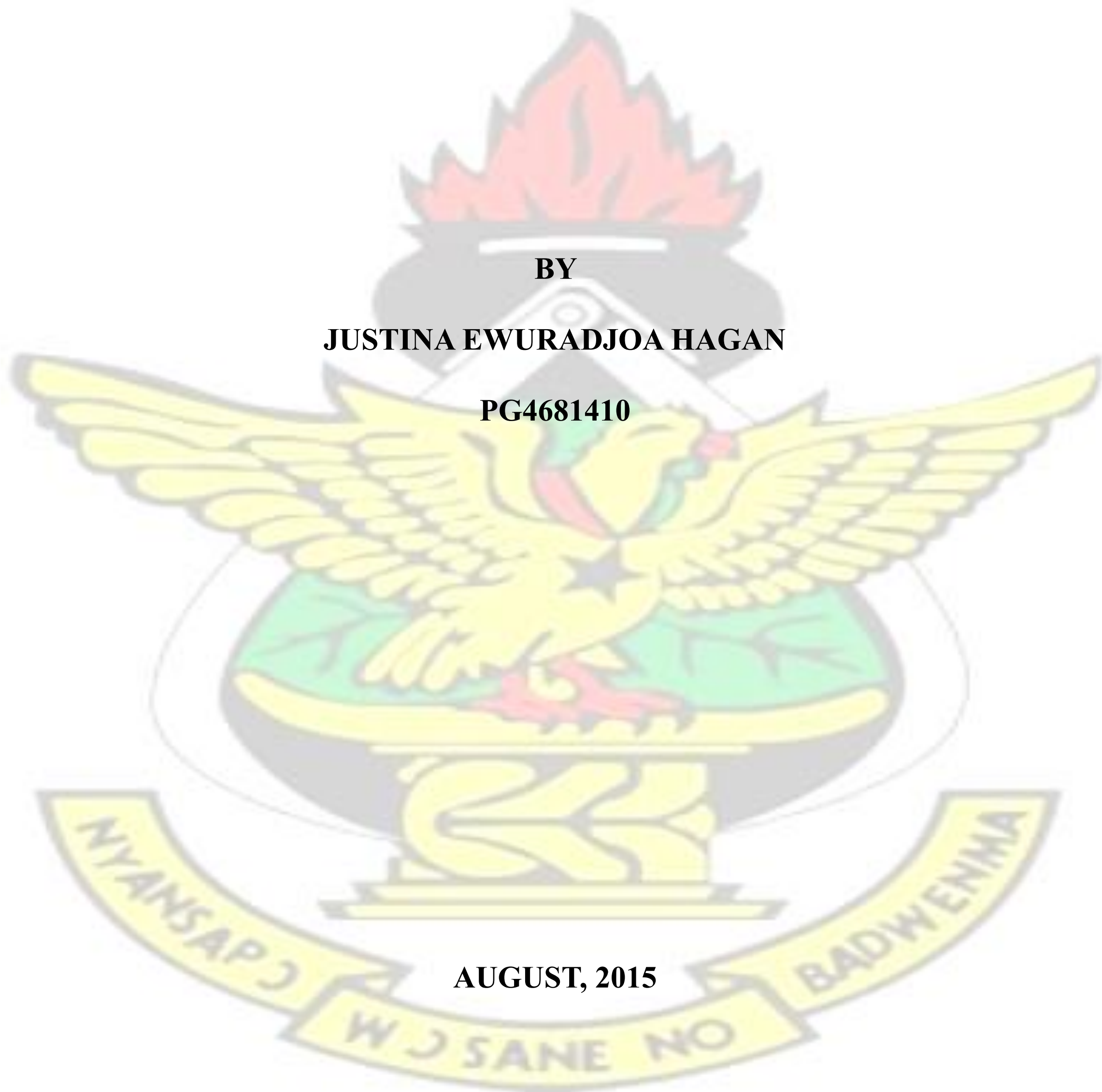
ASSESEMENT OF CREDIT RISK MANAGEMENT OF AGRICULTURAL DEVELOPMENT BANK



BY

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AUGUST, 2015

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KNUST

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A THESIS SUBMITTED TO THE KNUST SCHOOL OF BUSINESS, DEPARTMENT OF ACCOUNTING AND FINANCE, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, IN PARTIAL FULFILLMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION (FINANCE) DEGREE,

FACULTY OF SOCIAL SCIENCES

COLLEGE OF ARTS AND SOCIAL SCIENCES

AUGUST, 2015

CERTIFICATION PAGE

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

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ABSTRACT

The recent global financial crises should make everyone concerned about recent significant levels of bad debts on the books of banks in the Ghanaian financial sector. It calls for thorough assessment of the structure and components of the credit risk management frameworks and practices of banks by regulators, analysts and financial watchers from time to time, to ascertain the adequacy of the systems, policies and procedures for managing credit risk as well as conformity to current best practices. As a contribution to this exercise, this study is focused on Agricultural Development Bank (ADB) with the aim of evaluating the bank's credit risk profile as well as assessing its credit risk management frameworks to ascertain the soundness and conformity to international best practises. Due to the aims and objectives of this research, the research design that was adopted for the study was the descriptive survey method. The study applied analytical tools such as ratios and tables to the bank's 2013 financial statements, and those of 2012 and 2011 serving as references for comparison.

The study revealed that more than fifty percent (50%) of ADB total maximum credit exposure is derived from loans and advances. However, the high level of loan portfolio concentration to few large corporate clients was the weak point in the bank's credit risk condition. The bank's asset quality as well as their capacity to absorb credit losses had not improved. The study also revealed that ADB has adequate risk management structures to ensure sound management of credit risk as put forward by the Basel Committee for Banking Supervision.

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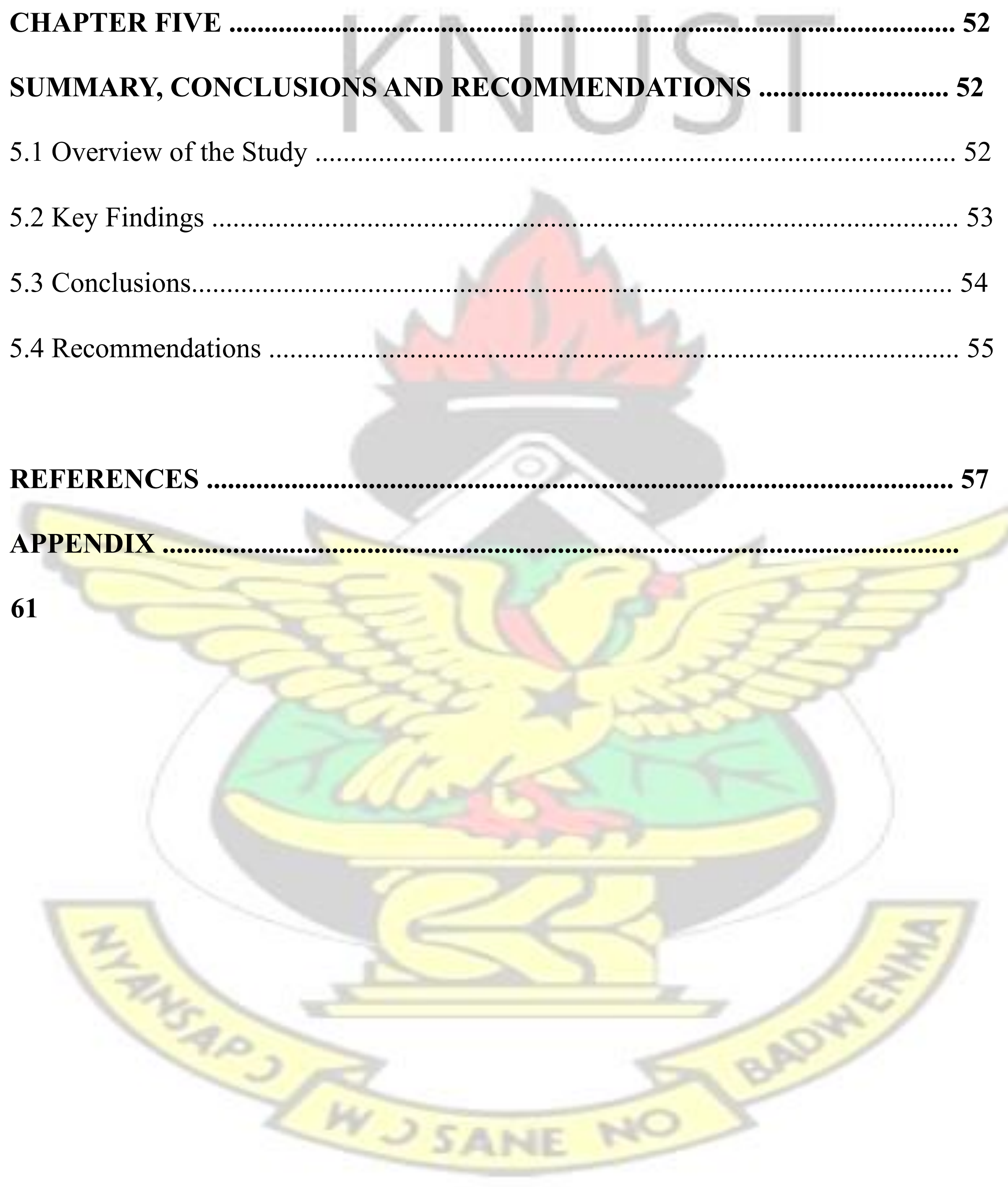

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DEDICATION

This work is dedicated to the Almighty God for His love, blessing and protection throughout my entire life and for bringing me this far. This work is also dedicated to my family especially my husband for his moral support. Also to the management and staff of the ADB for their support

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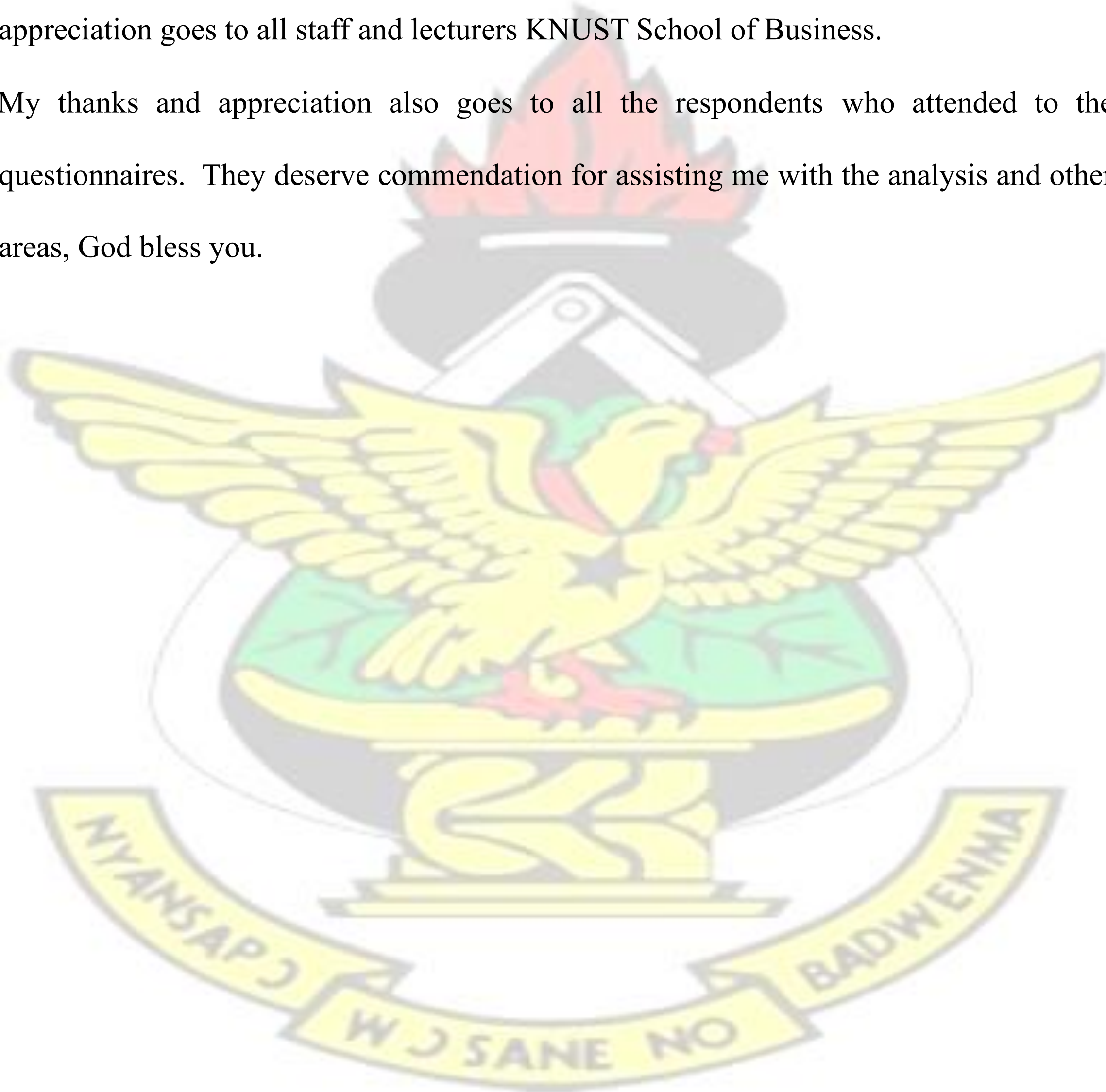
ACKNOWLEDGEMENT

A study of this kind could not have been successful without the help of others. I therefore, wish to express my sincere gratitude to the most God Almighty without whom I would not have been that I am today.

Like any other field of endeavour, one’s success depends immensely on contributions of well meaning individuals towards the person’s pursuit. My eternal and everlasting appreciation goes to all staff and lecturers KNUST School of Business.

My thanks and appreciation also goes to all the respondents who attended to the questionnaires. They deserve commendation for assisting me with the analysis and other areas, God bless you.



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Developments in the global financial sector within the past decade have given stakeholders in the Ghanaian banking industry cause not to only consider the returns made in the sector but to also critically examine frameworks used to manage risks in the sector and safeguard their interests. This is because the failures faced by the industry in recent times have been blamed largely on the weaknesses of the regulatory frameworks and practices of risk management in the financial institutions. Banking industry has been having the greatest impact of the crisis, where some banks which were hitherto performing well suddenly announced large losses with some of them going burst. Some reasons put forward for the failures in risk management in this regard include the limited role of risk management in the granting of loans in most banks as they are unable to influence business decisions and the fact that their considerations are subordinate to profitability interests and lack of capacity to adequately make timely and accurate forecasts. This has resulted in the flouting of basic risk management rules such as avoiding strong concentrations of assets and minimizing the volatility of returns.

The global financial crisis impact on the banking sector in Ghana has been quite minimal such that it did not threaten the survival of banks in the sector. This is largely because the sector has little exposure to complex financial instruments and relies mainly on low-cost domestic deposits and liquidity. However, the deterioration of asset quality (impairment charge / gross loans and advances) of the banks in Ghana, from about 1.5% in 2007 to 4.7% in 2010 due to significant balances of bad and doubtful debts on their books is an indication that all is not well with the sector (Banking Survey Report, 2011). Various

reasons have been put forward by analysts as accounting for the deterioration in the quality of bank‘s loans and advances. These include increased cost of funds, inflation, depreciation of the Cedi and the delay by government in paying contractors and other service providers. Unlike the case in developed countries, questions have not been raised about weakness or otherwise of the credit risk management practices of the Ghanaian banks which have resulted in significant financial losses, although there have been a few reported cases of fraud, theft and other operational occurrences. Competently managing credit score hazard in financial institutions (FIs) is valuable for the survival and progress of fiscal institutions. Within the case of banks, the obstacle of credit threat is of larger drawback due to the fact that of the larger phases of perceived dangers on account of one of the crucial traits of purchasers and business stipulations that they in finding themselves in.

According to the Banking Survey Report (2011), the general believe is that banks in Ghana have good credit risk management structures since there have not been any complaints or adverse findings against them by the regulators, that is, Bank of Ghana and Securities and Exchange Commission of Ghana (in the case of listed banks) concerning significant weaknesses in their risk management systems. The banks are believed to be generally compliant with major regulatory requirements which are basically in line with international standards set by the Basel Committee on Banking Supervision. These requirements include rigorous risk and capital management requirements designed to ensure that the banks hold capital reserves appropriate to the risk they expose themselves to through its lending and investment practices. However, in order to ascertain the resilience of the Ghanaian banking sector to withstand serious credit risk, there would be the need for thorough assessments of the structure and components of the credit risk management frameworks and practices

of the bank from time to time. This study will therefore be a contribution to this exercise with focus on Agricultural Development Bank

Limited (ADB) in the industry.

1.2 Statement of the Problem

The very nature of the banking business is so sensitive since more than 85% of their liability is deposits from depositors (Saunders & Cornett, 2005). Banks use these deposits to generate credit for his or her borrowers, which actually is a income generating undertaking for many banks. Despite the huge earnings generated from their credit creation approach, to be had literature indicates that this credit creation method exposes the banks to high default threat which would result in economic distress including chapter. Consistent with the Banking Survey document (2011), gross loans and advances improved from GH¢6.3 billion in 2009 to GH¢7.3 billion at year end 2010.

Notwithstanding, a cursory look at the Bank of Ghana's monetary report of December 2010 shows that in 2008 the non-performing loan ratio was 7.7 percent, in September 2009 the ratio increased to 13.2 percent, it further increased to 18.1 percent in September 2010.

From the foregoing, it can be observed that huge sums of monies are devoted by banks in the form of loans and advances, an indicating trend which connotes high rate of default and should be of particular interest or concern to all stakeholders in the banking industry. Based on these facts, it is prudent to find out the extent to which banks are effectively managing credit risk. The thrust of this study therefore, is to find out how banks manage credit risk in Ghana with specific reference to Agricultural Development Bank and an

entire review of the management techniques and practices of the bank in terms of managing credit risk.

1.3 Objectives of the Study

The objectives of the study will be:

1. To determine the credit risk management frameworks of the bank for managing credit risk.
2. To assess the effectiveness of credit risk management frameworks of the bank for managing credit risk.
3. To ascertain the variations between the credit risk management practices of the bank vis-à-vis current recommended standards and best practices by the Basel Committee on Banking Supervision.

1.4 Research Questions

The following questions will be posed to guide the study.

1. What are the credit risk management frameworks of the bank for managing credit risk?
2. What is the level of effectiveness of the credit risk management frameworks for the bank?
3. What are the variations between credit risk management practices of the bank vis-à-vis current recommended standards and best practises by the Basel Committee on Banking Supervision?

1.5 Significance of the Study

The extents to which banks manage their credit risk have implication for the survival and growth of financial sector and the economy as a whole. This study is therefore necessary

to unravel the causes of high non-performing loans in ADB and how to deal with the situation. The study will again evaluate the ability of the bank to comply with international standards and practices recommended by the Basel Committee Banking Supervision and make recommendations if there is the need. In addition, it will provide a guide for further studies on credit risk management in the industry.

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1.6 Scope of the Study

The study will be delimited in terms of scope and coverage. In terms of scope, the study will focus on only credit risk management in terms of loans and advances. Aspects such as short-term government securities, placement with other banks will not be considered.

In terms of coverage, the study will focus on ADB branches in the Central Region of Ghana.

1.7 Limitations of the Study

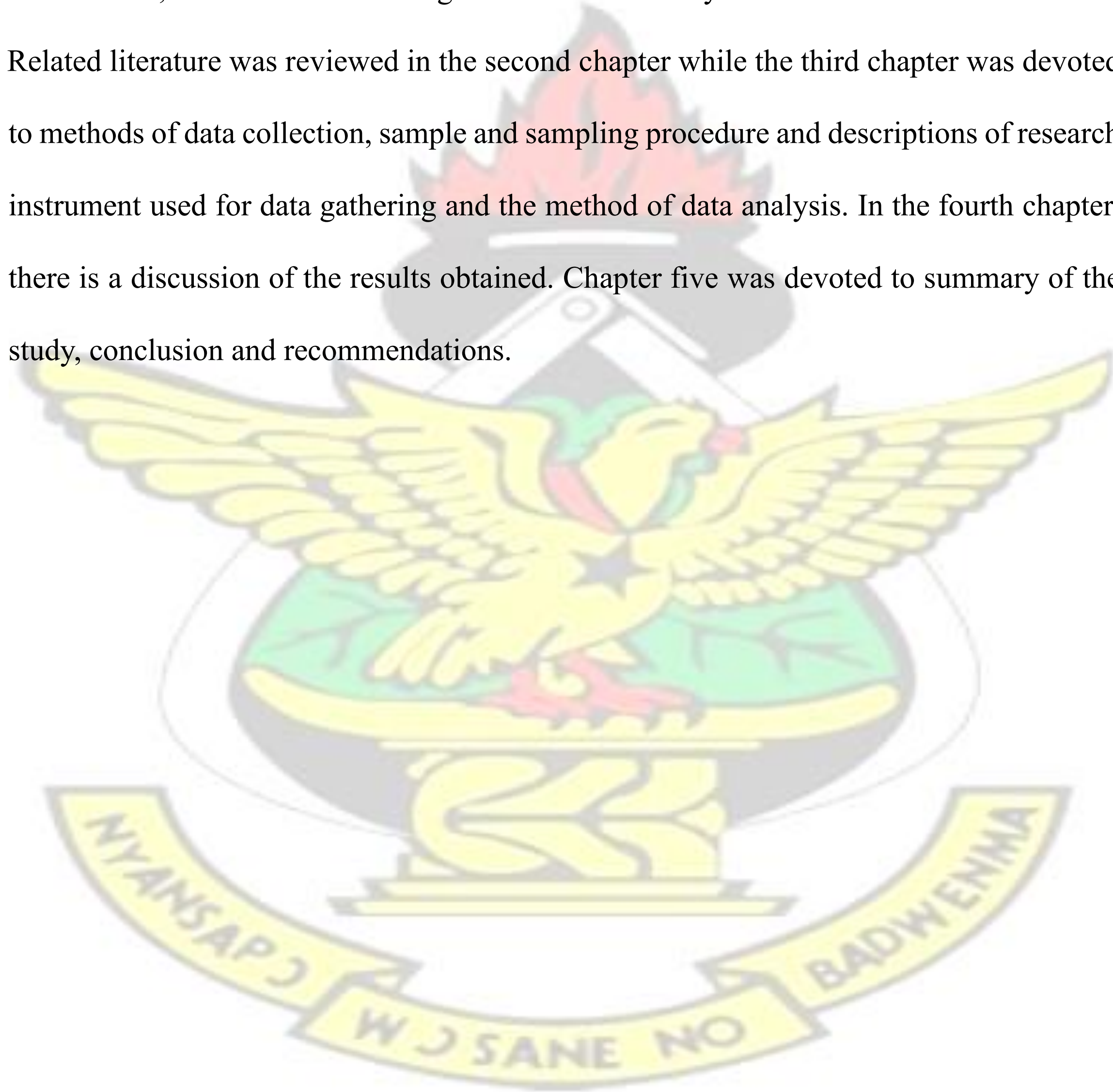
This research is constrained to Agricultural progress bank credit administration insurance policies and thus the findings, analyses and ideas do not signify the entire banking industry. The extension of the evaluation to other banks may present one of a kind outcome. As a result of time and information restrictions, just one financial institution was once used for the learn. There was therefore the probability that some disorders regarding the topic could no longer come up if such problems are distinctive to a few banks that aren't protected in the learn. Accessibility of data was also a constraint in view of the confidentiality of knowledge in banks. This fear perhaps backed by the reasonable notion that if they provide out any information that is not in favour of the bank they probably penalised. This might for that reason lead to invalid conclusion established on such faulty knowledge collected. Regardless of these challenges, the learn make clear credit score risk administration

procedures of the financial institution which could also be useful to policy makers and business corporations.

1.8 Organisation of the Rest of the Study

The research is organized into five chapters, with each chapter dealing with an aspect of the study. The first chapter, which is the introductory chapter deals with the background to the study, the statement of the problem, research questions, significance of the study, delimitation, limitations and the organisation of the study.

Related literature was reviewed in the second chapter while the third chapter was devoted to methods of data collection, sample and sampling procedure and descriptions of research instrument used for data gathering and the method of data analysis. In the fourth chapter, there is a discussion of the results obtained. Chapter five was devoted to summary of the study, conclusion and recommendations.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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

The review of related literature looks both the conceptual and empirical aspects of credit risk management in the banking sector. The review begins with the concept of credit risk management, categories of credit risk, tools of credit risk management, Recommended Standards and Best Practices by Basel Committee on Banking Supervision, Principles for the Assessment of Banks' Management of Credit Risk and Effectiveness of credit risk management frameworks.

2.1 Concept of Credit Risk Management

It is a buzz-phrase used in the company world and fiscal institutions. Van Gestel and Baesens (2008) state that the up to date financial turmoil and the regulatory changes offered via Basel II has given an impetus to credit score chance evaluation and danger comparison within the financial and banking enterprise. Consequently "credit risk administration is without doubt among the many most critical issues in the discipline of economic hazard management" (p.6). Economic associations stand a risk of borrower default once they problem loans to their consumers. In addition, when banks and other financial associations accumulate deposits and on-lend them to different consumers (i.e.

Behaviour financial intermediation), they put purchasers' savings at chance. Any tuition that conducts cash transactions or makes investments dangers the loss of those credit services. Nonetheless, finance associations should neither avoid threat (therefore limiting their scope and have an impact on) nor ignore threat (at their folly). Credit danger is each form of fiscal exposure hence of 1 microfinance tuition's dependence on an additional get

together to perform an duty as agreed upon through the events worried. It is the "hazard to earnings or capital due to borrower's late and non repayment of loan duty.

Credit score risk encompasses each the loss of earnings as a consequence of the MFI's inability to gather an predicted interest profits as well as the loss of predominant as a consequence of loan defaults"(national bank of Ethiopia, 2010, p.16).

As a result, every financial school faces the credit hazards which need to be managed effectually and effortlessly to increase the overall productivity and survival of fiscal offerings.

Credit score hazard management has been variously conceptualized. It refers to continual approach of systematically deciding upon, measuring, monitoring and managing risks associated with credit score within the financial businesses. Credit danger administration depicts the entire measures and tactics that are on the whole adopted to scale down the chance to earnings or capital as a result of debtors' late and non-fee of loan obligations.

Credit score hazard encompasses each the loss of sales resulting from the MFI's lack of ability to gather expected curiosity profits as good because the loss of precept due to loan defaults. Credit hazard administration entails each transaction threat and portfolio danger administration. It enables administration to quantitatively measure risk and great-tune capital allocation and liquidity needs to check the on and off steadiness sheet dangers faced through the school, and to assess the have an effect on of talents shocks to the financial system or school.

The national bank of Ethiopia (2010) defines credit danger management as "the process of managing an school's hobbies which create credit score risk exposures, in a way that significantly reduces the likelihood that such hobbies will have an impact on negatively on a microfinance institution's profits and capital (p.Sixteen). According to Gyamfi (2012),

credit danger administration is process which the identification and analysis of present advantage dangers that are inherent in all products and routine of financial institutions.

Chance taking and management forms an inborn aspect as good imperative a part of fiscal offerings most often and of microfinance in designated and, certainly, earnings are in part the reward for positive hazard taking in business. However, excessive and poorly managed threat can result in losses and accordingly endanger the protection and soundness of microfinance associations and protection of microfinance school's depositors. Effective chance credit management results in the powerful realization and decision of early warning approach and advantage situation; extra efficient resource allocation (capital and money) and better knowledge on abilities consequences. Every hazard management framework should embody the scope of risks to be managed, the system/systems and approaches to control these risks and the roles and responsibilities of individuals involved in hazard administration approach. The threat framework will have to be all-inclusive in order to capture all risks that a certain monetary university is exposed to. It should also be flexibility to accommodate any trade in business movements of the monetary university. Literature suggests credit score danger administration must now not be seen and assessed in isolation, now not simplest because a single transaction might have a number of risks but also one form of danger can set off different risks. The management process should consider scenarios the place dangers interact and can exacerbate one a different in opposed situations. As a result, sound risk administration procedure of each and every microfinance tuition must as a minimum contain the next key factors of a sound threat management method:

1. a routine process for comparing concentrations of credit risk with the adequacy of loan loss reserves and detecting patterns;
2. good decisions, adequate policies, procedures and limits;

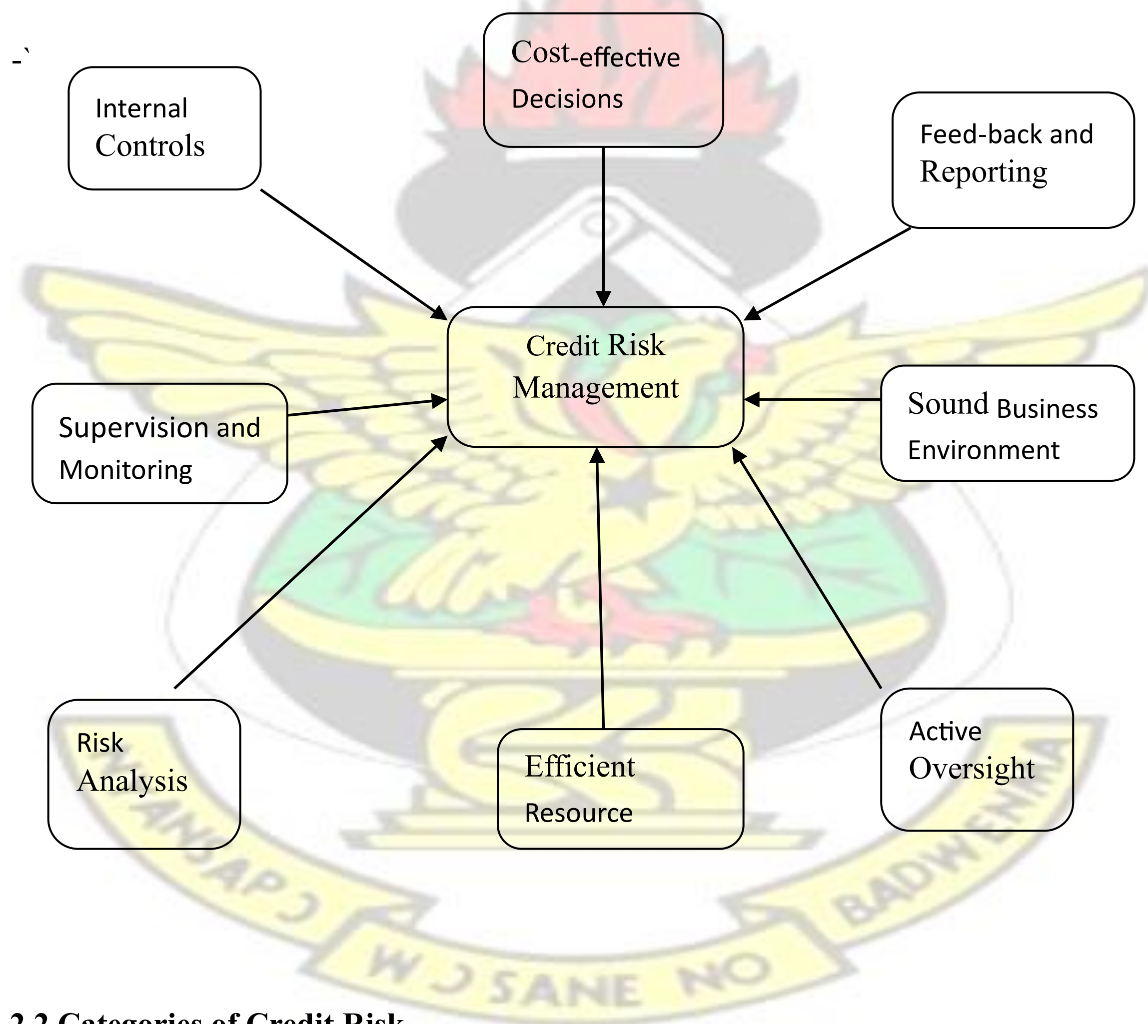
3. Well-designed borrower screening, careful loan structuring, close monitoring, clear collection procedures, and active oversight by senior board and management.
4. Delinquency is understood and addressed promptly to avoid its rapid spread and potential for significant loss;
5. Use of continuous feedback loop between measurement and monitoring, comprehensive internal controls and reporting, and involves active oversight by senior managers and directors, allowing more rapid response to changes in internal and external risk environments;
6. Encourages cost-effective decision-making and more efficient use of resources;
7. Creates an internal culture of "self-supervision" that can identify and manage risks long before they are visible to outside stakeholders or regulators.

According to Van Gestel and Baesens (2008), simple, however strong option to scale down the hazard is to restrict the viable losses on individual transactions, sub portfolios and portfolio stages by means of defining limits. Such limits constrain the quantity at hazard to a single product or to a group of related products and outcomes in a diverse buying and selling portfolio. The limits are outlined by using the administration in line with the expected industry developments and the threat urge for food. Credit chance management framework may aid to increase periodic screening out of undisciplined borrowers at an early stage; supply early warning to mortgage officers and peer crew individuals about talents future problems; allows the banks to get hold of cash flows before they're consumed or otherwise diverted; ensure that the debtors have a different earnings supply on which to rely due to the fact that the reimbursement method starts before investments bear fruit (Armendariz & Morduch (2000).

Commonplace cost agenda supplies purchasers a credible commitment gadget, which allows them to form the dependency of saving as a rule. They notice also that timehonoured

meetings with a mortgage officer may just reinforce customer believe in mortgage officers and their willingness to stay on monitor with repayments. Optimal allocation of credit facilities and the ability to predict and mitigate default events in financial industry forms the core of every sound credit risk management (Field & Pande, 2008; Van Gestel & Baesens, 2008). It can be deduced from the existing literature above that credit risk management can be enhanced by the following variables depicted in Figure 1.

Figure1: Components of Credit Risk Management of Financial Industries



2.2 Categories of Credit Risk

Involving the categorizing of credit score risk, distinctive authors have expressed quite a lot of standards. For illustration, Hennie (2003) aspects out in his publication that the three important varieties of credit score hazard are purchaser threat, corporate threat and

sovereign or country danger, whilst Culp and Neves (1998) bear in mind realized default threat and resale threat to be the 2 varieties of credit danger. What's adopted here is part of the views from Horcher (2005) who defines six varieties of credit score chance, together with default chance, counterparty pre-settlement hazard, counterparty agreement chance, authorized risk, country or sovereign risk and awareness threat. Only four forms of credit threat acknowledged by way of Horcher might be touched upon.

1. Default Risk

In keeping with Horcher (2005), typical credit threat pertains to the default on a fee, especially lending or sales. When a default happens, the quantity at chance may be as so much as the whole legal responsibility, which may also be recovered later, relying on explanations like the creditors' authorized reputation. Nonetheless, later collections are normally difficult and even inconceivable in that significant notable responsibilities or losses are often the explanations why firms fail.

2. Counter party Pre-settlement risk

Pre-contract danger arises from the probability that the counter social gathering will default as soon as a contract has been entered into but a contract nonetheless does not arise. The skills loss to the organization is determined by how market rates have changed considering that the establishment of the customary contract, which can also be evaluated in phrases of current and advantage exposure to the group (Horcher, 2005).

3. Counter party settlement risk

According to Casu, Girardone and Molyneux (2006), settlement risk is a danger most commonly confronted in the interbank market and it refers back to the trouble the place one get together to a contract fails to pay cash or provide property to another social

gathering on the contract time, which will also be associated with any timing differences in contract. Horcher (2005) points out that the risk is often associated with currency exchange buying and selling, where “repayments in specific money centers aren't made concurrently and volumes are gigantic”. The case of the small German financial institution Bankhaus Herstatt, which acquired repayments from its currency exchange counter events but had but to make payments to counter occasion economic institutions on the shutting down date, can function a average illustration for the failure precipitated by means of contract threat (Heffernan, 1996).

4. Country or Sovereign Risk consistent with Casu, Girardone & Molyneux (2006), nation threat arises as a result of the have an effect on of deteriorating foreign monetary, social and political conditions on abroad transactions and sovereign danger refers back to the possibility that governments could put into effect their authority to declare debt to outside lenders void or alter the movements of profits, curiosity and capital below some financial or political strain. Horcher (2005) nevertheless concluded that proof indicates that international locations and governments have quickly or completely imposed controls on capital, prevented goborder payments and suspended debt repayments, issues come up for issuers to fulfill responsibilities in such environment.

2.3 Tools of Credit Risk Management

The devices and tools, by way of which credit score hazard management is applied, are particular under:

A) Exposure Ceilings: With this, Prudential restrict is linked to Capital cash – say 15% for character borrower entity, 40% for a group with further 10% for infrastructure projects undertaken through the team, Threshold limit is fixed at a stage lower than

Prudential exposure; immense exposure, which is the sum total of the exposures beyond threshold restrict must no longer exceed 600% to 800% of the Capital cash of the bank.

B) Evaluation/Renewal: Multi-tier credit Approving Authority, constitution clever delegation of powers, greater delegated powers for better-rated customers; discriminatory time schedule for evaluate or renewal, Hurdle premiums and Bench marks for recent exposures and periodicity for renewal situated on danger ranking, amongst others are formulated.

C) Danger rating model: mounted complete threat scoring method on a six to 9 point scale. Evidently outline ranking thresholds and assessment the rankings periodically preferably at half of every year intervals. Score migration is to be mapped to estimate the expected loss.

D) Risk situated scientific pricing: hyperlink mortgage pricing to expected loss. Excessive-threat class debtors are to be priced excessive. Construct old data on default losses. Allocate capital to absorb the surprising loss.

E) Portfolio administration: the need for credit portfolio administration emanates from the need to optimize the benefits associated with diversification and to scale down the skills adversarial have an effect on the attention of exposures to a detailed borrower, sector or enterprise. The existing framework of tracking the non-performing loans across the steadiness sheet date does not sign the great of the complete loan publication. There must be a proper and ordinary on-going process for identification of credit weaknesses good upfront.

F) Loan review Mechanism (LRM): This should be done impartial of credit score operations. Additionally it is referred as credit score Audit protecting review of sanction procedure, compliance status, review of threat score, and choose up of

warning alerts and suggestion of corrective motion with the target of improving credit score excellent. This is performed to convey qualitative improvement in credit administration. Establish loans with credit weakness. Examine adequacy of loan loss provisions. The focus of the credit audit wishes to be broadened from account level to overall portfolio stage.

2.4 Recommended Standards and Best Practices by Basel Committee on Banking Supervision

Through the years, most fiscal associations have faced teething troubles owing to whole host of factors. Always, the essential and common intent of significant banking issues in each G-10 and non-G-10 nations immediately relates to lax credit score standards for borrowers and counterparties, bad portfolio chance management, or a scarcity of awareness to alterations in fiscal or other circumstances that may result in a deterioration in the credit score standing of a bank's counterparties (Basel Committee, 2007a). The Basel Committee on Banking Supervision includes senior representatives of financial institution supervisory authorities and imperative banks which were selected from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the us. Basel Committee unanimously agreed that the concepts set out should be utilized in evaluating the credit hazard administration system of banking institutions. The committee stipulates a number of ideas for banking supervisory authorities to use in assessing financial institution's credit score risk administration methods. These principles function recommended requisites and best practices to be used

within the monetary industry to be able to cut back credit threat (Basel Committee on Banking Supervision, 2000; Basel Committee, 2007a).

Hitherto 1991, the target of the Committee used to be to toughen supervisory understanding and the best of banking supervision and legislation worldwide. The Committee has neither everlasting staff nor formal authorized existence and consequently, its movements do not possess the whole drive of worldwide legislation. Nevertheless, the recommendations of the Committee have resulted in the harmonization of supervisory methods of member nations (Basel Committee, 2007a).

The second foremost obstacle of the Committee was once the promulgation of basic necessities for banking institutions. The Basel Committee on Banking Supervision average sets out a supervisory framework for measuring and controlling giant exposures. The framework will take result from 1 January 2019 and will take over from the Committee's 1991 general on the topic. While many monetary associations modeled their country wide principles after the Committee's 1991 guidance, there had been inconsistent outcome across various member countries as effect of variations in measures of publicity, measures of capital and numerical limits. The revised framework will aid setting normal minimum typical for measuring, aggregating and controlling single name awareness hazard throughout jurisdictions.

2.5 Principles for the Assessment of Banks' Management of Credit Risk

The advocated requirements and satisfactory practices as promulgated via the Basel Committee on Banking Supervision (2000) encapsulate the following 5 strands:

1. Starting an appropriate credit score danger atmosphere: The board of directors of every bank and financial university must have oversight responsibility to establish, approve and periodically (as a minimum annually) review the credit score hazard procedure and enormous credit score hazard policies of the financial institution. Senior management of the board will have to have accountability to ensure the implementation of the credit risk strategy as recognized and authorised by means of the board of administrators.
2. Operating underneath a sound credit granting method: This requires sound and sustainable macroeconomic insurance policies; a good based framework for economic steadiness policy method; a good developed public infrastructure; a clear framework for crisis management, healing and resolution; an appropriate level of systemic defence and robust market self-discipline. Underneath this strand, every banking tuition ought to function inside sound, good-outlined credit-granting standards and set up overall credit limits on the degree of individual borrowers and counterparties. This typical additionally entails that banks must put in position clearly-established process for approving new credits as good as the amendment, renewal and re-financing of existing credit.
3. Preserving a right credit administration, dimension and monitoring system: Banks should have in location a procedure for the continuing administration of their more than a few credit score risk-bearing portfolios. Banks have to have in position a system for monitoring the condition of person credit, including picking out the adequacy of provisions and reserves. Furthermore, banks must have know-how methods and analytical methods so that they can increase the administration of the bank to measure the credit score threat inherent in all on- and off-stability sheet hobbies. The administration expertise procedure must furnish the board of directors with sufficient

know-how on the composition of the credit score portfolio, together with identification of any concentrations of danger.

4. Guaranteeing ample controls over credit hazard: Banks need to set up a procedure of impartial, ongoing evaluation of the financial institution's credit risk administration tactics. Additionally, banks must make sure that the credit score-granting perform is being effectively managed and that credit exposures are within phases consistent with prudential standards and inner limits. In addition, banks will have to recollect talents future alterations in economic stipulations when assessing person credits and their credit portfolios. The evaluation of their credit score chance exposures must be implemented below stressful conditions.

5. Function of Supervisors: Supervisors will have to require that banks have an powerful procedure in location to determine measure, reveal and control credit score threat as part of an overall process to chance administration. Supervisors should conduct an independent evaluation of a bank's methods, insurance policies, tactics and practices concerning the granting of credit score and the ongoing management of the portfolio. Dwelling nation supervisors will have to additionally verify that the process is mighty throughout industry strains, subsidiaries and countrywide boundaries when reviewing the adequacy of their credit danger management methods. It's the role of the supervisors to be certain that banks have sufficient interior controls and audit process to establish and keep an adequately managed working atmosphere for the habits of their business thinking of their risk profile.

2.6 Effectiveness of the Risk Management Framework

Compelling credit hazard administration includes building up a proper credit risk environment; working under a sound credit giving procedure; keeping up a fitting credit

organization that includes observing procedure and in addition sufficient controls over credit hazard (Basel, 1999; Greuning & Bratanovic, 2003). It obliges top administration to guarantee that there are fitting and clear rules in overseeing credit risk and guaranteeing that rules are appropriately conveyed all through the association; and guaranteeing that everyone included in credit hazard administration comprehend them.

The Central Bank of Kenya (2005) recommends that banks need to build up a framework that empowers them to screen nature of the credit portfolio on a regular premise and make restorative strides as and when disintegration happens. The Authority expressed that the bank's credit arrangement ought to unequivocally give procedural rules in regards to credit danger observing. At the base it ought to set down system identifying with the accompanying:

1. the risks and responsibilities of individuals responsible for credit risk monitoring;
2. the assessment of procedures and analysis techniques;
3. the frequency of monitoring;
4. the periodic examination of collaterals and loan covenants;
5. the frequency of site visits;
6. and the identification of any deterioration in any loan.

Sumner and Webb (2005) argued that the board of administrators has the accountability of formulating bank mortgage policy and to observe compliance. For this reason, the structure of the board must influence the portfolio of loans that the financial institution has super. They notice however that on account those fiscal associations are monitored through external regulatory businesses, financial institution boards won't impact loan policy. Their empirical assessments making use of a sample of over 300 United States of America bank retaining firms yielded evidence consistent with each position. For instance, they

determined that each proportion of outsiders and a board force index are immediately regarding growth in consumer loans as a percentage of whole belongings, whereas farm and real estate mortgage holdings are not concerning bank board structure.

Pi and Timme (1993) examined the role of the chairman of a bank's board and determined that cost effectivity and return on belongings are shrink for banks that have the equal individual serving as chairman of the board and chief government officer (CEO) than for banks without such duality. Additionally they found out that the proportion of insiders or outsiders on the board of directors is unrelated to bank efficiency. Prowse (1997) amongst others examined the energy of boards of banks vis-àvis boards of non-economic organizations. He found that so much of the monitoring accountability of banks falls on the regulators, now not boards. Simpson and Gleason (1999) also found some evidence of corporate governance practices that influences bank activities.

Kyereboah-Coleman and Biekpe (2006) examined how company governance indications similar to board measurement, board composition and chief government officer (CEO) duality have an effect on financing selections of forty seven corporations listed on the Nairobi inventory exchange. They discovered that firms with higher board sizes hire more debt and the independence of a board correlates negatively and vastly with shorttime period money owed. When a CEO doubles as board chairperson, less debt is employed. Aboagye and Otieku (2010) studied 30 rural and neighbourhood banks in Ghana utilizing knowledge over the period 2000 – 2005 and concluded that an index that captures the state of corporate governance, outreach to purchasers, dependence on subsidies and use of technological know-how just isn't statistically related to their fiscal performance.

A credit rating for assessing the creditworthiness of an character or manufacturer to foretell the chance of default, which is established on the economic history and current property and liabilities of the subject, can help avoid credit score chance. As stated through Federal Reserve (1998), credit threat scores may just reflect no longer best the likelihood or severity of loss but in addition the range of loss over time. For banks, each of the interior credit standing and the external one are worried of their credit threat evaluation.

1. Internal credit ratings

The interior credit rankings of banks, as urged by means of Jacobson, Linde and Roszbach (2003), are the abstract of the chance residences of the financial institution mortgage portfolio. They can be treated as monotonic transforms of the likelihood of default and form the nature of credit decisions that banks make every day. A regular and meaningful inner chance rating approach generally is a valuable approach for differentiating the measure of credit score risk in loans and other sources of exposure. The internal credit rankings of banks are fitting more and more principal due to the fact that the recommendations, as per the modern Basel II accord (Basel 2006), emphasize the adoption of powerful interior credit standing method for risk comparison and buffer capital calculation, in order to without doubt motivate and lead banks to additional development in this process.

2. External credit scores

The outside credit ratings are offered by means of credit rating corporations comparable to Moody, typical & poor and Fitch, and are a measure of the long-time period primary strength of organizations (Gonzalez et al. 2004). One visible problem is that credit standing corporations commonly take a protracted-time period point of view, which suggests a reduce sensitivity of their ratings to short-term fluctuations in credit quality. Despite of this, these ratings still play a key position in pricing credit score threat. Due to the fact that

in the standardized procedure to credit threat of banks are allowed to fit assets into weighting bands in step with scores from eligible outside corporations, it is rather feasible that the long run position of external scores will hold on expanding. Credit score-scoring systems, as mentioned by Reto (2003), will also be found in nearly all forms of credit score analysis and share the equal concept with credit rankings. A credit scoring process determines points for each pre-identified aspect that are mixed to predict the loss chance and the recovery fee. In line with Altman and Saunders (1998), there are two forms of accounting centred credit score-scoring process in banks, that is, univariate and multivariate. The primary one can be utilized to compare various key accounting ratios of capabilities debtors with enterprise or workforce norms even as within the latter one, key accounting variables are mixed and weighted for producing a credit threat rating or a chance of default measure, which if higher than a benchmark, suggests a rejection to the mortgage applicant or yet another scrutiny. In line with Basel (2000), credit score danger items try and help banks in quantifying, aggregating and managing credit score hazard throughout geographical and product strains, and the outputs can also be very predominant to banks' risk administration as good as economic capital mission. These units, regardless of of the possible variations in assumptions, share the customary intent to forecast the chance distribution perform of losses that may come up from a financial institution's credit portfolio (Lopez & Saidenberg 1999).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the various methods and procedures which were employed and followed to obtain the information needed for the study. It discusses the research design,

the population of the study, the sample and sampling procedure, the research instrument used, data collection procedure and data analysis plan.

3.1 Profile of Agricultural Development Bank

"In 1965, Parliament passed The Agricultural Credit and Co-operative Bank Act, 1965 (Act 286) which incorporated a bank under that name. In 1967, National Liberation Council Decree (NLCD 182) was passed to change the name of the Bank to Agricultural Development Bank (ADB) and amended certain sections of the original Act to allow ADB to undertake the acceptance of deposits on current and savings accounts and transact banking business normally carried on by commercial banking institutions, including raising loans from foreign sources. In 1970, The Agricultural Development Bank Act, 1970 (Act 352) was passed to broaden the Bank's functions. ADB was granted a full banking licence in that year under the Banking Act, 1970 (Act 339).

The bank is jointly owned by the Government of Ghana and the Central Bank of Ghana with shareholding structure of 52% and 48% respectively. In view with its primary functions as contained in the mission statement, the bank seeks to finance agriculture sub-sectors such as primary production, agric-business, agro-processing, agro-export and cocoa sub- sector, with short term, medium term and long term loan facilities.

In 2004, ADB gained a Universal banking licence under Banking Act 2004 (Act 673) which removed restrictions on banking activity. The bank's products and services include corporate banking, retail and consumer banking, commercial credit risk, international banking, treasury management services and western union transfer. From its original Head Office on Tunisia Road, ADB moved to the Ring Road Central, and then to the Cedi House on Liberia Road in 1993, before finally settling at its current ADB House

Head Office premises on Independence Avenue in 2005. The bank has seventy branches which are strategically spread across the ten Regions of Ghana (ADB,
2010).

3.2 Research Design

The study is about the credit risk management of Agriculture Development Bank (ADB). Due to the aims and objectives of this research, the research design that was adopted for the study was the descriptive survey method. Such a design is non-experimental. It studies the relationship between non-manipulated variables in a natural setting. Merriam (1998, p.16) states that the "descriptive research design's key concern is for the understanding of the phenomenon of interests from the participants perspectives, not the researcher's". She further observed, that "descriptive studies are undertaken because there is lack of theory, or existing theory fails to adequately explain a phenomenon". Best and Khan (1993) stated that descriptive research limits generalization to the particular group of individuals observed and that no conclusions are extended beyond this group. It is expected that data gathered from the field through a descriptive survey would provide relevant information to policy-makers on what the actual situation is like in Agricultural Development Bank (ADB) with regard to credit risk management. This design was used because it provides a meaningful picture of events and seeks to explain people's perceptions and behaviour on the basis of information obtained at a point in time thus providing separate evaluation and generalization on the bank's credit risk management practices".

3.3 Population

The target population of the study will consist of all managers and employees in the credit departments of ADB in the Central and Western Region of Ghana. Agricultural

development bank was chosen for the study because the researcher would have easy access to data. The accessible population will be employees and management personnel in ADB who will be willing to participate in the study. This category of respondents would be selected because they serve as key informants who could be of tremendous help in providing very vital information and other reference materials necessary for the study.

3.4 Sample and Sampling Procedure

Sampling according to Bennett (1991), is the process involved in selecting respondents from the population under study. A sample as noted by Frankel and Wallen (2000) is a group in a research from which information is obtained. In order to ensure that accurate and reliable information on credit risk management is obtained, the study would adopt the purposive sampling technique. The choice of the purposive sampling technique would be motivated by the fact that the information on credit risk management strategies is specific and therefore an expert with the requisite experience is required in order to achieve data that is reliable. In all, a total of 50 respondents would be used for the study from the Central and Western branches of the bank.

Table 1: Sample Distribution by Branches

Branches	Population	Sample Selected
Agona Nkwanta	5	5
Agona Swedru	11	8
Assin Fosu	7	5
Korkordzor	9	5
Cape Coast	14	8
Kasoa	6	4
Mankessim	6	4
University of Cape Coast Campus (UCC)	7	4
Takoradi	11	7

3.5Data Source

The study employed both primary and secondary data. The secondary data consisted of the analysis of the various documents and loan portfolios of the bank. The study relied mainly on secondary data. This was obtained from the annual reports and other reports issued by the bank. The policy documentations and guidelines concerning the management of credit risk for the bank was also a major source of information for determining whether the bank structures and credit risk management tools are adequate in handling inherent credit risk in their business activities, whereas a questionnaire was also employed for the study to collect primary data.

3.6 Data Collection Procedure

The researcher would personally administer the questionnaire to the respondents. An introductory letter would be taken from the Kwame Nkrumah University of Science and Technology, Kumasi to the management of ADB branches in the Central and Western Region of Ghana to officially seek permission for the employees to participate in the study. After permission had been granted the researcher will brief the employees as to what the study is about in order to get the needed attention, support and co-operation of the staff. The questionnaire would be carefully designed to avoid ambiguity and bias. The questionnaire would assume the closed-ended format. The closed form would provide check-mark responses. The questionnaire will be divided into four sections. Section one contained the background information of the respondents. Section two dealt with the bank credit risk management frameworks for managing credit, section three looks at the extent to which credit risk management frameworks for managing credit are effective and the last section, section four looks at the variations between the banks credit risk management

practices vis-à-vis current recommended standards and best practises by the Basel Committee on Banking Supervision. The use of questionnaire would enable a large number of respondents to be surveyed within a shorter period of time. Again the questionnaire would be preferred to other instruments because it is judged the fastest mode of collecting data from the sample. The questionnaire is also believed to guarantee confidentiality and anonymity of respondents since it is generally self-reporting. Thereby, it would elicit more honest responses as it is also less expensive compared to the other data collection techniques. Respondents would be given two-three days to complete the instrument. To ensure an effective return rate, follow up telephone calls as well as personal visits would be made to encourage the respondents to complete the questionnaires. This will lead to a situation where most of the questionnaires would be retrieved giving a high return rate.

3.7 Data Analysis

The data collected would be edited to eliminate any incomplete questionnaire. The valid questionnaires would be coded to reflect their corresponding categories in accordance with the following scoring key adopted. Afterward the scored questionnaires would be analysed using Statistical Product for Service Solutions (SPSS) into the desired descriptive statistics. Since a descriptive sample survey was used in gathering data, it would be prudent for the researcher to use the same descriptive method in analyzing the data that would be obtained. Descriptive surveys do not typically require complex statistical analysis. However, descriptive statistics basically mean, standard deviations, frequencies and percentages. Descriptive statistical tools such as graphs, frequency tables and percentages would be used to show the results of the data. The secondary data would be analyzed using excel models. These consisted of a series of spread sheet-based data input tables that allowed data to be collected and manipulated in a systematic manner. The spread sheet

allowed for the generation of relevant tables, ratios and graphs which would assist in the interpretation and analysis of the data collected to help measure the bank's performance as well as judge the effectiveness of their credit risk management process.

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CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter focuses on the findings of the data collected from respondents. It deals with how data from the study were presented and analyzed in order to draw valid conclusions from the research that is being carried out. Statistical Package for Service Solution (SPSS, version 16) was the statistical tool for analyzing the data and was presented by the use of tables.

Analysis of Background Information of Respondents

Background information of respondents such as gender, working experience, position at workplace and educational qualification were sought from respondents. This information is crucial for the study since the researcher wanted to find out the underlying characteristics of the respondents who were taking part in the study.

Table 2: Background Information of Respondents

Variables	*Sub-scales*	ADB F (%)	Total

Gender	Male	30 (60%)	30 (60%)
	Female	20 (40%)	20 (40%)
Position/Rank	Credit Officer	16(32%)	16(32%)
	Relationship Officer	11 (22%)	11 (22%)
	Credit Evaluation Manager	9 (18%)	9 (18%)
	Senior Clerk		
	Supervisor	8 (16%)	8 (16%)
	Assistant Manager	4 (8%)	4 (8%)
		6 (12%)	6 (12%)
	Below 5 years		
Years of working	6 – 10 years	23 (46%)	23 (46%)
	11 – 15 years	9 (18%)	9 (18%)
	16 – 20 years	8 (16%)	8 (16%)
	Above 20 years	6 (12%) 4	6 (12%)
		(8%)	4 (8%)
Educational Qualification	Tertiary		
	Post Graduate	25 (50%)	25 (50%)
	Professional	13 (26%)	13 (26%)
	Others	8 (16%)	8 (16%)
		4 (8%)	4 (8%)

Source: Fieldwork (2012)

From Table 2, it could be observed that, out of the 50 employees of the bank who form the respondents of this study, 30 (60%) of the respondents were males with 20 (40%) were females. This means that the males exceeded the females by 20%; this can be attributed to the male dominance in the financial sector in the global economy. Also, the next

information that was obtained from the respondents was their position or rank in their work place. Even though, all the respondents were from the credit department of the various branches, their respective role or position was sought after. The study revealed that 16 (32%) which was the highest number recorded were Credit Officers, 11 (22%) were Relationship Officers, 9 (18%) were Credit Evaluation Managers and 4 (8%) were Supervisors.

This shows that, most of the respondents directly deal with credit issues in their respective branches of the bank. This was very good for the study because, the information obtained from these respondents came from people who have practical experience about the issues being addressed by the study. This also indicate that the staff of the credit department of the bank have strong knowledge of credit risk management, Basel II, banking operations and products which enable them communicate effectively and tactfully at the executive level with both internal and external customers. They also have experience in quantitative methods or statistical models.

The number of years worked was also a background information which was needed, it is said that, experience comes with years of working, therefore, it can be observed that 23 (46%) out of the 50 respondents have worked below 5 years, 9 (18%) have a working experience of between 6 – 10 years. Also, 8 (16%) have a working experience of 11 – 15 years. However, only 4 (8%) have worked for over 20 years. This indicates that most of the respondents have had some years of working experience in the credit departments in their respective branches. In terms of educational qualification, majority 25 (50%) have had tertiary education. Since credit risk management is a vital function of every bank, obtaining the necessary educational qualifications is very essential for smooth management of credit risk. The bank has staff with the requisite educational qualifications. These include:

a) Master of Business Administration in Finance, Banking and Economics.

b) Professional Accreditation in Risk Management and Basel II.

c) Professional Certification such as Chartered Financial Analysts, Association of Certified Chartered Accountants and Institute of Chartered Accountants (Ghana).

d) Bachelor of Science in Administration.

e) Higher National Diploma in Accountancy.

Table 3 presents the response on the availability of credit department in the bank.

Table 3: Availability of Credit Department

Response	**ADB** **F (%)**	**Total**
Yes	50 (100%)	50 (100%)
No	-	-

From Table 3, it can be observed that, all the respondents, 50 (100%) indicated that they have a credit department in their respective branches. This indicates that, the aspects of credit management are given priority by the bank. Table 4 presents the types of risks the bank manages.

Table 4: Types of Risks Banks Manages

Types of risks	ADB F (%)	Total F (%)

Credit	14 (28%)	14(28%)
Operational	5 (10%)	5 (10%)
Liquidity	6 (12%)	6(12%)
Market	7 (14%)	7(14%)
Interest rate	12 (12%)	12(24%)
Exchange rate	4 (8%)	4 (8%)
Others	2 (4%)	2 (4%)

Source: Fieldwork (2012)

Banks deals with a wide range of risks from credit to operational and the rest. From Table 4, it can be observed that, 14 (28%) out of the 50 respondents indicated that the major risk that they deal with is the risk pertaining to credit, this is followed by interest risk which recorded 12 (24%), market risk was 7 (14%), however other forms of risks such as regulatory and financial recorded 2 (4%). This means that, out of the various types of risks that banks deal with, credit risk is the most important according to the respondents. This finding is in line with the view of Hennie (2003) that, there are three main types of credit risk which are consumer risk, corporate risk and sovereign or country risk that banks face, while Culp and Neves (1998) consider realized default risk and resale risk to be the two types of credit risk. On his part, Horcher (2005) who defines six types of credit risk, including default risk, counterparty pre-settlement risk, counterparty settlement risk, legal risk, country or sovereign risk and concentration risk also believes that credit risk is a major risk confronting the financial sector. Table 5, presents the summary of response on the issue of training programmes for workers at the credit department at the various branches of the two banks.

Table 5: Organise Training Programmes

Response	ADB F (%)	Total F (%)
Yes	40 (80%)	40 (80%)
No	10 (20%)	10 (20%)

Source: Fieldwork (2012)

From Table 5, it can be observed that 40 (80%) of the respondents stated that, indeed they have been attending training programmes and workshops which are organised by either their bank or other financial agencies, this comprised while 10 (20%) stated otherwise. This indicates that, most of the workers in the credit departments in the bank have been updating their knowledge level on credit management issues and might be abreast with current issues in the credit management world. As part of their quest to manage credit risk, the bank has instituted course programs which deal with alternative approaches to credit risk management, financial modelling and financial analysis. This sharpens the knowledge and skills of credit officers so as to improve on the quality of credit appraisal, prevent delayed loan approvals, enable credit officers appreciate the need to comply with credit policy and further enhance monitoring of credit.

Credit Risk Profile

What are the bank's credit risk profiles for the period 2011-2013 financial years? ADB define credit risk as the risk of financial loss to them if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from their loans and advances to customers and other banks and investment securities.

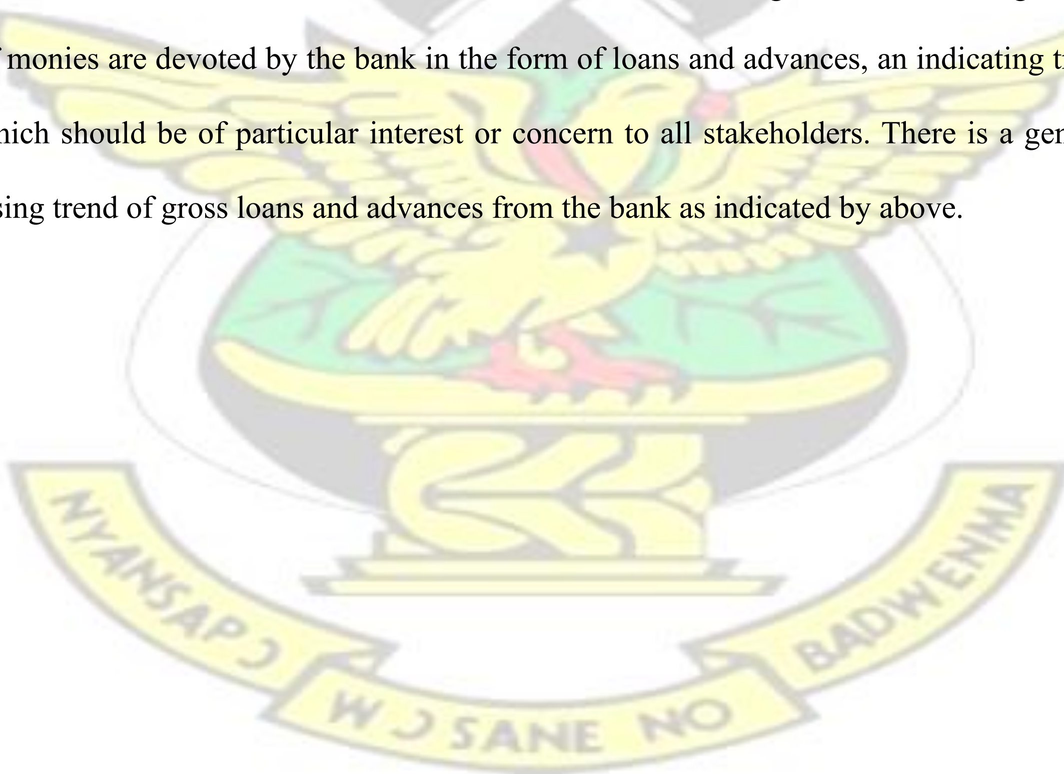
The credit risk associated with ADB's operations is inherited in their credit exposures. The risk areas have to do with concentrations and large exposures, diversification, lending to

related parties and over exposure to an economic sector. This situation place greater responsibility on the board and management of ADB to strengthen its systems and processes as well as personnel to manage the risk well.

Table 6: Gross and Net Loans and Advances

	ADB		
	2011 GH¢	2012 GH¢	2013 GH¢
GROSS LOANS AND ADVANCES	695,601,000	812,650,000	914,350,000

Source: Own Construction with data from 2011, 2012 and 2013 Annual Report. Table 6 shows the size of gross loans and advances of ADB from 2011-2013. The total gross loan portfolio of ADB in 2013 was GH¢ 914,350,000 compared to GH¢ 773,694,000, in 2012. The total gross loan portfolio of ADB increased from 13.99% in 2012 to remarkably 18.18% in the year 2013. Again 58% of ADB's total maximum credit exposure is derived from loans and advances to banks and customers. The table again shows that huge sums of monies are devoted by the bank in the form of loans and advances, an indicating trend which should be of particular interest or concern to all stakeholders. There is a general rising trend of gross loans and advances from the bank as indicated by above.



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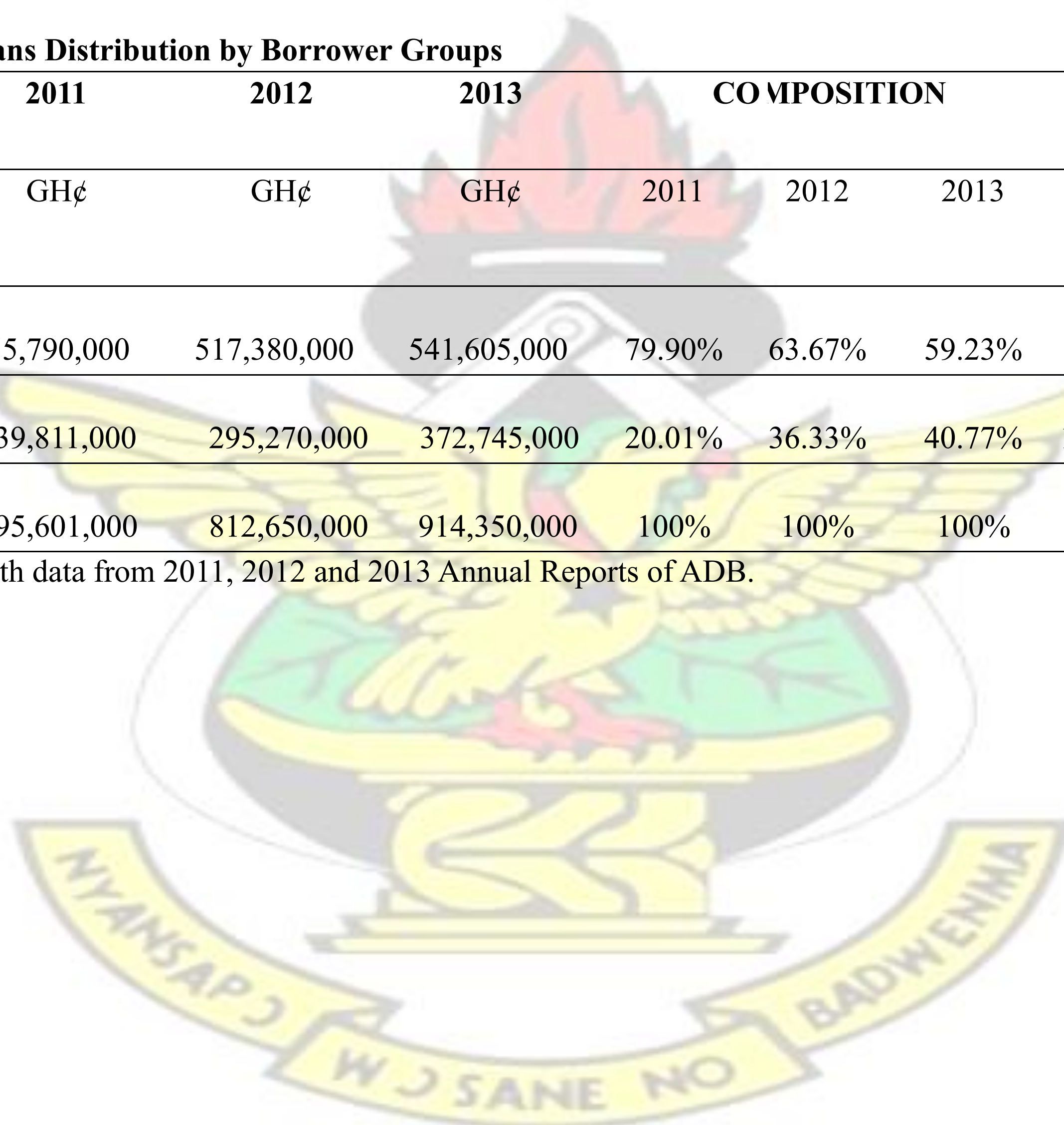

Table 7: ADB Customer Loans Distribution by Borrower Groups

	2011	2012	2013	COMPOSITION			GROWTH	
Loans to Customer per Borrower Group	GH¢	GH¢	GH¢	2011	2012	2013	2012	2013
Wholesale/50 Largest Exposure	555,790,000	517,380,000	541,605,000	79.90%	63.67%	59.23%	-6.91	4.68%
Retail (Individuals)	139,811,000	295,270,000	372,745,000	20.01%	36.33%	40.77%	111.19%	26.23%
Gross Loans and Advances	695,601,000	812,650,000	914,350,000	100%	100%	100%		

Source: Own Construction with data from 2011, 2012 and 2013 Annual Reports of ADB.

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4.2 Concentration for ADB

From Table 7, the 50 largest exposures of ADB to total gross loans and advances (50 largest exposure/ Gross loans and advances) constitute 79.90% of the total gross loans and advances of which the same was also recorded in the year 2011. This again means that ADB is also relying on few large corporate clients to build its loan portfolio thus any distress to these large clients pose a threat to its total loan size, loan quality and profitability.

Table 10: ADB Economic Sector Concentration of Gross Loan and Advances from 2011 To 2013

SECTOR ADB	2013 ¢	2013 %	2012 ¢	2012 %
Agriculture	264,182,000	27%	235,451,000	29%
Manufacturing	14,707,000	2%	44,334,000	5%
Commence and Finance	211,871,000	22%	141,059,000	17%
Transport and Communication	14,747,000	2%	32,502,000	4%
Mining and Quarrying	4,232,000	-	5,146,000	1%
Building and construction	207,919,000	21%	42,257,000	5%
Service	237,011,000	24%	306,103,000	38%
Others	16,837,000	2%	5,798,000	1%
Gross Loans andAdvances	**971,506,000**	**100%**	**812,650,000**	**100%**

Table 10 continue

SECTOR ADB	2011 ¢	%
Agriculture	190,819,000	27%
Manufacturing	34,631,000	5%
Commence & Finance	114,888,000	17%
Transport and Communication	13,905,000	2%
Mining and Quarrying	6,197,000	1%
Building and construction	35,869,000	5%
Service	293,325,000	42%
Others	5,967,000	1%
Total Gross Loans and Advances	**695,601,000**	**100%**

Source: Own Construction with data from 2011, 2012 and 2013 Annual Reports of ADB

4.3 Economic sector concentration of gross loan and advances for ADB

Table 10 depicts the analysis of economic sector concentration of gross loans and advances for ADB from 2011-2013. ADB monitors concentration of credit risk by sector. ADB remained focused on its core mission of agricultural financing and significantly increased new credit disbursement to various productive agricultural projects totalling GH¢ 235.451 million which was far in excess of the GH¢190.819 million recorded in 2011. This showed an increase of 23.39 percent. The stock credit to the agricultural sector rose significantly from GH¢ 190.819 million at the end of December 2011 to GH¢ 264.182 million at the end of December 2013, showing a growth of 38.45 percent. The service sector lost its first position to agricultural sector in 2013 with a decrease to 24% from 38% recorded in 2012. However, the stock credit to the services sector rose from GH¢ 237.011 million at the end of December 2012 to GH¢ 306.103 million at the end of December 2013.

ADB also disbursed significant portion of its gross loans and advances to the commence and finance sector. The sector recorded 22 percent of ADB's total gross loans and advances in 2013, thereby placing the sector second. The reasons explained for the large concentration of its gross loans and advances to the finance and the commence sector, could be attributed to the fact that Ghana's economy is coupled with dwindling of the manufacturing sector resulting from the increase of cheap imports and high operating cost. The mining, manufacturing, transport, and the other sectors recorded less than ten percent of ADB's gross loans and advances. Again all these four sectors recorded inverse growth trend in respect of gross loans and advance in 2013. The inverse growth recorded by the manufacture, transport and communication, mining and quarrying, and others were 3%, 2%, 1%, and 1%
respectively.

4.4 Product Distribution of ADB

A review of the several products that ADB lent out to their customers in response to market demand shows that, overdrafts and term loans were mainly the direct facilities used by the bank's customers. These products are considered risky due to the fact that they involve a direct outlay of funds and therefore a thorough assessment of the borrowers and the loan requests should be done as well as adequate security be taken for such facilities. The increase in the use of guarantees is also worth considering for potential credit risk. Even though, these products are considered as an indirect facility, defaults of commitments under them results in payment of some obligation leading to loses. Therefore, as off-balance sheet item, guarantees should be adequately assessed, secured and managed to avoid unexpected loses.

4.5 Industry Asset Quality

The quality of the banks' loan assets remains a source of concern. Nonperforming loans (NPL) ratio deteriorated from 13.2 percent in September 2012 to 18.1 percent in September 2013 and loan loss provisions to gross loans ratio as well as NPL net of provisions to capital ratio worsened from 8.5 percent and 15.2 percent in

September 2012 to 10.1 percent and 18.3 percent in September 2013 respectively. Default rates, as measured by sectoral shares of non-performing loans ratios, were more pronounced in the Commerce & Finance, Manufacturing, Services and Construction sectors. In terms of non-performing loans in each sector's gross loans, the Mining & Quarrying, Manufacturing, Construction and Agriculture & Forestry & Fishing sectors recorded the highest ratios.

Credit Risk Management Frameworks

What are the bank's risk management frameworks for managing credit risk?

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximise a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organisation. Research question two therefore sought to find out the frameworks that have been adopted by ADB to manage risk. Table 11 and 12 presents the summary of the responses.

Table 11: Bank's Risk Management Frameworks for Managing Credit Risk (ADB)

S/N	Frameworks	ADB	
		Mean	SD
1	Detailed and formalized credit evaluation/ appraisal process.	2.25	0.13
2	Credit approval authority at various hierarchy levels including authority for approving exceptions.	1.92	0.22
3	Risk identification, measurement, monitoring and control.	1.89	0.32
4	Risk acceptance criteria.	1.75	0.28
5	Credit origination and credit administration and loan documentation procedures.	2.92	0.19
6	Roles and responsibilities of units/staff involved in origination and management of credit.	2.07	0.42
7	Guidelines on management of problem loans.	2.50	0.30

Mean range: Agree = 3.0 – 2.1, Undecided = 1.1 – 2.0, Disagree = 0.0 – 1.9

ADB

Mean of means = 2.19

Mean of Standard Deviation = 0.27

An analysis was carried to find the overall view of the respondents of ADB on the bank's risk management frameworks for managing credit risk. The mean of means of ADB (M = 2.19, SD = 0.27) indicates that the respondents from the bank generally agree with the fact that, the seven frameworks identified are truly frameworks associated with credit risk management in their banks. A mean of standard deviation of 0.27 gives an indication of the closeness of the various responses to each other, in other words, the respondents

response are clustered around the mean of 2.19 (Agree). Empirical findings with respect to board influence are many and conflicting. Sumner and Webb (2005) argued that the board of directors has the responsibility of formulating bank loan policy and to monitor compliance. According to the Demirguc-Khunt and Huzinga (1999), establishment of a clear structure, allocation of responsibility and accountability processes have to be prioritized and disciplined. Responsibilities should be clearly communicated and accountability assigned thereto (Lindergren, 1987).

Effectiveness of the Credit Risk Management Frameworks

What is the level of effectiveness of the credit risk management frameworks

4.6 Assessment of Credit Risk Management Framework of ADB

The credit risk management framework of ADB comprises a comprehensive set of policies, standards, procedures and processes designed to identify, measure, monitor and report significant credit risk exposures in a consistent and effective manner across the bank. This section assesses tools employed by the bank in managing credit risk using the annual reports and credit manuals of the bank as reference materials.

4.7 Credit Risk Management Framework of ADB

The Board of Directors has overall responsibility for the establishment and oversight of the Bank's risk management framework. The board of ADB has established a Board Audit and Risk Committees and a risk department to assist in the discharge of this responsibility. The board has also established the Credit Committee which is responsible for developing and monitoring risk management in their respective areas.

The bank's risk management policies are established to identify and analyse the risks faced by the bank, to set appropriate risk limits and controls, and monitor risks and adherence to

limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions, products and services offered. ADB through its training and management standards and procedures aims to develop a disciplined and constructive control environment, in which all employees understand their roles and obligations.

ADB's Audit and Risk Management Committees are responsible for monitoring compliance with the bank's risk management policies and procedures, and for reviewing the adequacy of the risk management framework in relation to the risks faced by the bank. The Audit and Risk Management Committees are assisted in these functions by Internal Audit and the risk management departments. Internal Audit undertakes both regular and ad-hoc review of risk management controls and procedures, the result of which are reported to the Sub-Board Audit Committee. The Board of Director has delegated responsibility for the management of credit risk to the Credit Committee and Sub-Board Risk Management Committee.

These policies and procedures form part of the principles for managing credit risk put forward by the Risk Management Group of the Basel Committee on Banking Supervision in a consultative paper issued on 30 November, 1999. A separate Credit department, reporting to the Executive Committee, is responsible for oversight of the bank's credit risk, including:

a. Formulating credit policies in consultation with business units, covering collateral requirements, credit assessment, risk grading and reporting, documentary and legal procedures, and compliance with regulatory and statutory requirements.
b. Establishing the authorization structure for the approval and renewal of credit facilities. Authorization limits are allocated to business units. Larger facilities require approval by the Executive Committee members and the Board (Sub Committee) on risk management.

c. Reviewing and assessing credit risk. The credit departments assess all credit exposures in excess of designated limits, prior to facilities being committed to customers by the business unit concerned. Renewals of facilities are subject to the same review process. Limiting concentrations of exposure to counterparties, geographies and industries (for loans and advances), and by issuer, credit rating band, market liquidity and country (for investment securities).

Development and maintaining the bank's risk grading in order to categorise exposures according to the degree of risk of financial loss faced and to focus management on the attendant risks. The risk grading system is used in determining where impairment provisions may be required against specific credit exposures. The current risk grading framework consists of 4 grades reflecting varying degrees of risk of default and the availability of collateral or other credit risk mitigation. The responsibility for setting risk grades lies with the Board of Directors. Risk grades are subject to regular reviews by the Risk Management Department.

d. Reviewing compliance of business units with agreed exposure limits, including those for selected industries, country risk and product types. Regular reports are provided to the credit department on the credit quality of portfolios and appropriate corrective action is taken.

e. Providing advice, guidance and specialist skills to business units to promote best practice throughout the bank in the management of credit risk.

ADB has a risk management department organized into credit control, recoveries and operational control. Under the credit control department, it has credit administration, credit risk appraisal and credit monitoring. The department is responsible for managing all risks to which the Bank is exposed (operational risk, credit risk, liquidity risk, interest rate risk and foreign currency risk).

ADB treats all branches as independent business units which generate their own income, run their own profit and loss account and statement of financial position. The head office consolidates these and exercises oversight responsibility over all the branches. Credit is generated at the branch level and is then channelled through the credit control unit of the risk management department where a credit risk appraisal is performed to assess whether to engage the client or not. The client's file is then moved to the head of risk management and to other appropriate levels (credit committees, board and so on) for final approval before credit is granted.

There is also the monitoring aspect where the head office credit monitoring team monitors the loans and their performance in addition to the monitoring performed at the branch level. Where a loan goes beyond current, it is classified as either other loans especially mentioned (OLEM), substandard, doubtful or loss, as recommended by the Central Bank of Ghana. Where a loan goes beyond current, there is the recoveries team which moves in to recover loan losses. ADB is implementing a different loan classification or structure which is more stringent than those recommended by Central Bank of Ghana.

While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to relax credit standards for borrowers and counterparties, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. Even though banks may apply frameworks to manage the credit, the level of effectiveness of these is quite suspect.

Table 11: Level of Effectiveness of the Credit Risk Management Frameworks (ADB)

S/N	Frameworks	ADB	
		Mean	SD

1	Detailed and formalized credit evaluation/ appraisal process.	4.02	0.18
2	Credit approval authority at various hierarchy levels including authority for approving exceptions.	4.58	0.15
3	Risk identification, measurement, monitoring and control.	3.95	0.20
4	Risk acceptance criteria.	4.11	0.18
5	Credit origination and credit administration and loan documentation procedures.	4.20	0.12
6	Roles and responsibilities of units/staff involved in origination and management of credit.	4.05	0.10
7	Guidelines on management of problem loans.	2.40	0.22

Mean ranges: Very Effective (6.0), Effective (5.0), Partially Effective (4.0), Not Sure (3.0), Less Effective (2.0) and Not Effective (1.0)

ADB

Mean of means = 3.90

Mean of Standard Deviation = 0.16

An analysis was carried to find the overall view of the from ADB on the effectiveness of the bank's risk management frameworks for managing credit risk. A mean of means (M = 3.90, SD = 0.16) indicates that the respondents from ADB generally stated that the frameworks that are being adopted are partially effective. A mean of standard deviation of 0.16 gives an indication of the proximity of the various responses to each other, in other words, the respondents response are clustered around the mean of 3.90 ≈ 4.0 (Partially

Effective). This indicates that the level of effectiveness of the bank's risk management frameworks for managing credit risk ADB. The process of risk management comprises the fundamental steps of risk identification, risk analysis and assessment, risk audit monitoring, and risk treatment or control (Bikker and Metzmakers, 2005; Buttimer, 2001).

Current Recommended Standards and Best Practises by the Basel Committee on Banking Supervision

What are the variations between the two bank's credit risk management practices vis-àvis current recommended standards and best practises by the Basel Committee on Banking Supervision?

The Basel Committee on Banking Supervision provides a forum for regular co-operation on banking supervisory matters. Its objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide. With reference to the standards and best practices put forward by the committee, the researcher sought to find out if standards being practiced by the banks are in line with the standards set out by the Basel Committee on Banking Supervision. This was the focus of research question 4. Table 15 and 16 presents the summary of response.

Table 12: Current Recommended Standards and Best Practises by the Basel Committee on Banking Supervision (GCB, ADB)

No	CORE PRINCIPLES	ADB	
		Mean	**SD**
1	The board of directors should have responsibility for approving and periodically.	4.02	0.19

2	Senior management should have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk.	4.75	0.20
3	Banks should identify and manage credit risk inherent in all products and activities.	4.65	0.17
4	Banks must operate within sound, well-defined credit-granting criteria.	3.58	0.12
5	Banks should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.	4.22	0.09
6	Banks should have a clearly-established process in place for approving new credits as well as the amendment, renewal and re-financing of existing credits.	3.98	0.10
7	All extensions of credit must be made on an arm's-length basis. In particular, credits to related companies and individuals must be authorised on an exception basis, monitored with particular care and other appropriate steps taken to control or mitigate the risks of non-arm's length lending.	3.09	0.18
8	Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.	3.89	0.15

9 Banks must have in place a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves. 4.15 0.06

10 Banks are encouraged to develop and utilise an internal risk rating system in managing credit risk. 4.48 0.02

11 Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities. 3.89 0.15

12 Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio. 4.25 0.08

13 Banks should take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios, and should assess their credit risk exposures under stressful conditions. 4.49 0.14

14 Banks must establish a system of independent, ongoing assessment of the bank's credit risk management processes and the results of such reviews should be communicated directly to the board of directors and senior management. 3.92 0.10

Mean Ranges: Largely Compliance = 5.0 – 4.1, Compliance = 4.0 – 3.1, No More Compliance = 3.0 – 2.1, Non-Compliance = 2.0 – 1.1 Non-Applicable = 1.0 – 0.0

ADB

Mean of means: 4.09
Mean of Standard Deviation: 0.12

With reference to the current recommended standards and best practises by the Basel Committee on Banking Supervision, an analysis was carried to find the level of compliance

of ADB's credit risk management practices vis-à-vis current recommended standards and best practises by the Basel Committee on Banking Supervision. A mean of means (M = 4.09, SD = 0.12) indicates that the responses given by the workers at the credit department of ADB at their various branches also comply with the standards as set by the Basel Committee. A mean of standard deviation of 0.12 signifies the closeness of the various responses to each other, that is, their responses are gathered around the mean of 4.09(Compliance). Pi and Timme (1993) examined the role of the chairman of a bank's board and found that cost efficiency and return on assets are lower for banks that have the same person serving as chairman of the board and chief executive officer (CEO) than for banks without such duality. They also found out that the proportion of insiders or outsiders on the board of directors is unrelated to bank performance. Prowse (1997), among others, examined the power of boards of banks vis-à-vis boards of non-financial firms. He found that much of the monitoring responsibility of banks falls on the regulators, not boards. Simpson and Gleason (1999) also find little evidence of corporate governance characteristics influencing bank activity. Kyereboah-Coleman and Biekpe (2006) examined how corporate governance indicators such as board size, board composition and Chief Executive Officer (CEO) duality impact financing decisions of 47 firms listed on the Nairobi Stock Exchange. They found that firms with larger board sizes employ more debt and the independence of a board correlates negatively and significantly with short-term debts. When a CEO doubles as board chairperson, less debt is employed. Aboagye and Otieku (2010) studied 30 rural and community banks in Ghana using data over the period 2000 – 2005 and concluded that an index that captures the state of corporate governance, outreach to clients, dependence on subsidies and use of technology is not statistically associated with their financial performance. To minimize credit risk, banks are encouraged to use the "know your customer" principle as expounded by the Basel Committee on

Banking Supervision (Kunt-Demirguc and Detragiache, 1997; Parry, 1999; Kane and Rice, 1998).

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This is the final chapter of the study. It contains summaries of the overview of the study and key findings of the study, conclusions and recommendations to improve the Bank's credit risk management systems.

5.1 Overview of the Study

This study focused on the credit risk management of Agricultural Development Bank, and an entire review of the management techniques and practices of the bank in terms of managing credit risk. The objectives of the study were to assess; the credit risk profile of the bank for the period 2011- 2013 financial years, the credit risk management framework of the bank for managing credit risk, the effectiveness of credit risk management framework of the bank for managing credit risk and the variations between the credit risk management practices of the bank vis-à-vis current recommended standards and best practices by the Basel Committee on Banking Supervision.

Due to the aims and objectives of this research, the research design that was adopted for the study was the descriptive survey method. Such a design is nonexperimental. It studies the relationship between non-manipulated variables in a natural setting. The population for the study comprised of the staff Agricultural Development Bank (ADB). The purposive sampling technique was employed in sampling the respondents for the study. In all, a total of 50 workers were used for the study. The study employed both primary and secondary data. The secondary data consisted of the analysis of the various documents and loan portfolios available to the bank. Questionnaire was also employed for the study. The analysis in this study relied heavily on excel models.

Being a comparative study, both descriptive and inferential statistics were used. To make issues clear, percentages and frequency distribution tables were used to support the analysis of the major responses.

5.2 Key Findings

The main findings for the study were:

1. The study brought to light that more than fifty percent of ADB total maximum credit exposure is derived from loans and advances to banks and customers. The bank's share of industry loans and advances was very impressive. However, the bank was still relying on few large corporate clients to build their loan portfolio thus any distress to these large clients posed a threat to their loan size, loan quality and profitability.
2. A mean of means (M = 2.46, SD = 0.60) indicates that the respondents generally agree with the fact that, the seven frameworks identified are truly frameworks associated with credit risk management in their bank.

3. On the effectiveness of the bank's risk management frameworks for managing credit risk, a mean of means (M = 3.90, SD = 0.16) indicates that the respondents generally stated that the frameworks that are being adopted are effective. Again assessment of the annual reports and credit manuals of the bank indicates that they have solid governance structure in place with clear obligations and authority assigned to all who have responsibilities in the risk management process. The framework also outlines various procedures, processes and techniques for handling risks.
4. On the issue of the level of compliance of the bank's credit risk management practices vis-à-vis current recommended standards and best practises by the Basel Committee on Banking Supervision, a mean of means (M = 4.09, SD = 0.12) indicates that the responses given by the workers of the bank at their various branches conform with the standards. In addition, assessment of the annual reports and credit manuals of the bank also shows that bank complies with the standards as set by the Basel Committee on Banking Supervision.

5.3 Conclusions

The findings as briefly summarized above give rise to some conclusions that could be drawn from the analysis. It is evident from the findings that about 58% of the bank's total maximum exposure is derived from loans and advances. However, chunk of the loans and advances are allocated to corporate banking thus exposing the bank to credit risk if not managed well.

Although the quality of loan of the bank is deteriorating, the bank has adopted credit risk frameworks associated with credit risk management. This credit risk frameworks are being implemented quiet effectively. Again, the workers at their various branches comply with

the standards as set by the Basel Committee on Banking Supervision. Management of the bank should consistently and constantly put in place pragmatic measures to mitigate credit risk. Credit risk management underscores the fact that the survival of an organization depends heavily on it capabilities to anticipate and prepare for the change rather than just waiting for the change and react to it. The objective of credit risk management is not to prohibit or prevent credit risk taking activity, but to ensure that credit risk are consciously taken with full knowledge, clear purpose and understanding so that it can be measured and mitigated.

5.4 Recommendations

The foregoing findings reveal that the non-performing loans to gross loans or total credit exposures of the bank are decreasing. However, the percentages recorded indicate that much is still needed to be done in terms of credit risk especially non-performing loans and its management. In view of the important role the bank plays in the economic development of Ghana, it is very essential for all stakeholders, especially management to adopt programmatic measures to minimize the problem of credit risk especially nonperforming loans or bad loans in the bank. Some of these measures were suggested by respondents and the researcher.

1. The bank should diversify their loan portfolio. The bank should therefore substantially diversify their loan portfolio to include very much of retail banking. This enables banks to deal with non-corporate clients or individuals. When a substantial portion of loan portfolio is allocated to retail banking, any

distress to large corporate clients will not significantly pose huge threat to the bank's loan size, loan quality and profitability.

2. Credit risk monitoring and supervision efforts should be intensified by the bank. The bank should ensure that credit officers perform periodic follow-ups on borrowers to ensure that loans are used for the intended purpose. The bank should continue to diversify its lending activities and should allocate more funds to the productive sectors of the economy.
3. There is the need to provide severe sanctions to credit defaulters who do not meet their obligations agreed upon. Therefore, collateral securities should not be the only method used to recover debts. There should be the need to encourage the enactment of strategies and policies to trace defaulters who are nowhere to be found.
4. Management should organize training every three months in order to learn improve the productivity of employees. Frequent training will help to manage credit risk effectively and credit officials will become very competent when analysing and assessing credit to prevent delayed loan approvals, enable credit officers appreciate the need to comply with credit policy and further enhance monitoring of credit.
5. The bank should use technology evaluation criteria in rating loans given to clients/customers. The focus should be on solutions that fit into an overall risk framework as opposed to point solutions that are hard to integrate more desirable in the long term. This focus, in the long term, will decrease the number of overlapping processes and complexity across banking systems.

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APPENDIX

QUESTIONNAIRE

The researcher is a student of Kwame Nkrumah University of Science and Technology pursuing Master of Business Administration (MBA) in finance and conducting a Research on Assessment of Credit Risk Management of Agricultural Development Bank (2010- 2013). In view of this; the Researcher would be grateful if you could provide responses to the questions below. Information provided will be strictly confidential and only be used for the purpose of this study.

SECTION A Background Information

1. Sex: Male [ ] Female [ ]
2. Name of branch ....
3. Does your bank have credit department? Yes[ ] No [ ]
4. Name of Department/ Unit? ....
5. Position/Rank ………………………………………………
6. How long have you been an employee in this bank? …………
7. Highest Educational Qualification SHS [ ] Tertiary [ ] Post Graduate [ ] Professional [ ] Others ……………….
8. What types of risks does your bank manage? Please tick as many as apply. Credit [ ] Operational [ ] Liquidity [ ] Market [ ] Interest Rate [ ] Exchange Rate [ ]
   Others please specify……………..
9. Does your bank regularly organize training programs on credit risk management? Yes[ ] No [ ]

SECTION B

What are the bank's risk management frameworks for managing credit risk?

Please indicate your level of agreement to the following statement as your bank's risk management framework for managing credit risks by ticking [√] the appropriate option.

S/N	Frameworks	Agree	Undecided	Disagree
10	Detailed and formalized credit evaluation/ appraisal process			
11	Credit approval authority at various hierarchy levels including authority for approving exceptions.			
12	Risk identification, measurement, monitoring and control			
13	Risk acceptance criteria			
14	Credit origination and credit administration and loan documentation procedures			
15	Roles and responsibilities of units/staff involved in origination and management of credit			
16	Guidelines on management of problem loans			

17. In your opinion, what other risk management frameworks for managing credit risk are used in your bank?

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SECTION C

To what extent are the risk management frameworks for managing credit risks effective?

Please indicate your level of agreement to the following statement as the extent to which your bank's risk management framework for managing credit risk are effective by ticking [√] the appropriate option. *Very Effective (6.0), Effective (5.0), Partially Effective (4.0), Not Sure (3.0), Less Effective (2.0) and Not Effective (1.0)*

	Frameworks	**6**	**5**	**4**	**3**	**2**	**1**
18	Detailed and formalized credit evaluation/ appraisal process						
19	Credit approval authority at various hierarchy levels including authority for approving exceptions						
20	Risk identification, measurement, monitoring and control						
21	Risk acceptance criteria						
22	Credit origination and credit administration and loan documentation Procedures						
23	Roles and responsibilities of units/staff involved in origination and management of credit						
24	Guidelines on management of problem loans.						

SECTION D

What are the variations between the bank's risk management practices vis-à-vis current recommended standards and best practises by the Basel Committee on Banking Supervision?

Please indicate your level of agreement to the following statement by ticking [√] the appropriate option. *Largely Compliance = 5.0, Compliance = 4.0 No More Compliance = 3.0, Non-Compliance = 2.0 Non-Applicable = 1.0*

	CORE PRINCIPLES	**5**	**4**	**3**	**2**	**1**
25	The board of directors should have responsibility for approving and periodically.					
26	Banks should identify and manage credit risk inherent in all products and activities.					
27	Banks must operate within sound, well-defined credit-granting criteria.					
28	Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.					
29	Banks should have a clearly-established process in place for approving new credits as well as the amendment, renewal and re-financing of existing credits.					
30	Banks are encouraged to develop and utilise an internal risk rating system in managing credit risk.					
31	Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio.					

32. What other standards and best practises put forward by the Basel Committee on Banking Supervision are currently practiced in your bank?

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