

**EFFECT OF CREDIT RISK ON THE PROFITABILITY OF RURAL BANKS  
IN GHANA: A CASE OF ATWIMA KWANWOMA RURAL BANK LIMITED**

By

Gladys Adjeitsey (BBA. Accounting)

A thesis submitted to Department of Accounting and Finance  
Kwame Nkrumah University of Science and Technology School of Business  
in partial fulfilment of the requirements  
for the degree of

**MASTER OF BUSINESS ADMINISTRATION (FINANCE-OPTION)**

School of Business, KNUST

College of Humanities and Social sciences

AUGUST, 2015

**DECLARATION**

I, Gladys Adjeitsey hereby declare that this submission is my own work and that, to the best of my knowledge, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Gladys Adjeitsey	.....	.....
(PG9648713)	Signature	Date

Certified By:

Prof. K. D. Kessey	.....	.....
(Supervisor)	Signature	Date

Certified By:

Dr. Kingsley O. Appiah	.....	.....
(Head of Department)	Signature	Date

## **DEDICATION**

I dedicate this work to the Lord God Almighty as well as my son, Ivan Elom Dogbey and my dear husband, Mr. Ernest Dogbey who supported me throughout my education.

## **ACKNOWLEDGEMENT**

I will give my greatest gratitude to my God who protected and guided me throughout this programme and I am very grateful to the almighty God who gave me the strength and the wisdom to conduct this study. I also extend my deepest gratitude to Professor D. K. Kesse, my supervisor who guided me throughout the beginning to the end of the study. Also, special thanks goes to all those who supported me to go through this course.

I am also indebted to all Credit Officers, Mobile Bankers, the Management and staff of Atwima Kwanwoma Rural Bank Limited who gave me this opportunity to pursue this course. Finally, I would also thank my family, friends and loved ones who helped in diverse ways to enable me come out with this work.

## ABSTRACT

Rural banks including Atwima Kwanwoma Rural Bank Limited are faced with the credit risk of losing part or the entire loan including the interest receivable on such loans. This negatively affects the bank and reduces its financial strength to meet its financial obligations to customers. It is on this basis that the current study employs a mixed approach to investigate the effect of credit risk on the profitability of AKRBL. The study employed a questionnaire to gather data from 40 staff of AKRBL. The result of the study showed that the credit facilities of the rural bank are associated with several forms of risk including debtor's insolvency, financial loss resulting from changes in the level of credit spreads, debt uneconomical to pursue and when debtor abscond. The study further showed that to reduce the level of risk associated with the loans granted to customers, a set of criteria is employed to appraise prospective clients. The criteria includes appraising the applicants character, applicants extent of involvement in the business, experience in credit utilisation, profit and loss statement, security, ability to pay and borrowers repayment history. Notwithstanding, the rural bank has witnessed an average amount of default of GH¢6,142.9 and default rate of 6.9%. The study revealed negative relationship between the level of non-performing loans and loan loss provisions on the profitability of the bank. However, the loans and advances, liquidity and the capital adequacy ratio of the rural bank have positive relationship with the profitability of the rural bank. The major strategy employed by the rural bank in managing credit is the provision of incentive for prompt payment of acquired loans. Despite these strategies to reduce the level of credit risk, the rural bank is still confronted by several challenges in the management of credit risk including the diversion of loans, customer business failure, inadequate appraisal, inadequate monitoring, inadequate credit staff, inadequate security, staff attitude and staff influence. Based on these findings, the study recommends the provision of training programmes for credit officers, the need for adequate loan management educational programmes and the need for effective follow up of credit on continuous basis from disbursement to full payment.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>DEDICATION</b> .....	<b>iii</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>iv</b>
<b>ABSTRACT</b> .....	<b>v</b>
<b>TABLE OF CONTENTS</b> .....	<b>vi</b>
<b>LIST OF TABLES</b> .....	<b>ix</b>
<b>LIST OF FIGURES</b> .....	<b>x</b>
<b>LIST OF ACRONYMS</b> .....	<b>xi</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the Study .....	1
1.2 Problem Statement .....	4
1.3 Objectives of the Study.....	5
1.4 Research Questions .....	5
1.6 Significance of the Study .....	5
1.7 Scope of the Study .....	7
1.8 Organisation of the Study .....	7
<b>CHAPTER TWO</b> .....	<b>9</b>
<b>LITERATURE REVIEW</b> .....	<b>9</b>
2.1 Overview of the Rural Banking in Ghana.....	9
2.2 Risk Definitions .....	13
2.3 Types of Risks in Banking.....	13
2.3.1 Interest Rate Risk.....	15
2.3.2 Credit Risk .....	16

2.3.3 Liquidity Risk .....	18
2.3.4 Operational Risk .....	20
2.4 Risk Management .....	23
2.5 Credit Risk Management .....	26
2.6 The Concept of Credit Risk Management and Profitability .....	30
2.7 Effect of Credit Risk on Banks Performance.....	32
2.8 Conceptual Framework of the Study .....	39
<b>CHAPTER THREE .....</b>	<b>41</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>41</b>
3.1 Outline of Research Methodology .....	41
3.2 Research Design.....	41
3.3 Population of the Study.....	42
3.4 Sample Size and Sampling Techniques .....	43
3.5 Data Collection .....	44
3.5.1 Pilot Study.....	45
3.5.2 Data Collection Instruments .....	45
3.5.3 Data Preparation, Collation and Processing.....	46
3.6 Data Analysis .....	47
3.6.1 Model Specification .....	48
3.7 Data Validity and Reliability .....	49
3.8 Ethical Consideration.....	50
<b>CHAPTER FOUR.....</b>	<b>51</b>
<b>PRESENTATION AND DISCUSSION OF RESULT .....</b>	<b>51</b>
4.1 Socio Demographic Characteristic of Respondents.....	51
4.2 Forms of Credit Risk in the Rural Bank .....	52

4.2.1 Criteria Used By the Rural Bank in Appraising Customers for Loans.....	54
4.2.2 Causes of Credit Risk.....	55
4.3 Strategies to Manage Credit Risk of the Rural Bank.....	58
4.4 Effect of Credit Risk on the Rural Bank’s Profitability.....	61
4.5 Challenges Encountered in Credit Risk Management Practices.....	63
<b>CHAPTER FIVE .....</b>	<b>66</b>
<b>SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS 66</b>	
5.1 Summary of Findings.....	66
5.2 Conclusions.....	67
5.3 Recommendations.....	69
5.4 Limitations and areas for future studies.....	70
<b>REFERENCES.....</b>	<b>71</b>
<b>APPENDIX.....</b>	<b>77</b>

## LIST OF TABLES

Table 2.1: Regional Distribution of RCBs and Branches .....	10
Table 2.2: Deposits Mobilization, Loans and Total Assets of RCBs vs DMBs .....	11
Table 3.1: Sample Size Distribution .....	44
Table 3.2: Definition of the Multiple Regression Variables .....	49
Table 4.1: Socio Demographic Characteristics.....	51
Table 4.2: Criteria used by the Rural Bank in Appraising Loans of Customers .....	54
Table 4.3: Causes of Credit Risk in the Rural Bank .....	56
Table 4.4: Amount and Rate of Loan Default.....	57
Table 4.5: Credit Risk Management Strategies .....	60
Table 4.6: Effect of Credit Risk on Profitability.....	62
Table 4.7: Encountered Challenges in Credit Risk Management Practices.....	64

## LIST OF FIGURES

Figure 2.1: Risks Associated With Banking .....	14
Figure 2.2: Strategies of Risk Management.....	25
Figure 2.3: Conceptual Framework of the effect of Credit Risk Mgmt. on Profitability .....	40
Figure 4.1: Types of loans given to customers .....	53
Figure 4.2: Default Rate of AKBRL (2008-2014).....	58

## LIST OF ACRONYMS

<b>ABBREVIATIONS</b>	<b>MEANING</b>
RCBs	Rural and Community Banks
AKRBL	Atwima Kwanwoma Rural Bank Limited
BOG	Bank of Ghana
BIS	Bank of International Settlement
RBZ	Reserve Bank of Zimbabwe
GCC	Gulf Cooperation Council
SPSS	Statistical Programme for Social Sciences
LLP	Loan Loss Provisions
NPL	Non-Performing Loans

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

The banking sector performs a crucial function in the business intermediation procedure of all economies rendering its efficacy and efficiency a vital prerequisite in safeguarding solidity and growth (Halling & Hading, 2006). Valuable economic activities are engaged by banks in an attempt to ensure their survival and profitability (Diamond & Rajan, 2001). Smooth flow of funds is safeguarded at the asset side of the balance sheet of banks by loaning to deficit spending units whereas delivering liquidity to savers on the liability side. Furthermore, expediting trade via the delivery of payment and settlement systems, safeguarding the prolific investment of wealth and the profitability of other diverse purposes according to Jenkinson (2008) make banks vulnerable to a large number of risks including human resource risk, interest rate risk, foreign exchange risk, market risk, credit risk, regulatory risk, and liquidity risk. To attain greater profitability feat, financial institutions are therefore obliged to put up efficient and effective risk management mechanism to eliminate or reduce risk employing varying managerial resources (Appa, 1996), and so risk management has moved to center stage in defining superior performance of financial institutions (Haneef et al., 2012).

Credit arrangement is the key income bringing forth action for the money related area (Nawaz et al., 2012). Be that as it may, this activity incorporates more serious dangers to both the borrower and the loan specialist. The dangers connected with exchanging partners not meeting their obligation according to the concession to obliged period or at whatever time a while later may essentially jeopardize the smooth running of

business of the budgetary foundation (Nawaz et al., 2012). Alternatively, money related organizations have high liquidation hazard on the off chance that they have high credit danger, and this places the savers in threat. While trying to proceed with operation and maintain acceptable benefit level in the to a great degree focused environment, monetary organizations are slanted to manage compelling dangers. In any case, the upsurge penchant for gigantic danger taking has prompted chapter 11 and setback of a various budgetary foundation (Haneef et al., 2012). Throughout the years, banks have stood up to challenges for various components including careless advance qualities for indebted individuals and counterparties, lacking gathering peril supervision, or deficient commitment to modifications in money related circumstances of the nation may result to declining in the advance necessities of a bank's counterparty (Gil Diaz, 1994). It is in this manner clear that budgetary establishments utilize more noteworthy energy to make agreeable net income through credit hazard administration. In this way to enhance a budgetary organization's risk adjusted rate of incomes by maintaining advance threat experience inside palatable limit in order to offer a framework of the understanding the impact of credit peril organization on the money related foundations net income.

Cai and Anjan (2008:23) characterized acknowledge hazard as "credit organization is the most essential capacity of the keeping money industry. It is the most unsafe and troublesome, and in the meantime most gainful capacity performed by banks." The basic arranged movement a money related establishment supplements have persistently depended on its ability to man credit threats. It is uncommon for this to be done fittingly without an effective threat assessment, control and supervision strategies. Viable money related exercises require that monetary organization initiate

values for evaluating and affirming customers advance solicitation to protect that credit given are paid. Regardless, inferable from lacking advance administration ascribed to slips by and pollution in risk assessment and administration systems, poor and doubted credits unmovingly take unpackaged charge on money related yield result to budgetary organizations to experience built up anguish and certain, aggregate unexpected disappointment. In the interim advancing passes on a levelheaded offer of store divulgence of credit monetary foundations in Ghana, the ability of a money related organization to deliver much net income is basically relied on upon agent and viable running of its crediting gathering.

Notwithstanding the procedures established to ensure savers and other partner commitments, the recurrence of budgetary organizations enduring and frustration is on the upsurge in credit coin foundations in Ghana. This is ascribed to enhanced net income of money related establishments default, dwindled budgetary quality and free charge nearby net incomes coming about because of wasteful advance and liquidness peril organization. From now on, a monetary foundations supportability and profitability is dependent on arranged advance and liquidness peril authoritative practices communicated and connected completely. The instruments for proficient utilization of these practices could be affixed on the way of life and vision of the money related establishment, the general credit risk arrangements, and the advance systems utilized in the comprehension of arranged goalmouths and purposes of the monetary organizations notwithstanding the development estimates of such budgetary foundations. In view of these actualities, it is basic to assess the impact of danger connect to credit on the productivity of Ghana's rustic banks.

## **1.2 Problem Statement**

Considering the upsurge of loan operations, loan activities extension has been experienced in the Ghana's banking arena. The tendency of activities in this arena indicates that "bank deposit-loan ratio" upsurges everyday as the economy expands. However, loan danger is on the upsurge with an upsurge in demand for credit. Conventionally, loan is made accessible in relation to individual's economic standing, enterprise sustenance, character and liquidness; nonetheless the unbalanced condition of Ghana's economic arena brands it problematic for financial institutions to depend on the above-mentioned factors. Commercial circumstances are frequently undependable and may result to alterations in the loanee's economic standing and affect their capability to refund the credit in the contracted period.

Many rural banks including the Atwima Kwanwoma Rural Bank Limited are often confronted with the loan danger of losing a share or all credit plus the charges on attracted by credit facility. This inverse influence of the financial institution and decreases the economic acumen to attend its' economic duties in the contracted time frame. With these unrestrained situations, the liquidness of the financial institution is endangered. A bank's liquidness is regarded as the achievement of a financial institution, whose ineffective administration creates an inventory of challenges to financial institution and the national economy. The greater penalties of inadequate loan and liquidness administration separate from dwindle in net revenue constitute forfeiture of self-assurance in the financial institutions' capacity to bear out its functions, mistrust of banks by clients and other clients comparable and the associated decrease in the activities of the bank. On the basis of these facts, it is

imperative to evaluate the influence of risk manning on the net revenue of the Atwima Kwanwoma Rural Bank Limited.

### **1.3 Objectives of the Study**

The general objective of the research is to evaluate the effect of credit risk on the profitability of Atwima Kwanwoma Rural Bank Limited (AKRBL). However, specifically the study seeks to:

1. Identify the major forms of credit risk of Atwima Kwanwoma Rural Bank Limited;
2. Evaluate the influence of credit uncertainties on the profitability of the bank;
3. Identify the measures adopted to manage the bank's credit risk; and
4. Discuss the challenges of the credit risk management practices of the bank.

### **1.4 Research Questions**

Based on the direction and emphasis of the study, numerous critical questions are required to be answered. These critical questions include:

1. What are the major types of credit facing AKRBL?
2. What is the effect of credit risk on the profitability of rural banks?
3. What measures are adopted to manage credit risk at the bank?
4. What challenges confront the credit risk manning practices of the bank?

### **1.6 Significance of the Study**

Financial institutions capacity contributes to the steadiness and development of nation. According to Tabari et al. (2013), the steadiness of financial institution relies on the performance and banking risk variables. A comprehensive analysis of available

studies related to bank's profitability has resulted to some level of awareness of the inadequacy of the deduction of association between management of risk and profitability of rural financial institution's in Ghana. The majority of author's have relied on numerous developed nations and brought out varying findings. Nevertheless, there are rare studies of this nature in the Ghanaian context. Consequently, the current study has realised the presence of study break and devotes input to bridge it through the current study.

For a theoretic influence, the current research could bridge the study break on the effect of credit uncertainty administration on the performance of rural banks. Accordingly, the current study could offer more wide-ranging information to academicians and the general reading public. Additional influence could be that the current study could provide the framework for other academicians who desire to conduct additional research in similar sector.

From a practical perspective, the result of the current study could be of immense help to policy makers, bank managers, board members, financial investors and many others. The bank managers, board members could rely on the findings of the study to put in place appropriate measures to reduce the credit risk of rural banks and hence ensure greater performance. Investors can also rely on the findings of the study to make judicious financial investment decisions. Policy makers can also put in place appropriate measures or framework to safeguard the performance and survival of the rural banking sector.

## **1.7 Scope of the Study**

The current study thematically is limited to identifying the major causes of credit risk at Atwima Kwanwoma Rural Bank Limited, examine their effect on the banks profitability, identify the measures adopted to manage credit risk, and the challenges of the credit risk management practices of the bank. The study was also limited to studying the thematic areas in the context of Atwima Kwanwoma Rural Bank Limited.

## **1.8 Organisation of the Study**

The research is structured in five chapters. The first chapter provides a background which covers general knowledge related to the research topic. The chapter also presents the study objectives and questions, the importance of the research, justification of the research and limitations.

The second chapter reviews related literatures or studies relevant to the current study. The major reviewed materials or literatures are in the areas of credit risk management and rural bank profitability. The critical measurement tools (ROA, NPL, LA, LLP, CL, TD, EQ, LQ, and TA) and models in the study are.

In the chapter three, the study presents practical research methodology in a statistical manner. The chapter further examines additional data including the target population, sample size and the data collection instruments.

The chapter four of the study presents the result from two perspectives. Firstly, it presents the descriptive result. Secondly, it presents the result of the inferential

regression analysis of the study. Chapter five of the study summarises the findings, and provide conclusion for the study. The initial portion of this chapter is the summary of the result findings of the study and the last part provides both managerial and policy recommendations for the use of government, managers of banks and the general public.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

The chapter reviews relevant literatures in the academic field of credit risk and the profitability of banks. The chapter reviews rural banking in Ghana, risk definition, and the types of risks in banking. The chapter also examines risk management, credit risk management in banks, credit risk management policy or philosophy, credit risk management practices, and banks credit culture. The chapter further reviewed empirical literatures on the concept of credit risk management and profitability.

#### **2.1 Overview of the Rural Banking in Ghana**

“The concept of rural banking was adopted from the Philippines by the Bank of Ghana in the 1960s, making it part of the formalized system of banking in Ghana and later made it operational legally in 1976. Rural and community banks (RCBs) are possessed and man in Ghana by associates of the local community more suitably a district. Though RCBs function as profit-making financial institutions, RCBs are not allowed to operate wholly fledged agencies in other districts (Aboagye & Otioku, 2010). RCBs are required by law to deliver formal financial middle role to rural dwellers (deployment of rural saving from surplus bounds and entrench them as loan facilities to needed firms and individuals, predominantly SMEs); formation of the philosophy of formalized banking amongst dwellers of rural communities; and equip dwellers of remote communities; and encourage industrialization in the rural areas (BOG, 2006)”.

“The ARB Apex bank had a conglomerate of one hundred and thirty three (133) self-regulating ARBs as at July 2012, with branches of 564 and service delivery location

of 548 throughout Ghana ([www.arbapexbank.com](http://www.arbapexbank.com)). Table 2.1 shows the regional distribution of the RCBs in Ghana. The regions with more than twenty (20) RCBs are Ashanti, Brong Ahafo, Central and Eastern. The dominant force in the regional distribution of RCBs and branches is the Ashanti region. The region has 24 RCBs and 111 branches of RCBs (ARB, 2012). The Ashanti region is followed by the Eastern region in the channeling of the objectives of the rural banking sector in Ghana. Eastern region has 22 RCBs and 85 branches whereas the Central region boasts of 21 RCBs and 68 branches. Some of the least regional forces in the regional distribution of RCBs and branches are the Greater Accra, Northern, Upper East, and the Upper West regions. These regions have less than 10 RCBs and less than 15 branches as shown by Table 2.1”.

**Table 2.1: Regional Distribution of RCBs and Branches**

SN	Region	Number of RCBs	Number of Branches
1	Ashanti	24	111
2	BrongAhafo	20	69
3	Central	21	68
4	Eastern	22	85
5	Greater Accra	6	13
6	Northern	6	3
7	Upper East	5	10
8	Upper West	4	3
9	Volta	12	22
10	Western	13	55
	Total	133	439
	Head office + Branches = 564		

Source: ARB Apex Bank, 2012

“RCBs make up about 50% of the overall banking sector in Ghana and are the largest providers of formal financial services to rural dwellers (IFAD, 2008). As at 2008, all the RCBs had raised a total of GH¢343.9 million deposit, advanced of GH¢224.7 million loans, delivered GH¢63.3 million domestic money transfers, GH¢9.3 million

international money transfer and facilitated cheques clearance worth GH¢993.7 million (Nair & Fissaha, 2010). The combined profit and net value stood at GH¢15.6 million and GH¢622.3 million in 2008 respectively. Nevertheless, a contrast of their performance against that of deposit money banks (DMBs) as in Table 2.2 shows that the percentage of mobilized total deposits by RCBs averaged only 7%, 4% for loans and 6% for total asset (Aboagye & Otioku, 2010). From Table 2.2, the span of studied years indicates patronage of RCBs by Ghanaians of different walks of life. The deposits received by RCBs over the period increased at a tremendous volumes reaching GH¢32,473 in 2006. The average deposits over the span of years of considered is GH¢16,082.7. With this average deposit, the RCBs were able to stimulate the businesses of many rural dwellers by given an average loan of GH¢12,178.1. In the nutshell, the RCBs over the period has made an average asset of GH¢27,338 as shown in Table 2.2”.

**Table 2.2: Deposits Mobilization, Loans and Total Assets of RCBs vs DMBs**

Years	Deposits			Loans			Total Asset		
	DMBs	RCBs	% RCBs	DMBs	RCBs	% RCBs	DMBs	RCBs	% RCBs
2000	4,668	200	3	5,064	69	1	11,948	268	2
2001	7,232	316	4	6,234	122	2	15,651	432	3
2002	10,767	1201	11	6,914	527	8	19,236	1590	8
2003	14,917	1357	9	10,493	529	5	24,847	1791	7
2004	19,481	1684	9	13,319	716	5	31,224	2259	7
2005	23,041	1684	7	17,938	716	4	37,430	2259	6
2006	32,473	2245	7	25,285	1072	4	51,030	2967	6
Mean	16,082.7		7%	12,178.1		4%	27,338		6%

Source: Bank of Ghana, Aboagye and Otioku, 2010

"This execution is low given the way that RCBs are presently more than DMBs, and the way that RCBs have 70% of the populace as their objective business sector. As a consequence of this execution of RCBs, Aboagye and Otioku (2010) communicated

reasons for alarm that assembling reserve funds and propelling credits as at such low levels may not prompt the fancied financial change which rustic banks are required to realize. So also, Bushin and Akpalu (2010) prescribed that RCBs must do much to raise their extension in light of the fact that the level of advances and advances given are too low.

The Central bank of Ghana has classified the commercial performance of 17 out of the 133 RCBs in the market as unexceptional, and others as economically distraught. Six of the 17 average RCBs were perceived to have negative net value (Nair & Fissaha, 2010). Aboagye and Otieku (2010) conducted a study on 30 RCBs; amongst others examined the financial strength in terms of total asset, total deposits, total loans, non-performing loans, and interest expenses ratio, and indicated that there are neither any outstanding nor average performing rural banks. They rather indicated that all RCBs are average performers or distant performers”.

The Bank of Ghana closed 23 RCBs in June 2007 due to poor performance. The BoG (2001) recognized the reasons for the failure of RCBs as incompetence of the management, fraud, misappropriation, carelessness or inefficient board of directors, indecorous financial records, nonconformity to guidelines in given insider loans, tenacious recuperating and bribery, poor savings generation, use of less skilled employees, non-tendering of provident earnings, unearning assets and non-performing loan collections.

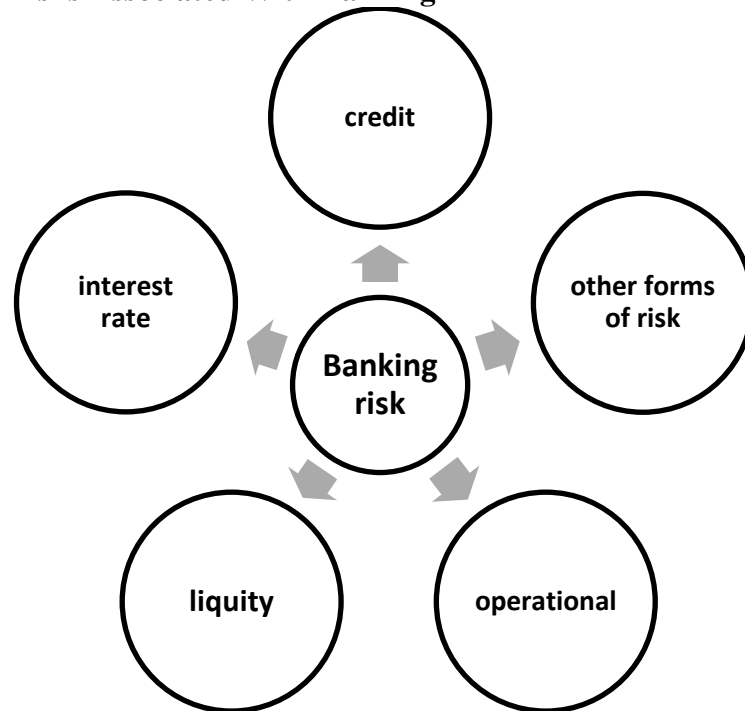
## **2.2 Risk Definitions**

Risk has long been considered particularly in the most recent years. It is one of those ideas that don't have a general definition. Each creator has an alternate way to deal with danger. Gallati (2003) characterizes hazard as a condition in which there exists a presentation to misfortune, or a condition in which there exists a plausibility of deviation from a coveted result that is normal or sought after. Different definitions (Bessis, 2002; Machiraju, 2008; Schroeck, 2002) incorporate the limitation that hazard is taking into account certifiable occasions, including a blend of circumstances in the outer environment. In any case, tragically this definition does not think seriously about the circumstances in the inside environment. Numerous emergencies in the economy and the money related administrations industry happen due to issues inside of associations. The money related markets have been continually changing in the course of the most recent decades and dangers obliged the patterns in these business sectors. Business banks attempt the vital procedure of money related intermediation whereby the stores or reserve funds of the surplus division are diverted to shortage part. Budgetary intermediation can improve development by pooling trusts of the little and scattered savers and allotting them for interest in an effective way by utilizing their instructive favorable position as a part of the advance business sector (Machiraju, 2008)

## **2.3 Types of Risks in Banking**

Banks that deal with their dangers have an upper hand. They go out on a limb deliberately, suspect unfavorable changes and shield themselves from such changes. Figure 2.1 is a brief depiction of the sorts of dangers that banks need to shield themselves from.

**Figure 2.1: Risks Associated With Banking**



Source: Bessis, 2002, p. 12

As portrayed from the figure over the banks need to oversee more sorts of dangers keeping in mind the end goal to expand the shareholders' riches. The most essential classes of dangers incorporate credit danger, interest rate hazard, liquidity danger and operational danger. Credit danger emerges when a bank can't get back the cash from advances or ventures. Premium rate danger emerges when the business estimation of a bank resource, advance or security falls when premium rates rise. The dissolvability of the bank would be undermined when the bank can't satisfy its guarantee to pay a settled add up to investors as a result of the decrease in the estimation of the advantages brought on by expansion in premium rate. Liquidity danger emerges when the bank is not able to meet the requests of investors and needs of borrowers by transforming resources into money or obtain stores when required with insignificant misfortune. What's more, to wrap things up, operational danger emerges out of failure to control working costs, particularly non-intrigue costs, for example, pay rates and wages. In a focused situation high operational costs would endanger the bank's

prospects to survive. Obviously these are not by any means the only classes of dangers that banks need to look into when planning a danger administration technique. There must be mulled over the dangers that could come about because of the political circumstance from that (nation chance), the vacillations of the remote trade rates (outside coin hazard); the mechanical advances (natural dangers) et cetera.

### **2.3.1 Interest Rate Risk**

As indicated by Kortewege and Polson (2008:13), "the net premium salary, the distinction between premium wage and premium cost, is the principle determinant of the benefit of banks. It is dictated by interest rates on resources and paid for trusts, volume of stores, and as an outcome the adjustments in interest rate influence the net interest salary. Interest rate danger is the potential negative effect on the net interest salary and it alludes to the powerlessness of a foundation's monetary condition to the development in interest rates. Changes in premium rate influence profit, estimation of benefits, obligation shaky sheet things and income. Consequently, the goal of premium rate hazard administration is to look after profit, enhance the capacity, the capacity to retain potential misfortune and to guarantee the amplexness of the remuneration got for the danger taken and influence danger return exchange off."

Every single monetary organization face interest rate hazard. Changes in premium rates influence both bank's procuring and costs furthermore the monetary estimation of its advantages and liabilities. The impacts coming about because of these progressions are reflected in the bank's capital and salary. Bank controllers and administrators place awesome accentuation on the assessment of bank premium rate hazard administration. These have started to develop in significance since the usage of

business danger based capital charges suggested by the Basel Committee. Premium rate hazard administration contains different strategies, activities, and methods that banks utilization to decrease the danger of lessening of its net value as a consequence of unfavorable changes in premium rates (van Greuning, BrajovicBratanovic, 2003)".

### **2.3.2 Credit Risk**

The territory of credit danger got significant force (Bharath & Shumway, 2008; Davydenko, 2008; Korteweg& Polson, 2008) inferable from the expanded competition in the division and the hindrances of the money related inconveniences of the 2007/8. As indicated by Bharath (2008:14), "Credit danger is one of the primary dangers of business banks that will influence the banks' capacity of manageable operation."

Bharath (2008:15) further reported that "the banks accept credit hazard when they go about as middle people of stores and credit hazard administration lies at the heart of business keeping money. Investigations of keeping money emergencies demonstrate that the most continuous variable in the disappointment of banks has been poor credit quality. The credit hazard administration procedure of a bank is accepted to be a decent marker of the nature of the bank's advance portfolio. Acknowledge danger rose as a noteworthy danger administration issue amid the 1990s. In progressively focused markets, banks started assuming more prominent credit hazard in this period. In a 1996 report the Bank of International Settlement (BIS) characterized acknowledge hazard as the danger that a counterparty won't settle a commitment for full esteem, either when due or whenever from there on. In return for worth frameworks, the

danger is by and large characterized to incorporate substitution danger and key danger."

Credit risk covers all dangers identified with a borrower not satisfying his commitments on time. Indeed, even where resources are precisely coordinated by liabilities of same development, the same interest rate conditions and the same cash, the main on monetary record danger remaining would be credit hazard. There are two primary sorts of credit hazard that a portfolio or position is presented to, credit default hazard and credit spread danger. Credit default danger is the danger happening when a backer of obligation, obligor, is not able to meet its money related commitments. Where an obligor defaults, a financial specialist for the most part brings about a misfortune equivalent to the sum owed by the obligor less any recuperation sum which the speculator recoups as an aftereffect of dispossession, liquidation or rebuilding of the defaulted obligor. All portfolios with credit introduction display credit default hazard. The size of credit default danger is depicted by a company's FICO score. The FICO score is declared after a formal examination of the borrower. This investigation is attempted by rating offices. The most known rating organizations are Fitch Ratings, Moody's and Standard & Poor's. Keeping in mind the end goal to evaluate the examination a few issues are broke down. Among these issues there are: the asset report position and expected money streams and incomes, nature of administration, organization's capacity to meet booked premium and key and a viewpoint of the business in general.

### **2.3.3 Liquidity Risk**

Bharath (2008:15) uncovered that "Liquidity of bank may be characterized as the capacity to meet expected and unexpected money needs. Money needs emerge from withdrawal of stores, obligation developments and credit disbursements. The necessity for money is met by expansions in stores and borrowings, advance reimbursements, venture developments and the offer of advantages. Insufficient liquidity can prompt unforeseen money shortages that must be taken care of at exorbitant expense which decreases gainfulness." According to Crouhy, Galai, & Mark (2005), this could likewise result to liquidity insolvency of the foundations denied of being monetarily bankrupt.

Van Greuning, BrajovicBratanovic (2003:17) stipulates that "Bank liquidity administration approaches ought to contain a danger administration structure, a liquidity administration and financing system, an arrangement of breaking points to liquidity hazard exposures, and an arrangement of methods for liquidity arranging under option situations, including emergency circumstances. Liquidity is important for banks to make up for expected and sudden asset report changes and to give stores to development. A bank has satisfactory liquidity potential when it can acquire required subsidizes immediately and at a sensible expense. The cost of liquidity is a component of economic situations and the market's impression of the natural hazard of the getting foundation."

van Greuning, BrajovicBratanovic, (2003) further proposed that "The significance of liquidity rises above the individual foundation, on the grounds that a liquidity shortage at a solitary establishment can have framework wide repercussions. It is in

the way of a bank to change the term of its liabilities to distinctive developments on the advantage side of the asset report. Liquidity dangers are regularly overseen by a bank's benefit obligation administration panel (ALCO), which should consequently have an intensive comprehension of the interrelationship in the middle of liquidity and other market and credit hazard exposures on the monetary record. Anticipating conceivable future occasions is a crucial piece of liquidity arranging and danger administration. An assessment of regardless of whether a bank is adequately fluid relies on upon the conduct of money streams under diverse conditions. Liquidity hazard administration should along these lines include different situations."

Crouhy, Galai, & Mark (2005) recommended that "the first situation, likewise called "going concern" is commonly connected to the administration of a bank's utilization of stores. This situation builds up a benchmark for equalization sheet-related money streams amid the typical course of business. The second situation is identified with a bank's liquidity in an emergency circumstance, when a huge piece of its liabilities can't be moved over or supplanted. Furthermore, to wrap things up, the third situation is identified with general business sector emergencies. For this situation the liquidity is influenced in the whole managing an account framework. Liquidity administration under this situation is predicated using a loan quality, with huge contrasts in subsidizing access existing among banks. The capacity to promptly change over resources into money and assets to different wellsprings of financing in the case of a liquidity deficiency is vital. Broadened liabilities and financing sources as a rule show that a bank has all around created liquidity administration. The level of broadening can be judged by sorts, the kind of trust supplier, and topographical market.

### **2.3.4 Operational Risk**

Albeit operational danger is without anyone else's input not another idea, it has by a wide margin not got the same measure of consideration as credit and business sector hazard until late years. Operational danger turns into a noteworthy imperative since include taking suitable measures to guarantee the subjective exchanges without preparing mistakes so as to convey the best administrations to the clients. Basic changes in monetary markets, expanding globalization and deregulation, and also corporate rebuilding had a substantial effect on the extent and nature of operational dangers defying banks. Taking after extreme operational disappointments bringing about the rebuilding of the influenced monetary establishments (e.g. Natwest, Allied Irish Bank, LTCM) or in the offer of the element (e.g. Barings), the accentuation on operational danger inside of banks has expanded, driving controllers, evaluators, and rating offices to grow their center to incorporate operational dangers as a different element other than business sector and credit hazard (Helbok and Wagner, 2006)".

According to Haubenstock and Andrews (2001:12), "the operational peril was interestingly viewed as an autonomous regulatory issue in the Operational Risk Management file appropriated by the Basel Committee on Banking Supervision in 1998. The New Basel Capital Accord was at first point by point in a recommendation in 1999, released in 2001 and got the chance to be effective in 2007; within the structure, operational risk was joined in the assumed Pillar 1 which derives its thought in the estimation of a banks' general capital charge. Close by correcting the base capital measures authoritatively covering credit and business risk, Basel II sets another slightest capital standard for operational peril. While obliging subsidizing to guarantee against operational peril disasters, the new framework is expected to urge

banks to upgrade their threat organization strategies as to reduce operational risk presentation and diminish mishaps coming to fruition on account of operational dissatisfactions. The new capital accord gives spurring power of lower capital necessities to those banks that display invigorated risk organization rehearses and lessened threat exposures."

"As one of the headways proposed by the Basel II, the operational threat is described by this foundation as "the peril of quick or roaming mishap coming to fruition in view of lacking or failed inward systems, people and structures or from outside events". As demonstrated by Santomero (1997), "this approach is according to diverse emotions that consider operational peril joined with the issues of unequivocally taking care of, settling, and taking or making movement on trades exchange for cash. Regardless, operational risk is a term that has a variety of suggestions within the sparing cash industry, and as needs be for inside purposes banks may choose to grasp their own particular implications of operational threat. This internal definition should respect the individual situation of every bank, for instance, its size, and refinement, its propensity and multifaceted nature of its activities in a money related manner, considering the full extent of material operational threats standing up to the bank and gets the most tremendous explanations behind amazing operational incidents."

Haubenstock and Andrews, (2001) similarly recommend that "the organization of operational risk is not another practice; it has constantly been basic for banks to endeavor to envision distortion, keep up the genuineness of inside controls, reduce goofs in return get ready, in this manner on with a particular final objective to defend the best quality organizations for their customers, also in light of the way that slip-ups

can provoke immense hardships. Then again, what is for the most part new is the point of view of operational peril organization as a broad practice proportionate to the organization of credit and business risk on a basic level. Beforehand, banks depended exclusively upon inside control instruments within business lines, supplemented by the survey limit, to administer operational threat. While these stay crucial, starting late there has been an ascent of specific structures and methodology went for directing operational risk."

"There are an awesome number of alternatives that administration can decide for overseeing operational danger. These alternatives can be partitioned in three classes (Schroeck, 2002): (1) Third-party protection of dangers - By paying a premium, banks can safeguard occasion hazards remotely. Banks are then no more subject to the occasion dangers guaranteed and, thus, are not needed to hold occasion hazard capital for that some piece of their occasion dangers. Since insurance agencies can manufacture arrangement of advantages that advantage more from expansion impacts and in light of the fact that insurance agencies may have amassed more mastery in assessing these dangers, they can offer the protection contracts at lower costs; (2) Self-protection of dangers - For various reasons, including expense contemplations, a bank may pick not to purchase outer protection for a few dangers. This can bode well particularly if the bank can accomplish the advantages of danger pooling naturally, and more financially than gave by an outsider; (3) Controlling hazard inside - Some dangers (e.g. inward misrepresentation) are best overseen inside through tight rules and controls. In any case, setting up and running these instruments can likewise be exorbitant".

## **2.4 Risk Management**

As indicated by Gallagher (1956), "during the time spent working together, it is inescapable that you will be confronted with startling and frequently unsavory amazements that debilitate to undermine or, far and away more terrible, to wreck the business. That is the quintessence of danger and how an organization or an individual react to it will figure out if it will survive and succeed or not. Hazard administration is an idea that has been utilized subsequent to the beginnings of the mankind, it is an advancing idea." This wellspring of danger regulatory breaches is clear in business confirmation part. It didn't develop actually from the buy of protection by partnerships. The idea of danger administration was initially brought into business procedure in 1916 by Henry Fayol. In any case, it just got to be formalized after Russell Gallagher (1956) distributed "Danger Management: A New Phase of Cost Control" in the Harvard Business Review and contended that "the expert protection administrator ought to be a danger chief".

Hazard administration as we comprehend it today has been conceptualized in the mid-1950s. There was a move period when the improvement from the protection administration to hierarchical danger administration was paralleled by the development of the scholastic control of danger administration. With no questions the scholarly train delivered profitable methodologies, philosophies and models that further bolstered the improvement of danger administration in the genuine business world. The Nobel recompense champ, Harry Markowitz, was the first money related scholar to expressly incorporate danger in the portfolio and enhancement dialog. He connected terms, for example, return and utility with the idea of danger. Hazard administration can be viewed as a dynamic, key, and coordinated procedure that

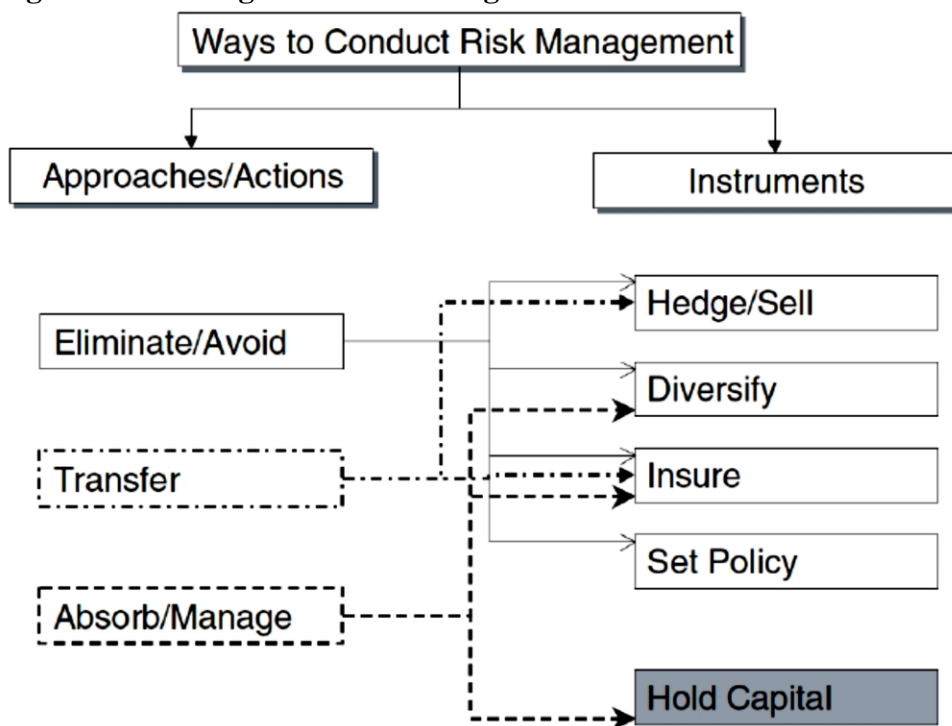
incorporates both the estimation and the moderation of danger, with a definitive objective of amplifying the estimation of a bank, while minimizing the danger of chapter 11 (Schroeck, 2002)".

"Hazard administration is frequently performed by a hierarchical unit, preferably an autonomous staff capacity reporting straightforwardly to the governing body, making danger administration a board obligation and errand. The board needs to set key targets and guarantee, by means of strict controls, that the assigned objectives are really accomplished inside of the halfway commanded rules. Running a danger administration capacity in a concentrated way is favorable on the grounds that it takes into consideration an autonomous, coordinated perspective of a wide range of danger, so that just the net positions should be overseen and particular staff can accomplish better valuing in the capital markets. Administration needs to create vital objectives for the different danger ranges (hazard system) that are proportionate with a definitive target to augment organization esteem. The objective of danger administration ought to be to recognize any uneconomic danger taking, at the end of the day, to guarantee that any danger administration action is steady with quality amplification. A definitive goal ought not be to minimize, or more terrible, to evade all dangers, however it ought to be to locate the ideal harmony between dangers taken and expected returns, focusing on the upper hand of the organization".

In a bank, there are distinctive ways to deal with direct peril organization. Figure 2.2 gives a survey of the decisions that banks have when moving nearer a peril. The bank can decide to wipe out particular risks that are not enduring with its looked for cash related traits or, as often experienced before long, the perils are not key to the fiscal

asset made. Remembering the final objective to take out specific perils the bank can use as a strategy portfolio improvement or, despite this, can decide to buy assurance as decisions or actuarial security, for case, for event risks. The banks can make certain business methods, for instance, system control, due tirelessness procedures, remembering the deciding objective to diminish the potential outcomes of particular adversities and even take out particular perils ex stake.

**Figure 2.2: Strategies of Risk Management**



Source: Schroeck, 2002

In the event that the bank would not like to keep away from some danger, it can choose to exchange it to other business sector members. The choice to exchange the danger to other business sector members is made on the premise of regardless of whether the bank has an upper hand in a particular portion and regardless of whether it can accomplish the honest worth for it. The distinct option for exchanging dangers is to keep the dangers, to ingest (oversee) them. A few dangers must or ought to be

retained at the bank level, on the grounds that they are too complex, or can't be exchanged or supported effortlessly or they are a business need. A few dangers assume a focal part in the bank's business reason and ought to in this way not be disposed of or exchanged. The instruments that banks can use keeping in mind the end goal to deal with the dangers are given by Schroeck (2002) include: (1) Diversification to regularly decrease the recurrence of both most pessimistic scenario and best-case results, which by and large lessens the bank's likelihood of disappointment; (2) Hedge through protection arrangements, forward contracts, swaps, choices, numerous sorts of over-the-counter and subordinate items, and maybe most prominently, futures; (3) Internal protection; and (4) Holding capital: For every single other danger that can't be expanded away or safeguarded inside and which the bank chooses to assimilate, it needs to verify that it holds an adequate measure of capital so as to guarantee that its likelihood of default is kept at an adequately low level.

## **2.5 Credit Risk Management**

“The objective of credit danger administration is to amplify a bank's danger balanced rate of return by keeping up credit hazard presentation inside adequate parameters. Bank need to deal with the credit hazard natural in the whole portfolio and additionally the danger in individual credit danger and different dangers. The compelling administration of credit danger is a discriminating segment of a far reaching way to deal with danger administration and fundamental to the long haul accomplishment of any managing an account associations. The major issue in overseeing credit danger is beating the organization or impetus issues between loan specialists as untouchables and borrowers as insiders. Banks that figured out how to

effectively perform its credit hazard administration at long last this had a positive effect on their money related execution what is a converse in the inverse case (Haim and Thierry, 2005)".

Credit Risk Management is inalienable in saving money and is unavoidable. The essential capacity of bank administration is danger administration. Banks accept credit hazard when they go about as middle people of stores and credit hazard administration lies at the heart of business managing an account. The matter of managing an account is credit and credit is the essential premise on which a bank's quality and execution are balanced. Credit danger is made out of default hazard and credit moderation hazard. Default danger is the danger that the counterparty will default on its commitments to the speculator. In this hazard, the credit quality weakens (or default danger increments). Credit danger is more hard to quantify on the grounds that information on both default and recuperation rates are not broad, credit returns are exceedingly skewed and fat tailed and more term time skyline and higher certainty levels are utilized as a part of measuring credit dangers. These are issues in measuring credit hazard that have propelled the improvement of a few complex models and business programming items for measuring portfolio credit hazard (Haim & Thierry, 2005).

Credit danger is the potential that a bank borrower or counterparty will neglect to meet its commitments as per concurred terms. For the most part the acknowledge danger is related for customary giving exercises of banks and it is basically portrayed as hazard a credit not being reimbursed partially or in full. However credit chance additionally can get from holding bonds or different securities. All banks have their

own particular credit rationality built up in a formal composed advance arrangement that must be bolstered and spoke with a proper credit society. A credit society is effective when all workers in the bank are adjusted to the administration's loaning needs (Hempel and Simonson, 1999).

Credit threat is the potential that a bank borrower or counterparty will disregard to meet its responsibilities according to agreed terms. All things considered the recognize peril is connected for customary giving activities of banks and it is basically delineated as risk a credit not being repaid to some degree or in full. However credit risk moreover can get from holding bonds or diverse securities. All banks have their own specific credit thinking set up in a formal made development procedure that must be maintained and related with a fitting credit society. A credit society is powerful when all delegates in the bank are acclimated to the organization's giving needs (Hempel and Simonson, 1999).

"Credit danger is the most imperative zone in danger administration. It emerges from non-execution by a borrower either powerlessness or unwillingness to perform in the pre-conferred builder way. As indicated by Greuning, 2003 more than 80% of all bank asset report identify with credit. This influences the moneylender holding the advance contract and additionally different banks to the loan boss (Caoutte, Altman and Narayanan, 1998). Everywhere throughout the world introduction the credit danger has prompted numerous banks disappointment. Credit hazard introduction especially to land prompted across the board saving money issues in Switzerland, Spain, the United Kingdom Sweden, Japan and others .The Basel states that credit danger is one of the major monetary dangers that business banks face. It is depicted as

the danger to have misfortunes in light of the fact that counterparty is not skilled to do its commitments as indicated by the term of understanding. Some of the time misfortunes happen notwithstanding when the counterparty does not break the agreement, but rather there are sure signs demonstrating expanding likelihood of borrower's indebtedness (e.g. minimize in FICO scores of the borrower). Credit danger is one of the key for the bank's inability to not appropriately oversee it may prompt indebtedness and liquidation of a Financial Institution (Basel, 2002). It is the capacity of an association to finish an imperative objective, reason or mission (Gregory and Neal, 1990). Credit hazard administration has a major effect on the life of a bank and if the right approaches are picked and are wrongly executed, then target accomplishment turns into a default assignment. As said, the way that a bank deals with its credits influence its money related execution".

To finish credit hazard administration obligations and obligations the foundation must comprehend its money related investigation, advance documentations, overhauling, advance contracts and natural examination. It should likewise keep up sound records on the credit execution of its arrangement of unsafe resources on the grounds that any adjustment in endorsing; laws and regulations can fundamentally change its advance misfortune experience (Kenneth and Thygerson, 1995). At the point when credit hazard all around oversaw in this way, it can at last lead the association to the powerful execution which is the objective of FIs and this must be accomplished by applying credit administration devices and systems that have the capacity to help in checking credits and assessing comes back from the risk bearded.

## **2.6 The Concept of Credit Risk Management and Profitability**

Banks raise accounts through gathering stores from organizations and different establishments, family units, and the administration from one viewpoint and give credits to families, organizations and different foundations, and the legislature through a few distinct sorts of game plans. Accordingly, the significant resources of banks are credits and bonds whilst real liabilities are client stores. As per Cornett and Saunders (2005), monetary record of a bank has advances speaking to the mass measure of a bank's advantages; by and by, these advances accompany hazard. Where the bank makes terrible credits to clients, the bank will be in major issues if those advances are not reimbursed. Credit administration is along these lines concerned with prizes and dangers that must be objective through wary and watchful danger administration, disappointment of which may perhaps realize lawful activity, monetary misfortune or damage the banks' name (Reserve Bank of Zimbabwe (RBZ) Guideline No. 1, 2006; as cited in Mavhiki, Mapetere, & Mhonde, 2012).

Bank credit is the getting office made accessible to a person by the bank as a credit or an advance. The major desire of the money related framework is that when stores are credited out, there ought to be sensible suspicion of discount of the advances, in addition to premium. Credit danger comes up from vulnerability in an offered counterparty to get together with the commitment of regarding the terms and states of the credit course of action (Fatemi & Foolad, 2006). It is the danger of misfortune started by an account holder's inability to pay an advance or line of credit. Generally, credit danger emerges from vulnerability in counterparty's capacity or ability to meet its contractual commitments.

Another scholar, Rene (2000:18) also included that “a decline in the credit standing of counterparty as part of credit risk. In the same vein, Naomi (2011) argued that credit risk represents the potential variation in the net income from non-payment or delayed payment of credit facility granted to customers. The Global Risk Management Group 1999 in its report conceded that credit risk is the possibility that bank borrower will fail to meet obligation in accordance with the agreed terms. It added that, 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 organization. Lending involves the creation and management of risk assets, and it is an important task of bank management.”

Credit Risk Management covers the choice making procedure, before the credit choice is made, and the subsequent meet-up credit responsibilities, in addition to all observing and reporting procedures (Miller, 1996). Danger is a condition in which there exists a quantifiable scattering in the conceivable results from any movement (The Chartered Institute of Management Accountants, 2005). As it were, it alludes to the procedure by which all advances, advances, credit offices, or convenience conceded by a bank to a client are managed to guarantee that the offices run agreeably as indicated by the terms representing them and are at last reimbursed on due date. Advanced danger administration is the administration methodology conceived to kill or minimize the antagonistic impacts of conceivable budgetary misfortune by recognizing all the potential wellsprings of misfortune, measuring the money related results of a misfortune happening, and utilizing controls to minimize real misfortunes or their monetary outcomes (Irukwu, 1998). In like manner, the most imperative theme in the business world today is the administration and control of danger.

Consistently, we find out about huge , little , and medium-sized organizations that have caved in or gone into liquidation, on the grounds that their administration overlooked the dangers to which the association was presented because of the nonattendance of a proficient danger administration framework.

The compelling administration of credit danger is a basic part of a complete way to deal with danger administration and fundamental to the long haul accomplishment of any keeping money association. A noteworthy capacity of banks is to arrangement in the credit market; they perform this capacity by assembling trusts from surplus financial units and directing the same to shortfall units for profitable exercises. This suggests that, banks award credits to clients from people in general's trusts with the general object of expanding benefit coming about because of income. Presently, in light of the fact that benefit is a component of income coming about because of suitable advances and advances, it takes after that banks should adequately deal with its credit dangers keeping in mind the end goal to ensure and upgrade productivity.

## **2.7 Effect of Credit Risk on Banks Performance**

The danger connected with the matter of managing an account can be gathered as credit danger, business sector hazard (which comprise of remote trade hazard, liquidity hazard and interest rate hazard), operational danger which some of the time incorporate lawful hazard and most as of late vital danger (Asare-Bekoe, 2010; Yussif, 2003, Cooperman et al., 2000). This study subsequently makes an endeavor to add to the examination, estimation and administration of credit dangers in rustic and group banks in Ghana. Specifically, the study is keen on building up whether there is a relationship between the budgetary execution of Ghanaian RCBs on one hand, and

their acknowledge hazard administration frameworks and in addition capital sufficiency proportions.

“Empirical evidence suggest that credit risk management is a predictor of bank`s performance. For instance non-performing loans, an indicator of credit risk can reduce the value of a bank and destabilizes the credit system. As Padmanabham (1998) and Agu (1998) put it loan default reduces the resources base of a bank for further lending, weakens staff moral and affects the borrower`s confidence. The cost of managing overdue loans tends to be very high and this can reduce banks profitability levels. In some cases the cost on unpaid loans are shifted to other customers or borrowers in the form of high interest margin charged on loans. Some scholars e.g., (Li Yuqi 2007; Naceur and Kandil 2006; Kinthinji 2010; Kolapo, Ayeni and Ojo 2012; Kargi 2011) amongst others have carried out extensive studies on this topic and produced mixed results; while some found that credit risk management impact positively on banks financial performance, some found negative relationship and others suggest that other factors apart from credit risk management impacts on bank`s performance. Specifically, Kargi (2011) found in a study of Nigeria banks from 2004 to 2008 that there is a significant relationship between banks performance and credit risk management. He found that loans and advances and non-performing loans are major variables that determine asset quality of a bank.

Nair and Fissaha (2010) demonstrated in a comparable investigation of the Ghanaian country managing an account industry that, the level of credit misconducts or disabled advances in a RCB's advance portfolio is regularly viewed as the best driving marker of the institution`s money related execution. Nair and Fissaha, further uncovered that

the rate of advance portfolio that was in default (among the example banks) for over one month was 16 percent. This is too high and unsuitable given the worldwide normal of 3 percent for the overall miniaturized scale managing an account industry (MIX, 2008). Moreover the extent of credits in default for over one year was 3.5 percent, contrasted and 1.5 percent for the worldwide smaller scale managing an account industry. This as per Nair and Fissaha is a marker of vast advance misfortunes which might never be paid back".

In an examination of the Kenyan keeping cash industry, Kithinji (2010) showed that there is an underhanded relationship between non-performing advances, a pointer of recognizes threat for profitability. Other precise studies outside Africa have developed an in number critical relationship between credit peril and banks execution. A valid study in Qatar, Achou and Tengue (2008) showed that better credit peril organization result in better bank execution. They assume that, "it is thusly of dire noteworthiness for banks to sharpen wise credit risk organization to shield the upside of the bank and guarantee monetary pros premium". Achou and Tengue further showed that spares cash with strong credit peril organization procedures tend to procure lower development default (incapacitated advances) and net premium compensation. A tantamount study drove by Hosna et al (2009) in Sweden offers sponsorships to the revelations of Achou and Tengue (2008).

Afriyie and Akotey (2013) in their study take a gander at the impact of credit threat organization on the productivity of natural and gathering banks in the Brong Ahafo Region of Ghana. They used the fiscal clarifications of ten natural banks from the season of 2006 to 2010 (five years) for our examination. The board backslide model

was used for the estimation. In the model, importance of Return on Equity (ROE) and Return on Asset (ROA) were used as advantage marker while Non-Performing Loans Ratio (NLPR) and Capital Adequacy Ratio (CAR) as credit threat organization pointers. The revelations show a gigantic conversely relationship between non-performing credits and natural banks' productivity revealing that, there are higher development mishaps yet banks still win advantage. This exhibits that, rural banks don't have sound and convincing credit danger organization sharpens".

In Nigeria, Kargi (2011) assessed the impact of credit threat on the profit of Nigerian banks, using five years' data for the season of 2004-2008 and set up that "CRM has an indispensable part in the efficiency of Nigerian keeping cash portion. The study reinforces the case that advantage of bank is conversely controlled by credits and advances, non-performing advances, and stores levels, in this way displaying banks to monstrous risk of illiquidity and agony. In Costa-Rica, Epure and Lafuente (2012) associated backslide examination to consider the region of credit peril on bank execution. They found that execution overhauls provoked managerial changes and that credit threat records for differences in bank execution, while non-performing advances alternately impact adequacy and benefit for assets (ROA) and the capital plentifulness extent (CAR) has a positive effect on the net premium edge."

"Kolapo, Ayeni and Ojo (2012) using board data backslide for the period 2000 to 2010 found that the effect of credit threat on bank's execution measured by the Return on Asset (ROA) of banks is cross sectional invariant. They assumed that the nature and regulatory case of individual firms don't center the impact. Moreover, Hosna, Manzura and Juanjuan (2009) reemphasized the effect of credit risk organization on

advantage level of banks. They induced that higher capital need contributes insistently to bank's efficiency. Muhammed, Shahid, Munir and Ahad (2012) used expressive, relationship and backslide strategies to think about whether credit threat impact banks execution in Nigeria from 2004 to 2008. They furthermore found that credit danger organization has a discriminating impact on profit of Nigerian banks.

Boahene, Dasah and Agyei (2012) utilized relapse investigation to figure out if there is a huge relationship between credit danger and benefit of Ghanaian banks. They took after the line of Hosna, Manzura and Juanjuan (2009) by utilizing Return of Equity as a measure of bank's execution and a proportion of non-performing advances to aggregate resource as intermediary for credit hazard administration. They discovered exactly that there is an impact of credit danger administration on benefit level of Ghanaian banks. The study additionally recommends that higher capital necessity contributes emphatically to bank's gainfulness. Li yuqi (2007) inspected the determinants of bank's gainfulness and its suggestions on danger administration hones in the United Kingdom. The study utilized relapse examination on a period arrangement information somewhere around 1999 and 2006. Six measures of determinants of bank's gainfulness were utilized. They proxied Liquidity, acknowledge and capital as inner determinants of bank's execution. Gross domestic product development rate, premium rate and swelling rate were utilized as outer determinants of banks benefit. The six variables were consolidated into one general composite record of bank's benefit. Return on Asset (ROA) was utilized as a marker of bank's execution. It was found that liquidity and credit danger have negative effect on bank's gainfulness.

Poudel (2012) assessed the effect of the credit hazard administration in bank's budgetary execution in Nepal utilizing time arrangement information from 2001 to 2011. The consequence of the study shows that credit hazard administration is an imperative indicator of bank's money related execution. Fredrick (2010) exhibited that credit hazard administration has an in number effect on bank's money related execution in Kenya. Then, Jackson (2011) towed the line of Fredrick (2010) by utilizing CAMEL pointers as autonomous variables and profit for Equity as an intermediary for banks execution. His discoveries were additionally in accordance with that of Fredrick who likewise inferred that CAMEL model can be utilized as intermediary for credit hazard administration. Musyoki and Kadubo (2011) additionally found that credit hazard administration is an imperative indicator of bank's money related execution; they inferred that banks achievement relies on upon credit hazard administration.

Ahmed, Takeda and Shawn (1998) in their study found that propel disaster acquisition has a tremendous positive effect on non-performing advances. In this way, an addition ahead of time adversity acquisition exhibits an augmentation in credit peril and deterioration in the way of advances thusly affecting bank execution unfavorably. Ahmad and Ariff (2007) examined the key determinants of credit peril of business banks on rising economy keeping cash structures differentiated and the made economies. The study found that regulation is basic for keeping cash systems that offer multi-things and organizations; organization quality is fundamental in the cases of credit prevalent banks in rising economies. An augmentation ahead of time mishap acquisition is in like manner thought to be a basic determinant of potential credit risk.

The study further highlighted that credit danger in rising economy banks is higher than that in made economies.

Felix and Claudine (2008) investigated the relationship between bank execution and credit risk organization. It could be instigated from their disclosures that landing on worth (ROE) and benefit for assets (ROA) both measuring efficiency were conflictingly related to the extent of non-performing development to total credit of cash related establishments in this way inciting a decline in productivity.

Kargi (2011) evaluated the impact of credit risk on the profitability of Nigerian banks. Cash related extents as measures of bank execution and credit threat were accumulated from the yearly reports and records of inspected banks from 2004-2008 and analyzed using illustrating, relationship and backslide systems. The revelations revealed that credit risk organization has a discriminating impact on the efficiency of Nigerian banks. It assumed that banks' efficiency is conflictingly influenced by the levels of credits and advances, non-performing advances and stores in this way introducing them to mind boggling peril of illiquidity and inconvenience".

Epure and Lafuente (2012) examined bank execution in the region of threat for Costa-Rican keeping cash industry in the midst of 1998-2007. The results showed that execution improvements take after managerial changes and that danger elucidates contrasts in banks and non-performing credits antagonistically impact viability and benefit for assets while the capital plentifulness extent has a beneficial outcome on the net premium edge. Al-Khouri (2011) assessed the impact of bank's specific risk qualities, and the general dealing with a record area on the execution of 43 business

banks working in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. Using adjusted effect backslide examination, results exhibited that credit risk, liquidity peril and capital threat are the essential issue that impact bank execution when advantage is measured by benefit for assets while the fundamental danger that impacts productivity when measured by benefit for worth is liquidity peril".

Sufian and Habibullah (2009) in their study revealed that "liquidity, credit threat, and capitalization have beneficial outcome on the state-had business banks productivity, while the impact of overhead cost is negative. They recommend that the joint stock business deal with a record with's higher credit risk tend to be more gainful, while higher costs result in lower joint stock business banks advantage levels. Kolb (1992) states that the mistake of banks is mostly due to the hazardous credits they give. Autonomous of the level of peril included, reasonable credit unsafe advances they give. Free of the level of threat included, convincing credit risk organization can reduce bank frustrations.

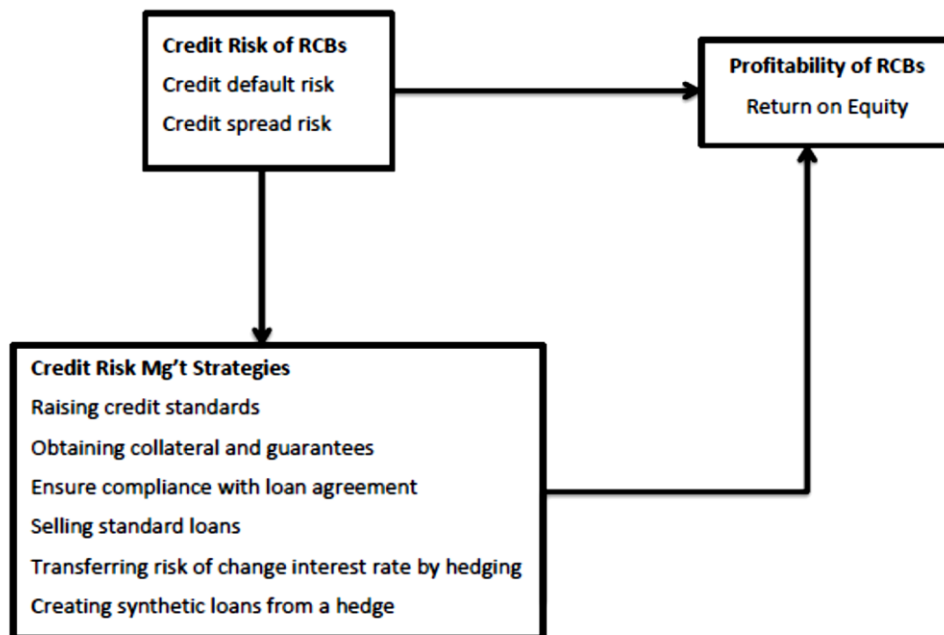
Nawaz et al. (2012) in their study revealed "that credit risk organization has a gigantic impact on the benefit of Nigeria banks. In this way, organization ought to be watchful in setting up a credit approach that may not antagonistically impacts profitability besides they need to know how credit course of action impacts the operation of their banks to ensure sensible use of stores."

## **2.8 Conceptual Framework of the Study**

The current study is built on two major forms of credit risk; credit default risk and credit spread risk. Since the financial sector especially the rural banking sector is

bedeviled with huge level of non-performing loans, it is imperative to identify suitable, effective and the most efficient credit risk management strategies that could have positive influence on the profitability of RCBs. The capability of RCBs to influence credit risk through their credit management strategies will be evident in their positive effect on the profitability of RCBs and this phenomenon is conceptualized in the framework provided in Figure 2.3.

**Figure 2.3: Conceptual Framework of the effect of Credit Risk Mgmt. on Profitability**



Source: Author's Own Construct, 2015

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Outline of Research Methodology**

This part looks at the philosophy utilized in the present study. Besides, this segment inspects the configuration of study, the objective populace and the example size and the examining technique. The part additionally looks at the information accumulation strategies and the information gathering techniques and system for information investigation. The last area of the part talks about the unwavering quality and legitimacy of the utilized builds of the study.

#### **3.2 Research Design**

As indicated by Polit et al. (2001:23), the outline of the study "is a general arrangement for leading the study keeping in mind the end goal to answer the examination address." The configuration of the study characterizes the strategies followed in directing the study. The utilized a blended methodologies, which included both subjective and quantitative techniques. Amaratunga et al. (2002) give in their article that subjective and quantitative exploration can be utilized as a part of mix. Amaratunga et al. (2002: 15) further clarifies that "subjective and quantitative approaches are not antithetic rather they concentrate on the distinctive measurements of the same wonder." They additionally stress that quantitative and subjective examination can be consolidated in a manner that one can cover the shortcomings of the other. The subjective methodology included assembling the suitable information to analyze the exercises and henceforth blueprint, classify, depict, and inspect technique for gathering information (Hyde, 2000). It likewise utilizes realistic instruments, for example, bar and pie diagrams to help with simple perception of the

dissemination of the information. The quantitative way to deal with this study included numerical figuring through the reception of monetary execution measurements.

The study likewise received a contextual investigation way to deal with inspect the impact of danger of given credits on Atwima Kwanwom Rural Bank Limited's benefit level. The study additionally utilized the contextual investigation way to deal with study just the situation of the AKRBL. As indicated by Yin (1994:61), a contextual investigation is "an experimental enquiry that explores a contemporary wonder inside of its genuine setting, particularly when the limits in the middle of marvel and connection are not obviously clear' and it 'depends on numerous wellsprings of confirmation." Case study approaches by and large utilize information accumulation instruments including perception, meeting, poll, and substance examination.

### **3.3 Population of the Study**

According to Saunders (2009: 101), a population "is a group of individuals, persons, objects, or items from which samples are taken for measurement." All the group of persons or items about which the study desires to gather information on is termed as the target population. To undertake a significant study, there is the need to be precise with regard to the sample size and the setting of your targeted population. Based on this, the targeted population for this research comprised the entire Credit Officers in the Credit departments of the six (6) branches of the Atwima Kwanwoma Rural Bank Limited. The Atwima Kwanwoma Rural Bank Limited has 32 credit officers in the six branches and 19 mobile bankers.

### 3.4 Sample Size and Sampling Techniques

For the purpose of this study, Atwima Kwanwoma Rural Bank in the Ashanti region was sampled. Both the rural bank and the region of location were sampled based on the purposive non-probabilistic sampling procedure. Ashanti region was chosen because of its dominance of the distribution of community and rural banks in Ghana. The region's 25 community and rural banks is the largest number of community and rural banks of in Ghana. Likewise, the Atwima Kwanwoma Rural Bank Limited was chosen because of its financial performance in the chosen region. The information for the study was taken from all the agencies of the Atwima Kwanwom Rural Bank Limited. The branches of the bank include those at Atonsu, Ayigya, New Tafo, Old Tafo, Pakyi No. 2, and Santasi. A simple random sampling method by balloting was further employed to select 8 staff members from the Credit Department from each of the five branches of the rural bank. The Credit Manager, the Senior Credit Officer and other three Junior Credit Officers are deemed the most credible informants on the issue of credit management due to their level of education and experience. Three mobile bankers were also sampled from each of the five branches of the rural bank. The current study estimates the appropriate sample size by employing De Vaus finite population formula approach (De Vaus, 2002) and the structure of the sample size is shown in Table 3.1. The De Vaus formula for calculating the appropriate sample size is given as:

$$n = \frac{N}{1 + N(\alpha^2)}$$

where;

$n$  = Sample size

$N$  = Sample Frame

$\alpha$  = Confidence Level

$$n_1 = \frac{32}{1+32(0.05)^2}, n_1 = \frac{32}{1.0875}, n_1 = 30 \text{ Credit Officers}$$

$$n_2 = \frac{19}{1+19(0.05)^2}, n_1 = \frac{19}{1.0475}, n_2 = 18 \text{ Mobile Bankers}$$

$$n=n_1 + n_2$$

$$n=30+18$$

$$n=48 \text{ sample size}$$

**Table 3.1: Sample Size Distribution**

<b>Agencies of AKRBL</b>	<b>Credit Officers</b>	<b>Mobile bankers</b>	<b>Samples size</b>
Atonsu	5	3	8
Ayigya	5	3	8
New Tafo	5	3	8
Old Tafo	5	3	8
Pakyi No. 2 (Head Office)	5	3	8
Santasi	5	3	8
<b>Total</b>	<b>30</b>	<b>18</b>	<b>48</b>

### 3.5 Data Collection

Primary data collection tools employed was questionnaires, and secondary data were taken from audited annual report and accounts and other statutory statements of the six (6) agencies of Atwima Kwanwom Rural Bank Limited. Though many studies have been conducted on the topic for this research, many of them focused on commercial banks in Ghana, largely neglecting rural banks. The annual reports of the selected rural bank over nine (9) year period, thus from 2005–2014 was utilized for this study so as to gather trends and make informed conclusions. Other forms of secondary information were collated through the reviewing of papers, financial reports, publications and works pertinent to the theme of the study. The electronic data from various World Wide Web (www) sites were also used widely for current items on the subject matter.

### **3.5.1 Pilot Study**

To optimize the reliability and rationality of the constructs of the study, questions generated from the interview were pre-tested on 10 professional staff of the banking sector in Sunyani. The reliability of the study was checked through a Cronbach Alpha analysis. The respondents were requested to complete the first studies grounded on the activities of rural banks in managing credit risk to ensure greater level of profitability. The primary study took about 5 to 10 minutes to finish. Through the administration of the pretest, the student made sure that the constructs measured reflected the real activities and anticipations of respondents surveyed. Results from the pretest study indicated that there was the need for some items or constructs to be altered to enhance the reliability of the study. It was decided to maintain every statement in the study in order to ensure a wider measure to be sure that the statements really evaluated the same concepts from the expert's point-of-view.

### **3.5.2 Data Collection Instruments**

The study relied on structured questionnaire for collating the required data. The data collection instrument was established and grounded on both closed and open-ended questions. The closed-ended queries were employed to examine the grade of numerous features and so aided in decreasing the digit of connected replies so as to get relatively varying answers. The questionnaire administered on face-to-face basis with the staff of the accounts and finance departments of the sampled six (6) branches of the AtwimaKwanwom Rural Bank Limited in the Ashanti region.

The questionnaire was sub-divided into four categories: (1) the first part of the questionnaire were principally on the socio demographic characteristics including age,

sex, educational level, and years of experience in the banking sector, (2) the second part of the questionnaire offers items to identify the nature and cause of credit risk of Atwima Kwanwoma Rural Bank Limited, 3) the third section provides items to identify the measures adopted to manage credit risk at the bank, and (4) the fourth section examined the challenges of the credit risk management practices of the bank. All constructs or items were examined via a liker scaling type.

### **3.5.3 Data Preparation, Collation and Processing**

As put by Miles and Huberman (1994:56), distinguishing and merging information and then replicating on that information is “the stuff examination”. According to Bryman and Bell (2007), this stage in the qualitative investigation procedure characteristically includes allocating inferential and descriptive tags to the information. Based on the study of Miles and Huberman (1994), the analysis of information for this study began with an initial set of tags reliant on the constructed frame, the objectives of the study and the stipulated questions of the research, and the critical variables clear from the reviewed literature. The procedure of reentering the information was employed, where the information were persistently re-evaluated and re-scanned as suggested by Robson and Hedges (1993). The researcher was then able to refine and revise the codes as the analysis progressed. Some tags became redundant and were removed, whereas some eventually showed significant to be encompassed in the research. The tagged information on replies were inputted into the computer based programme, Statistical Package for Social Sciences (SPSS), version 17 for display and examination. The software produced statistics, occurrences, proportions and tables to show outcomes of the data analysis. However, for the secondary data obtained via the financial reports and statements of the nine branches of the

AtwimaKwanwoma Rural Bank Ltd, computations of the various constructs and variables for the regression model was carried out with the aid of the Microsoft Excel Version 2010.

### **3.6 Data Analysis**

The collated primary data was processed and analysed using the Statistical Software Programme for Social Sciences (SPSS version 17), whereas the secondary data with regards to the profitability of the Atwima Kwanwoma Rural Bank Ltd was analysed using Microsoft-Excel version 2010. The objective one of this study was analysed descriptively. The descriptive analysis conducted involved the use of tabular analysis (percentages and frequencies), and mean values for discussing the key variables involved in the study. The inferential analysis with regards to the effect of credit risk on the banks profitability was performed using multiple regression analysis. The objective 4 of the study, the challenges of the credit risk management practices of the Atwima Kwanwoma Rural Bank Limited were ranked with the aid of the Kendall's rank test analysis. Kendall's coefficient of concordance (W) is a measure of the agreement among several (p) judges who are assessing a given set of n objects. In this study, the judges were the various heads of the Accounts and Finance Departments of the sampled Rural Bank assessing the various perceived challenges of credit management practices. The W statistic was obtained from the formulas below:

$$W = \frac{12S}{p^2(n^3 - n) - pT}$$

where the frequency of objects is n, the frequency of judges is p and the sum-of-squares statistic over the row sums of ranks is S. The correction factor for tied ranks is T (Siegel, 1956). It was estimated with the aid of the non-parametric test of K-related sample which gave the various mean rank values attached to the perceived reasons. It

also provided the Kendall's W, which is their agreement level and the associated p-value. The significance of the P-value indicates that the judges are in concordance or agreement.

### 3.6.1 Model Specification

The econometric model used in the study (which was in line with what is mostly found in the literature) is given as:

$$Y_i = \beta_0 + \sum_{i=1}^k \beta F_{it} + \mu_{it} \quad (1)$$

Where,  $Y_i$  is the dependent variable (Return on Assets),  $\beta_0$  is the intercept or constant,  $\beta$  is the coefficient of independent variables,  $F_{it}$  is the independent variables and  $\epsilon_{jt}$  is the error term. This study is modelled according to the work of Kolapo, Ayeni & Oke (2012) and Poundel (2012) that investigated the effect of credit risk and banks performance. Precisely, the researchers employed the model of Poundel (2012), and stipulates that bank's profitability (Return on Asset) is affected by credit risk management (ratio of non-performing loan to loans and advances, ratio of loan loss provision to classified loans and ratio of loans and advances to total deposit) and capital requirement by ratio of equity capital to total asset. By employing the econometric model as in equation (1) precisely to this research, equation (4) develops. The practical mode of the function is extended as:

$$ROA = F\left(\frac{NFL}{LA}, \frac{LLP}{CL}, \frac{LA}{TD}, \frac{EQ}{TA}, \frac{TD}{LA}\right) \quad (2)$$

Where: ROA= Return on asset; NPL= non-performing loans; LA= Loans and advances; LLP=Loan loss provision; CL=Classified loan; TD= total deposit; EQ= shareholders fund; LQ= liquidity ratio; and TA= total asset.

The model of the study is specified as:

$$ROA = \beta_0 + \beta_1 \frac{NFL}{LA} + \beta_2 \frac{LLP}{CL} + \beta_3 \frac{LA}{TD} + \beta_4 \frac{EQ}{TA} + \beta_5 \frac{TD}{LA} + \mu \quad (3)$$

When  $NPL^* = \frac{NFL}{LA}$ ,  $LLP^* = \frac{LLP}{CL}$ ,  $LA^* = \frac{LA}{TD}$ ,  $EQ^* = \frac{EQ}{TA}$ , and  $LR = \frac{TD}{LA}$

The equation (2) can be written as:

$$ROA = \beta_0 + \beta_1 NPL^* + \beta_2 LLP^* + \beta_3 LA^* + \beta_4 EQ^* + \beta_5 LR + \mu \quad (4)$$

**Table 3.2: Definition of the Multiple Regression Variables**

Variable	Description of the variables
Return on Asset (ROA)	This defines the proportion of net operating profit that an organisation obtains from the operations of business in a specified time period to the volume of the business's total asset
Non-performing Loans (NPL)	This defines the loans that the bank perceives as likely losses of monies owing to credit nonpayment.
Loan loss provisions (LLP)	This defines the volume of funds that bank's put aside from its yearly incomes as an insurance against likely loss of a non performing loan, or to equal a lost loan facility.
Loans and Advances (LA)	This is a facility given out to the clients of bank that permits the clients to employ the bank's monies that is required to be repaid at an agreed time frame with interest
Liquidity (LR)	This is the capability of an organisation to carry out its short-term responsibility when demanded.
Capital Adequacy Ratio (CAR)	This is the index supervisory experts employ to define the maximum volume of funds that the bank is required to be capable of taking some heights of danger imperiling credit funds

### 3.7 Data Validity and Reliability

The dependability of an exploration instrument were tried through the behavior of the unwavering quality investigation of both the pre-test and the post-test develops.. Both dependability tests were led and broke down utilizing the Cronbach's alpha. The dependability of the significant develops of the survey was tried and this gave Cronbach alpha estimation of 0.8756.

As indicated by Allen and Yen (1979: 16) the legitimacy of a study is characterized as "the degree to which the device measures what it implies to quantify." After the pilot study, content legitimacy of the study was further inspected through the looking for master conclusion on the structure and the developments of the study.

### **3.8 Ethical Consideration**

De Vos (1998) characterizes morals as "an arrangement of moral methods of insight that is proposed by a man or group is thusly widely recognized and which offers rules and behavioral desires concerning the most right conduct in investigational subjects and members, staff, promoters, different academicians, aides and understudies'. Moral issues measured in this examination include the foundation's privilege and systematic earnestness with respect to the understudy. The objective of leading the examination is to create learning through genuine direct, reporting and production of an exploration report. The scientist is mindful that information ought not be misrepresented nor controlled to keep up the nature of the exploration and of the report (Burns & Grove, 1993). To fulfill this, a composed assent was acquired from the proper powers of the inspected branches of the AtwimaKwanwoma Rural Bank Limited, advising them of the point and outline of the exploration. Moreover, the respondents were made aware that the study is meant to satisfy academic requirements of the researcher. The respondents were therefore not required to write their names.

## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF RESULT

This chapter presents and discusses the result of the study in an attempt to address the specific objectives of the study. The major areas the chapter discusses include respondent's background, the forms of credit risk in the rural banking sector; the strategies employed to manage credit risk of AKRBL; the effects of credit risk on the rural bank's profitability, and the challenges encountered by the bank in credit risk management practices.

#### 4.1 Socio Demographic Characteristic of Respondents

The section of the study discusses the gender and age distribution, the educational level, working experience and type of respondent. The result is presented in Table 4.1.

**Table 4.1: Socio Demographic Characteristics**

<b>Socio Demographics</b>	<b>Frequency</b>	<b>Percent</b>
<b>Sex of respondent</b>		
Male	21	52.5
Female	19	47.5
<b>Total</b>	<b>40</b>	<b>100.0</b>
<b>Age of respondent</b>		
18-25 years	6	15.0
26-35 years	24	60.0
36-45 years	10	25.0
<b>Total</b>	<b>40</b>	<b>100.0</b>
<b>Marital status</b>		
Single	16	40.0
Married	20	50.0
Divorced	4	10.0
<b>Total</b>	<b>40</b>	<b>100.0</b>
<b>Type of officers</b>		
Credit Officer	25	62.5
Mobile Banker	15	37.5
<b>Highest educational level</b>		
Secondary	4	10.0
Tertiary	36	90.0
<b>Total</b>		
<b>Working experience in the banking industry</b>		
1-5 years	8	20.0
6-10 years	21	52.5
11-15 years	11	27.5
<b>Total</b>	<b>40</b>	<b>100.0</b>

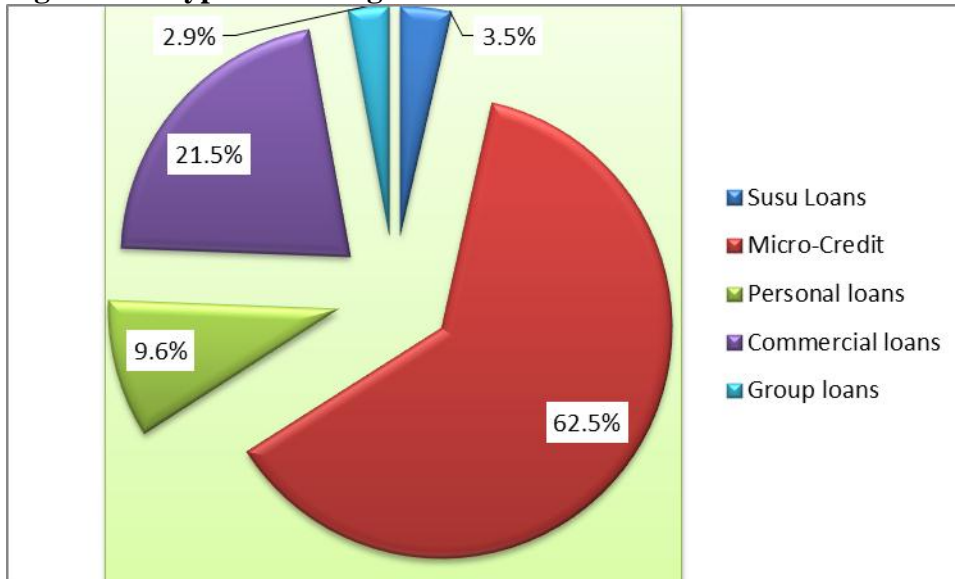
Source: Field Survey, 2015

The majority (62.5%) of the surveyed respondents were Credit Officers, whereas 37.5% were Mobile Bankers. The result of table (4.1) indicates that the majority (52.5%) of the surveyed credit officers and mobile bankers of AKRBL were males in the study period. This result is not consistent with the sex distribution of the working population that shows that females and males constitute 52.3 percent and 47.1 percent of Ghana's working-age population respectively (Ghana Statistical Service, 2010). The majority (60.0%) of the surveyed respondents were between the age group of 26 to 35 years whereas 25.0% were also between 36 and 45 years. These age categories are cohorts recognized officially in Ghana as the youth population that also constitutes the majority of the Ghanaian working population. This group constitutes 62 percent of the working-age population (GLSS, 2010). The result of the table further showed that the majority (50.0%) of the surveyed respondents were married. Tertiary education was the highest educational status of the majority (90.0%) of the surveyed respondents. the majority (52.5%) also have working experience of 6 to 10 years in the banking industry.

#### **4.2 Forms of Credit Risk in the Rural Bank**

This section of the study discusses the various forms of credit risk associated with the services and products of Atwima Kwanwom Rural Bank Limited (AKRBL). This section of the study begins with the identification of the types of loans given to customers. The result of the types of loans given to customers of AKRBL is presented in Table 4.1.

**Figure 4.1: Types of loans given to customers**



Source: Field Survey, 2015

The result of Figure (4.1) shows that the majority (62.5%) of the respondents receive micro credit facilities from AKRBL. Some of the major micro credits given out to numerous customers include individual loans, church loans, educational finance, and SME loans. Also, 3.5% of the respondents receive Susu loans, 2.9% receive group loans, 9.6% receive personal loans and 21.5% receive commercial loans from AKRBL. The predominance of the micro credit is attributed to the purpose and primary functions of the numerous rural and micro financial institutions in Ghana. These banks are often located strategically to provide assistance to small businesses in rural areas in Ghana.

It should however be emphasized that AKRBL faces several challenges in the processing of credit facilities for applicants. These challenges include false information provision by customers, diversion of loans, lack of adequate records, improper monitoring, delays in the processing of loans, customers often do not get

total amount requested, inadequate credit staff, ineffective credit audit, centralisation of credit authorization, lack logistics for monitoring and technology or system failure.

#### 4.2.1 Criteria Used By the Rural Bank in Appraising Customers for Loans

The criteria used by AKRBL in appraising customer's applications for credit are assessed in this section of the study. The appraisal system or scheme encompasses the customer's character, business experience, past experience in accessing loans, and the performance of the business. The result of the section is descriptively presented in Table 4.2.

**Table 4.2: Criteria used by the Rural Bank in Appraising Loans of Customers**

Appraisal factors	N	Min	Max	Mean	SD	Rank
Ability to pay	40	3.00	5.00	4.63	0.70	1
Character of beneficiaries or applicants	40	3.00	5.00	4.45	0.64	2
Extent of involvement in the business	40	4.00	5.00	4.25	0.44	3
Profit and loss statement	40	2.00	5.00	4.20	0.88	4
Borrower's repayment history	40	2.00	5.00	4.05	0.93	5
Liquidity/working capital activity	40	3.00	5.00	4.05	0.93	6
Profitability	40	2.00	5.00	4.03	0.97	7
Market for the product or service	40	2.00	5.00	3.93	0.97	8
Cash flow statement	40	2.00	5.00	3.90	0.90	9
Experience in credit utilization	40	2.00	5.00	3.80	0.88	10
Security	40	1.00	5.00	3.80	1.22	10
Future prospects of the business	40	2.00	5.00	3.70	0.94	12
The size and strength of the existing market	40	2.00	5.00	3.68	0.83	13
Quality as an entrepreneur	40	1.00	5.00	3.48	1.01	14

Rank: [Strongly Disagree-1, Disagree-2, Fairly Agree-3, Agree-4, Strongly Agree-5]

Percentages are in Parentheses

Source: Field Survey, 2015

The result of table (4.2) the mean response of 4.45 showed that the majority of the surveyed respondents strongly agreed that the personal character of the customers of the rural bank is assessed before loan request is granted. The mean response value of 4.25 also indicates that majority of the surveyed respondents agreed that the rural bank appraises the customer's extent of involvement in the business before applied

loans are granted to clients. Furthermore, the mean response values of approximately 4.00 shows that the quality of the entrepreneur and the experience of the customers in credit utilisation are appraised by the bank before a loan request is granted.

The result of the table (4.2) showed that for AKRBL to grant loan or credit facilities to clients a thorough cash flow statement, profit and loss statement and security are appraised to reduce the level of loan default as indicated by the approximate mean response value of 4.00. The mean response value of 4.63 indicates that the respondents strongly agreed that the customers' ability to pay the requested loan in time is appraised by the rural bank. The borrower's repayment history is agreed by the majority of the surveyed respondents to be assessed by AKRBL before the grant of loans as shown by the mean response value of 4.05.

The result of table (4.2) further showed that the future prospects of the business and the profitability of the business of clients that apply for loans with AKRBL are thoroughly appraised to reduce the probability of default. From this result, it can be concluded that AKRBL appraises the personal character of clients, the profitability of business and the credit experience of the clients before granting loans to customers. All the practiced risk management statement strategies are in accordance with Schroeck's (2002) internal insurance policies of controlling credit risk by banks.

#### **4.2.2 Causes of Credit Risk**

This section of the study discusses the causes of credit risk of AKRBL. The level of credit risk associated with the bank is often associated with strategy lapses and customer mismanagement. The section employs the Relative Importance Index (RII)

to estimate the various factors contributing the banks credit risk level. The result of the section is presented in Table 4.3. All factors with RII values below 0.700 are deemed insignificant in terms of contributing the credit risk of AKRBL.

**Table 4.3: Causes of Credit Risk in the Rural Bank**

Causes of Credit Risk	Responses					RII		
	1	2	3	4	5	Weight	RII	Rank
When the debtor is in solvent	0	1	3	10	26	186	0.930	1 <sup>st</sup>
When the debtor is deceased	0	2	7	13	18	167	0.835	2 <sup>nd</sup>
Borrowers do not fulfill their debt obligations	2	3	5	11	19	162	0.810	3 <sup>rd</sup>
Financial loss resulting from changes in the level of credit spreads	2	4	5	15	14	155	0.775	4 <sup>th</sup>
When the debt is uneconomical to pursue	0	2	14	14	10	152	0.760	5 <sup>th</sup>
When the debtor absconds	3	6	6	10	15	148	0.740	6 <sup>th</sup>
When the debtor is committed to prison	2	10	6	6	16	144	0.720	7 <sup>th</sup>

Rank: [Strongly disagree-1, disagree-2, fairly agree-3, agree-4, strongly agree-5]

Source: Field Survey, 2015

The result of table (4.3) showed that the credit risk of AKRBL is predominantly caused by the debtor's insolvency as this factor produced the highest RII value of 0.930. The second and third ranked factors contributing to the credit risk of AKRBL are the death of the client and the borrower's unwillingness to fulfill their debt obligation with RII values of 0.835 and 0.810 respectively. The financial loss resulting from changes in the level of credit spreads with RII value of 0.775 is ranked fourth in terms of contributing to the credit risk level of AKRBL. The least ranked three factors contributing to the credit risk level of AKRBL are the perception that the pursuance of debt is too expensive, debtor absconds and the commitment of a debtor to prison with RII values of 0.760, 0.740 and 0.720 respectively. Though lowly ranked, these factors are deemed as significant causes of the credit risk of AKRBL since their respective RII values are above 0.700.

**Table 4.4: Amount and Rate of Loan Default**

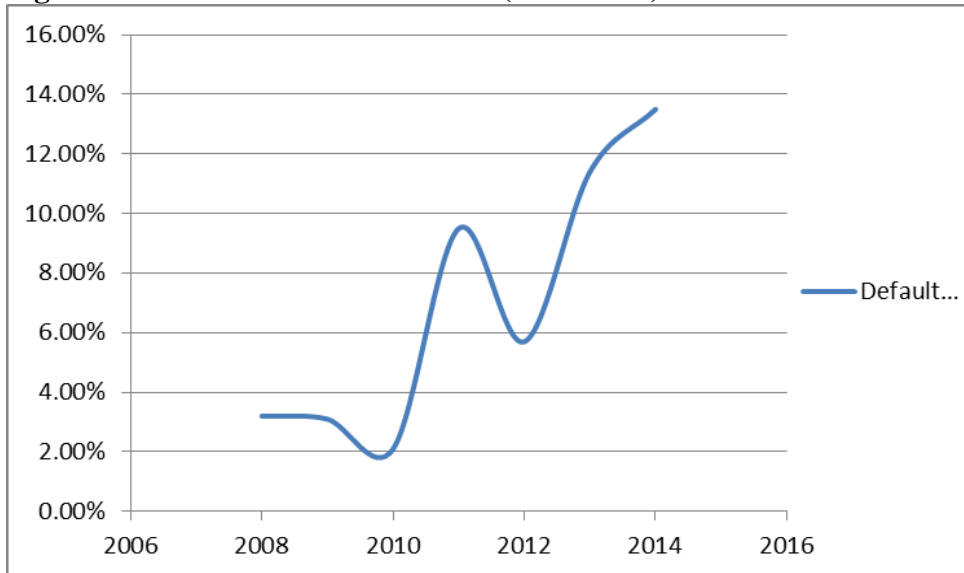
<b>Years</b>	<b>Amount of loan default (GH¢)</b>	<b>Default rate</b>
2008	3000	3.2%
2009	2000	3.1%
2010	1000	2.1%
2011	6000	9.5%
2012	4000	5.7%
2013	7000	11.4%
2014	20000	13.5%
<b>Average</b>	<b>6,142.9</b>	<b>6.9%</b>

Source: Field Survey, 2015

The result of table (4.4) discusses the amount of loan default and the default rate of AKRBL between 2008 and 2014. The average loan default of the rural bank over the considered seven years is GH¢6,142.9 and an average default rate of 6.9%. The highest amount of loan defaulted with AKRBL over the seven considered years was GH¢20,000 in 2014 with a default rate of 13.5%. However, the least amount of loan of GH¢1,000 was defaulted in 2010 with a default rate of 2.1%. Evidently, the loan default rate is consistently worsening compared to the world standards. Nair and Fissaha (2010) indicates that the proportion of the credit portfolio defined as default for more than one month was 16% is regarded as very high and intolerable given the worldwide mean of 3% for the global micro-crediting sector (MIX, 2008).

The trend of the loan default rate of AKRBL between 2008 and 2014 is presented by Figure 4.2. In 2008, the loan default rate of the rural bank was 3.2%. This default rate fell to 3.1% in 2009 and finally reached its lowest of 2.1% within the considered period in 2010. However, the loan default rate rose again in 2011 to about 9.5% but fell in the later year to about 5.7%. In the ensuing years, the loan default rate hiked reaching its highest of 13.5% in 2014. The causes of this rate of default are given in Table 4.3.

**Figure 4.2: Default Rate of AKBRL (2008-2014)**



Source: Field Survey, 2015

In the early years of 2008 to 2010, AKBRL had in place efficient and effective credit monitoring mechanisms. The credit appraisal system was stringent and rarely compromised in an attempt to increase credit activities due to the global financial crisis of 2008 often called Credit-Crunch. However, after the elapse of the Credit-Crunch period, the rural bank began to witness lapses in its credit appraisal and monitoring mechanism. The credit committee in an attempt to increase credit activities or advances relaxed the credit appraisal mechanism after the financial crisis. Moreover, the mobile bankers of the bank were inadequate in number to handle the increased credit activities and also inadequately equipped and motivated to effectively and efficiently execute their roles in ensuring timely credit repayment. The expanded credit facilities were also predominantly in the areas of advances to small scaled businesses that have very high rate of default of 6.05 per annum (Boateng, 2009).

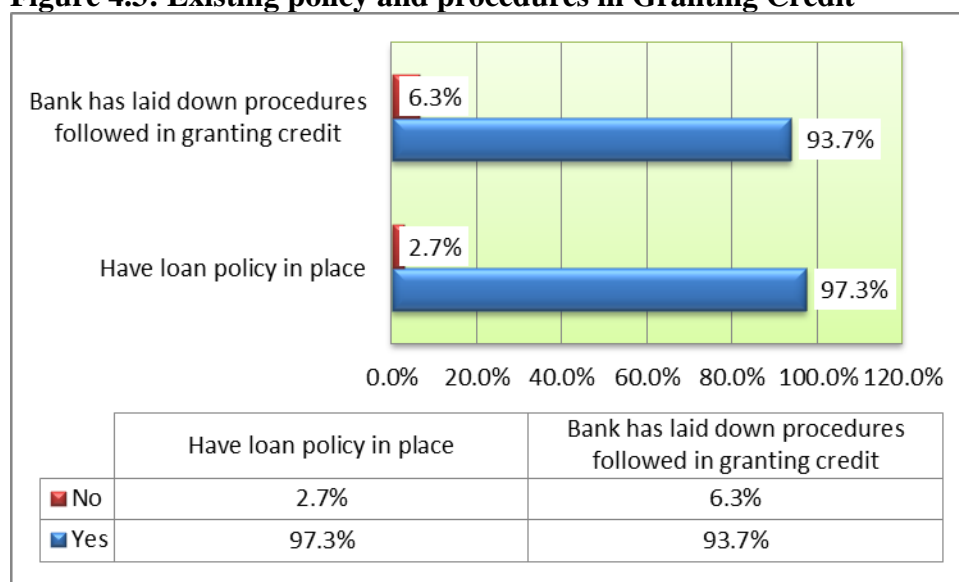
### **4.3 Strategies to Manage Credit Risk of the Rural Bank**

This section of the study discusses the strategies adopted by AKRL to manage credit risk in its operations. The section begins by assessing the existence of loan policy and

laid down procedures in granting credit to customers. The result of the existing policy and procedures is presented in Figure 4.2.

The result of Figure (4.3) shows that the majority (97.3%) of the respondents perceived the AtwimaKwanwoma Rural Bank Limited to have in place a formal loan policy to manage the level of credit risk. The laid down procedures followed by AKRBL in granting credit to clients or customers engulfs around several factors including evaluation of customer’s character, obtaining information on potential loan customer from credit bureau agency, customers are required to meet a laid down appraisal criteria, customers are required to hold operational account with the bank (customer should hold account with the bank for at least three months), one-third cash provision as security of any amount requested, two personal guarantors and collateral security. In other instances, customers are required to be engaged in viable business, customers are required to complete a credit application, bank check’s customer’s trade references and analysis of customer’s statement, and check the credit history of customers.

**Figure 4.3: Existing policy and procedures in Granting Credit**



Source: Field Survey, 2015

Table 4.5 ranks the various strategies adopted by AKRBL in attempt to reducing or combating credit risk. These strategies have been ranked in the table using the Relative Importance Index analytical tool. This analytical tool shows the importance the various surveyed respondents attach to each strategy employed by AKRBL in combating credit risk. A strategy needs an RII value of 0.700 or greater to be regarded as a significant strategy employed by the rural bank in combating credit risk.

**Table 4.5: Credit Risk Management Strategies**

<b>Credit risk management strategies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Weight</b>	<b>RII</b>	<b>Rank</b>
Provide incentive for prompt payment	3	3	14	8	12	143	0.715	1 <sup>st</sup>
Develop an account receivable section	8	4	8	2	18	138	0.690	2 <sup>nd</sup>
Provide check-and-balances for credit	2	10	8	14	6	132	0.660	3 <sup>rd</sup>
Establish payment guideline	9	7	2	9	13	130	0.650	4 <sup>th</sup>
Monitoring overall lending rules, policies and guidelines for branches	6	10	4	9	11	129	0.645	5 <sup>th</sup>
Allocation of responsibility and accountability	4	12	6	12	6	124	0.620	6 <sup>th</sup>
Ensure signing of the credits and collateral agreement	10	10	0	7	13	123	0.615	7 <sup>th</sup>
Ensure compliance with internal guidelines	11	5	2	15	7	122	0.610	8 <sup>th</sup>
Write to notify your debtors often	4	12	12	6	6	118	0.590	9 <sup>th</sup>
underwriting authority and loans limit	15	2	5	8	10	116	0.580	10 <sup>th</sup>
Prioritization of the lending process and systems	3	16	7	12	2	114	0.570	11 <sup>th</sup>
Ensure completeness of the credits application	11	5	6	15	3	114	0.570	12 <sup>th</sup>
Monitoring the loan portfolio and advising management	6	12	10	9	3	111	0.555	13 <sup>th</sup>
timely communication of risk information to top management	8	9	14	5	4	108	0.540	14 <sup>th</sup>
Establish clear risk policy and a reporting structure	20	0	4	5	11	107	0.535	15 <sup>th</sup>

Rank: [Strongly Disagree-1, Disagree-2, Fairly Agree-3, Agree-4, Strongly Agree-5]

Source: Field Survey, 2015

The result of table (4.5) showed that the highly ranked strategy employed by AKRBL in combating credit risk of the bank is the provision of incentive for prompt payment of loans. That is, clients that promptly pay their received loans over a certain period

are rewarded to motivate and ensure prompt payment attitude among customers. The second and ranked credit risk management strategies employed by the bank are the development of an account receivable section and the provision of check-and-balances for credit though these factors are regarded insignificant since their respective RII values are below 0.700. the least three ranked strategies adopted in combating credit risk are monitoring the loan portfolio and advising management, timely communication of risk information to top management, and the establish clear risk policy and a reporting structure. The hiked rate of the loan default rate could therefore be attributed to the less reliance on these three factors in the credit risk combating process.

#### **4.4 Effect of Credit Risk on the Rural Bank's Profitability**

From Table 4.3, it is evident that the model has good fit. The adjusted R-Squared value of 0.667 indicates that about 66.7% of the changes in the dependent variable (return on asset) are attributable to the independent variables. This is further supported by the significance of the F-Statistics that indicates that the explanatory variables together well explains the dependent variable. The Durbin Watson value of approximately 2 indicates the absence of autocorrelation. According to the rule of thumb as suggested by Field (2009), values less than 1 or greater than 3 are definitely cause for concern; however, values closer to 2 are less problematic depending on your sample and model.

**Table 4.6: Effect of Credit Risk on Profitability**

<b>Return on Asset (ROA)</b>	<b>Coefficient</b>	<b>Std. Err.</b>	<b>t</b>	<b>P&gt; t </b>
Non-performing Loans (NPL)	0.001	0.0005	2.49	0.014
Loan loss provisions (LLP)	-0.136	0.076	-1.78	0.072
Loans and Advances (LA)	0.396	0.070	5.67	0.000
Liquidity (LR)	0.297	0.052	5.71	0.000
Capital Adequacy Ratio (CAR)	0.281	0.067	4.17	0.004
Cons	0.966	0.330	2.93	0.004
<b>Test Statistics</b>				
Number of obs.	10			
F(3, 8)	2080.04			
Prob> F	0.000			
R-Squared	68.77			
Adj. R-Squared	66.72			
Durbin Watson	1.98			

Source: Field Survey, 2015

The result of table (4.6) showed that the depth of the non-performing loan (NPL) of the rural bank negatively influences the return on asset (ROA) at a statistical significance level of 5%. This consequently indicates that an increase in the level of the non-performing loans of the bank by a unit reduces the bank's return on asset by 0.001 units. Afriyie and Akotey (2013) in their study also indicates a negatively association among non-performing credits and the profitability of rural bank's indicating that, there are greater credit fatalities. This further specifies that, rural bank rarely possess efficient loan risk administrative strategies. Padmanabham (1998) and Agu (1998) indicates that "loan default reduces the resources base of a bank for further lending, weakens staff moral and affects the borrower's confidence. In such a situation, the cost of managing overdue loans tends to be very high and this could reduce banks profitability levels."

The level of loan loss provisions also negatively influences the rate of return on asset at a statistical significance level of 10%. This therefore implies that an increase in the loan loss provisions of the rural bank would lead to a decrease in the bank's return on

asset by 1.784 units. The result also showed that there is positive relationship between loans and advances and the rate of returns on assets at a statistical significance level of 1%. This therefore implies that a unit increase in the loans and advances of the rural bank is associated with 5.669 unit increases in the rate of return on asset. The study showed positive correlation between the liquidity of the bank and the return on the assets of the bank. Afriyie and Akotey (2013) in their study also indicates a significant negative relationship between Loan loss provisions (LLP) and rural banks' profitability, but showed positive relationship between loans and advances and profitability of the bank. The capital adequacy ratio of the bank positively influences the return on assets of the bank at a statistical significance level of 1%.

#### **4.5 Challenges Encountered in Credit Risk Management Practices**

Respondents were presented with a list of 11 challenges usually reported in the literature as hindering the credit risk management practices of banks. The task of each respondent was to rank the challenges from strongly agree to strongly disagree indicating their agreement level to the factors as challenges in the credit risk management practices. The Table 4.7 displays the mean ranks and by extension, the ranks of the problems as adjudged by the 40 credit officers and mobile bankers.

**Table 4.7: Encountered Challenges in Credit Risk Management Practices**

<b>Challenges</b>	<b>Mean Rank</b>	<b>Rank</b>
Diversion of loans	7.70	1 <sup>st</sup>
Customers business failure	7.68	2 <sup>nd</sup>
Loans for social purpose	7.50	3 <sup>rd</sup>
Inadequate appraisal	7.05	4 <sup>th</sup>
Inadequate monitoring	6.96	5 <sup>th</sup>
Inadequate credit staff	5.96	6 <sup>th</sup>
Inadequate security	5.91	7 <sup>th</sup>
Board imposition	4.92	8 <sup>th</sup>
Staff attitude	4.68	9 <sup>th</sup>
Staff influence	4.04	10 <sup>th</sup>
Inadequate documentation	3.60	11 <sup>th</sup>
<b>Test Statistics</b>		
N (Total Respondents)		40
Kendall's W <sup>a</sup>		0.653
Chi-Square test value		101.081
Degree of freedom		10
P-Value		0.000
a. Kendall's Coefficient of Concordance		

Source: Field Survey, 2015

The result of table (4.7) was obtained following the non-parametric test for k-related samples in SPSS 17. The level of agreement between the 40 respondents was tested using the Kendall's coefficient of concordance since there are three or more judges or respondents.

Diversion of loans was ranked first by 40 respondent whereas inadequate documentation with mean rank of 3.60 was adjudged the last or more specifically, the eleventh on the list. Customer's business failure, loans for social purpose and inadequate appraisal fell in second, third and fourth positions respectively with mean ranks of 7.68, 7.50 and 7.05 respectively. The second and third constraints are more related to the debtor's mismanagement and misapplication of the acquired loan whereas the fourth and fifth challenges are more related to the managerial lapses of the bank. the least three challenges of the rural bank in the credit risk management

practices of the bank are staff attitude, staff influence and inadequate documentation with mean ranks of 4.68, 4.04 and 3.60 respectively.

Kendall's coefficient of concordance ( $W^a$ ), testing the null hypothesis that there is no agreement (respondents differ significantly) among the respondents with respect to how constraining the inventory of problems affect credit management practices was rejected at a 1% significance level. The degree of unanimity as measured by the W-statistics is about 65% since the score is zero for random ranking and 1 for perfectly unanimous ranking. The respondents in the study setting can therefore, be said to unanimously agree that the most constraining factors to efficient combating of the credit risk of the bank are more related first to the debtors attitude in terms of the application of the acquired loans.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter presents a summary of the findings of the study, draws conclusions based on the key findings and also makes recommendations and suggests areas for further research.

#### **5.1 Summary of Findings**

The study sought to assess the identify the major forms of credit risk of AtwimaKwanwoma Rural Bank Limited, examine the effect of credit risk on the banks profitability, identify the measures adopted to manage credit risk at the bank, and identify the challenges of the credit risk management practices of the bank. With regard to these earmarked objectives, the findings are discussed in paragraphs.

The AtwimaKwanwoma Rural Bank Limited gives varying types of credit to clients including micro-credit, personal loans and commercial loans. The credit facilities of the rural bank are associated with several forms of risk including debtor's insolvency, financial loss resulting from changes in the level of credit spreads, debt uneconomical to pursue and when debtor abscond.

To reduce the level of risk associated with the loans granted to customers, a set of criteria is employed for the applicants to appraise. The criteria includes appraising the applicants character, applicants extent of involvement in the business, quality as an entrepreneur, experience in credit utilisation, profit and loss statement, security, ability to pay, borrowers repayment history, and business profitability. Irrespective of these appraisal criteria for credit applicants, between the periods of 2008 and 2014,

the rural bank has witnessed an average amount of default of GH¢6,142.9 and default rate of 6.9%.

The study revealed negative relationship between the level of non-performing loans (NPL) and loan loss provisions (LLP) on the profitability of the bank. However, the loans and advances (LA), liquidity (LR) and the capital adequacy ratio (CAR) of the rural bank have positive relationship with the profitability of the rural bank. Therefore, it is imperative for the bank to reduce non-performing loans and loan loss provisions through the appropriate credit risk strategies.

The rural bank has laid down procedures and policy to manage credit risk. The major strategy employed by the rural bank in managing credit is the provision of incentive for prompt payment of acquired loans.

In the phase of these strategies to reduce the level of credit risk, the rural bank is still confronted by several challenges in the management of credit risk including the diversion of loans, customer business failure, inadequate appraisal, inadequate monitoring, inadequate credit staff, inadequate security, staff attitude and staff influence.

## **5.2 Conclusions**

In the vigorous granting of micro credit to customers, the AtwimaKwanwoma Rural Bank Limited is confronted by several credit risks including debtor's insolvency financial loss resulting from changes in the level of credit spreads, debt is uneconomical to pursue, when a debtor absconds, and when debtor is convicted. All

these forms of credit risk persist irrespective of numerous credit applicant appraisal criterias. The bank thoroughly appraises all loan applicants in terms of their character, their extent of involvement in the business, quality of an entrepreneur, experience in the utilisation of credit, profit and loss statement and many others in attempt to reducing the extent of non-performing loans and increases the profit level of the bank. in the phase of the bank's laid down procedures and policies in granting loans to applicants, and the employment of the strategy of incentive for prompt payment, the bank still witnessed an average amount of default of GH¢6,142.9 and default rate of 6.9%. This implies that there are still lapses in the credit risk management strategies employed by the bank and hence the need to introduce new strategies.

The major lapses or challenges recognized in the credit risk management practices of the AtwimaKwanwoma Rural Bank Limited included diversion of loans, customer's business failure, loans for social purpose, inadequate appraisal, inadequate monitoring, inadequate credit staff, inadequate security and many others. All these revealed challenges have immense influence on the profitability of the rural bank. These challenges often lead to an increasing level of non-performing loans, loan loss provisions that both negatively influence the profitability of the bank. Therefore, for AtwimaKwanwoma Rural Bank Limited to make substantial profit from its operations there is the need to adopt appropriate and effective credit risk management strategies to reduce the current level of the loan default rate and hence non-performing loans. This can be achieved through effective and appropriate recommendations that are made in the subsequent section.

### **5.3 Recommendations**

Based on the findings of the study, several recommendations are made in this section of the study in attempt to ensure effective and appropriate credit risk management of Atwima Kwanwoma Rural Bank

Training programmes should be provided for the credit officers and mobile bankers to ensure effective and efficient credit monitoring. This could also ensure effective credit applicant appraisal bereft of any form of biases and prejudice.

There is the need for the rural bank to provide adequate loan management educational programmes for clients. Such educational programmes would inform clients not to misappropriate loans by using them for purposes other than what they were granted for. This form of education is essential to reduce the level of non-performing loans attributed to diversion of loans.

For customers to abide by their debt obligations and use acquired loans efficiently to avoid sudden collapse of business that would increase the level of non-performing loans or bad debt, there is the need for the rural bank to provide financial, accounting and technical advice to its numerous business clientele.

The rural bank should ensure effective follow up of the credit on the continuous basis from disbursement to full repayment of principal and interest. Staff in the credit department and the audit team should regularly visit branches of the bank to ensure compliance to approved loans. Also, all necessary information needs to be acquired on the loanee's capacity to produce satisfactory flow of cash to repay the loan. The

bases of such information could be other financial institutions working with the client. Semiannual financial records could be visited by the Bank so as to be able to examine creditworthiness of the client. The client should further be constantly visited to ensure the obtained information are accurate.

The importance of the Collateral security as a subordinate mode of repayment should all the time be considered during the retrieval procedure. This could affect the business character of the bank and inputs in manning security-associated factors in loan organizing based on worth, kind, superiority, assurance, certification deferral and faultlessness and others. Reliant on the thinking of the domestic marketplace, the real procedure of discharging collateral would have to be started to inspire, impend or persuade repayment.

#### **5.4 Limitations and areas for future studies**

The current study was limited to credit risk and principally employed only the AKRBL as a case. Future studies could extend the study to cover other forms of risk associated with banking operations. Moreover, the inferential aspect of the current study was limited to assessing the influence of explanatory variables such as non-performing loans, loan loss provisions, loans and advances, liquidity, capital adequacy ratio on profitability. Hence, future studies could extend the explanatory variables to reduce the error margin and enhance the reliability of the study constructs.

## REFERENCES

- Aboagye, A. Q. & Otioku, J. (2010), "Are Ghanaian MFIs' Performance Associated with Corporate Governance?", *Corporate Governance, Vol. 10 Issue 3, pp. 307 - 320*
- Achou, F. T. & Tegnuh, N. C. (2008), "Bank Performance and Credit Risk Management", *Master Degree Project School of Technology and Society, University of Skovde Press.*
- Afriyie, H. O., & Akotey, J. O., (2013). Credit Risk Management and Profitability of Selected Rural Banks In Ghana. ,” *Journal of Risk Finance*, 4(2), 1-18.
- Agu, C. C. (1998). Loan Management in Agriculture, in Ijere, M. and A. Okorie (eds.), *Readings in Agricultural Finance*. Longman Nigeria Plc., Lagos.
- Ahmad, N.H. & Ariff, M. (2007). Multi-country study of bank credit risk determinants, *International Journal of Banking and Finance*, 5(1), 135-152.
- Ahmed, A.S., Takeda, C. & Shawn, T. (1998). Bank loan loss provision: A Reexamination of Capital Management and Signaling Effects. *Working Paper, Department of Accounting, Syracuse University*, 1-37.
- Al-Khouri, R. (2011). Assessing the risk and performance of the GCC banking sector, *International Journal of Finance and Economics*, ISSN 1450-2887, 65, 72-8.
- Allen, M.J., & Yen, W.M. (1979). *Introduction to Measurement Theory*, Monterey, CA: Brook/Cole.
- Amaratunga, D., Baldry D., Sarshar, M., & Newton, R., (2002). "quantitative and qualitative research in the built environment: application of "mixed" research approach", work study, Vol. 51, No.1, p.17-31.
- Appa, R. (1996). *The Monetary and Financial System*. ( 3rd Edn)., London Bonkers Books Ltd.
- ARB Apex Bank (2012), *Annual Reports, 2006-2012*, Accra.
- Asare-Bekoe, K. M. (2010), "A Risk-Based Assessment of Ecobank Ghana Limited", *Master's Thesis, Copenhagen Business School, Handelshøiskolen*.
- Bank of Ghana (2006), Bank of Ghana web site, available at: [www.bog.gov.gh](http://www.bog.gov.gh)
- Basel Committee on banking Supervision (2002). "*Risk Management Practices and Regulatory Capital: Cross-sectional Comparison*". Basel Committee on Banking Supervision, [www.bis.org](http://www.bis.org)

- Bessis, J. (2002). "Risk management in banking", John Wiley & Sons Ltd
- Bharath, S. T. and Shumway, T. (2008). cit. in Matoussi, H (2010). "Credit-risk evaluation of a Tunisian commercial bank: logistic regression vs neural network modeling. *Accounting and Management Information Systems*, Vol. 9, No. 1, pp. 92 –119.
- Bhasin, V. K. & Akpalu, W. (2010), Impact Of Micro-finance Enterprises on the Efficiency of Micro-Enterprises in Cape Coast, *IFLIP Research Paper 01-5, Geneva*.
- Boahene, S. H., Dasah, J., & Agyei, S. K. (2012). Credit risk and profitability of selected banks in Ghana. *Research Journal of Finance and Accounting*, 3(7), 6-14.
- Bryman, B. & Bell, E. (2007) *Business Research Methods*. (2nd edn.) Oxford: Oxford University Press.
- Burns, N., & Grove, S. K. (1993) *Understanding Nursing Research*. (2nd edn). Philadelphia: W.B. Saunders Company.
- Cai, J & Anjan, V. T. (2008), Liquidity Risk, Credit Risk, and Interbank Competition, *Working Paper*.
- Caoutte, J. B., Altman. & Nayaran, P. (1998). Managing credit risk. The next great financial challenge. Willey, J. and Sun. New York. NY.
- Carminees, E.G., & Zeller, R.A. (1979). Reliability and Validity Assessment. Beverly Hills: Sage.
- Cooperman E., Mills D., & Gardner J., (2000); Managing Financial Institutions: An Asset and Liability Approach. *The Dryden Press, Harcourt College Publishers, Orlando*.
- Cornett, M. M., & Saunders, A. (2005). Fundamentals of financial institutions management. Boston, MA: Irwin/McGraw-Hill.
- Crouhy, M. Galai, D., & Mark, R (2005) "The essentials of risk management". McGraw-Hill
- Davydenko cit. in Matoussi H (2010). "Credit-risk evaluation of a Tunisian commercial bank: logistic regression vs neural network modeling". *Accounting and Management Information Systems* 9(1): 92 –119.
- De Vaus, D. (2002). *Surveys in Social Research* (5<sup>th</sup> ed.). London: Routledge. Ch. 8.

- De Vos, A.S., Strydom, H., Fouche, C.B., & Delpont, C.S.L. (1998). *Research at Grassroots for the Social Sciences and Human Service Professions*. (3rd edn.). Pretoria: Van Schaik.
- Diamond, D. W. & Rajan, R. G. (2001), Liquidity risk, liquidity creation, and financial fragility: A theory of banking, *The Journal of Political Economy* 109(2), 287-327.
- Epure, M. & Lafuente, I. (2012). Monitoring Bank Performance in the Presence of Risk. *Barcelona GSE Working Paper Series* No.61.
- Fatemi, A., & Foolad, I. (2006). Credit risk management: A survey of practices. Retrieved from <http://www.emeraldinsight.com>
- Felix, A. T. & Claudine, T. N. (2008). Bank performance and credit risk management, Unpublished Masters Dissertation in Finance, University of Skovde.
- Flynn, B. B., Sakakibara, S., Schroeder, R. G., Bates, K. A. & Flynn, E. J. (1990). Empirical research methods in operations management. *Journal of Operations Management*. 9(2), p250-84.
- Fredrick, O. (2010), "The impact of credit risk management on financial performance of commercial banks in Kenya". *DBA African Management Review*.
- Gallagher, G. T. (1956). *Credit risk analysis*. 2nd ed. New York. NY. The MacMillan publishing. Inc.
- Gallati, R. (2003). *Risk management and capital adequacy*, New York: McGraw-Hill.
- Gil-Diaz, F. (1994). *The Origin of Mexico's 1994 Financial Crisis*, *The Cato Journal*, vol.17, No.3, <http://www.cato.org/pubs/journal/cj>, on 28 November 2015.
- Haim, L., & Thierry, P. (2005). Investments. P 554.
- Halling, M. & Hayden, E. (2006). *Bank Failure Prediction: A Two-Step Survival Time Approach*. Available at SSRN: <http://ssrn.com/abstract=904255> or <http://dx.doi.org/10.2139/ssrn.904255> [Accessed: 6 Feb 2014].
- Haneef S., Riaz T., Ramzan M., Ali Rana M., Ishaq F.M., & Karim Y. (2012). Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector of Pakistan. *International Journal of Business and Social Science*, 3(7), 307-315.
- Helbok, G & Wagner, H (2006). "Determinants of operational risk reporting in the banking industry". *Journal of Risk* (July 11): 25-37

- Hosna, A. Manzura, B & Juanjuan S. (2009), "Credit risk management and profitability in commercial banks in Sweden" School of Business Economics and Law.
- Hosna, A., Bakaeva, M. & Sun Juanjuan (2009), "Credit Risk Management and Profitability in Commercial Banks", *Master Degree Project No. 2009:36, School of Business, Economics and Law, University of Gothenburg.*
- Hyde, K. F., (2000). "Recognizing deductive processes in qualitative research", *Qualitative Market Research: An International Journal*, V.3, No. 2, p.82-89.
- Irukwu, J. (1998). *Insurance law and practice in Nigeria*. Ibadan: Caxton Press (WA) Ltd..
- Jackson, O. (2011), "The impact of credit risk management on financial performance of commercial banks in Kenya". University of Nairobi.
- Jones, R. A., & Pérignon, C. (2013). Derivatives Clearing, Default Risk, and Insurance. *Journal Of Risk & Insurance*, 80(2), 373-400.
- Kargi, H. S. (2011), "Credit risk and the Performance of Nigeria banks" Ahmadu Bello University Zaria.
- Kargi, H. S. (2011). *Credit Risk and the Performance of Nigerian Banks*. AhmaduBello University, Zaria
- Kenneth, J. T. & Thygerson, D. G. (1995). *Management of financial institutions*. California State University, San Bernardino.
- Kinthinji, A. M. (2010), "Credit risk management and profitability of commercial banks in Kenya".
- Kithinji, A. M. (2010). *Credit Risk Management and Profitability of Commercial Banks in Kenya*, School of Business, University of Nairobi, Nairobi.
- Kolapo, T. F., Ayeni, R. K. & Oke, M. O (2012). Credit risk and commercial banks' performance in Nigeria: A panel model approach. *Australian Journal of Business and Management Research*, 2 (2), 31 – 38.
- Kolb, R. W. (1992). *The Commercial Bank Management Reader*, Florida, Kolb publishing Company.
- Korteweg & Polson 2008 cit. in Matoussi, H (2010). "Credit-risk evaluation of a Tunisian commercial bank: logistic regression vs neural network modeling". *Accounting and Management Information Systems*, Vol. 9, No. 1, pp. 92 – 119.

- Liyuqi (2007), “Determinants of Banks profitability and its implication on Risk management practices: Panel Evidence from the UK”. University of Nottingham.
- Machiraju, H. R. (2008). *Modern commercial banking*, 2nd edition, New Delhi: New Age International (P) Ltd. Publishers
- Mavhiki, S., Mapetere, D., & Mhonde, C. (2012). An analysis of the challenges faced by banks in managing credit in Zimbabwe. *European Journal of Business and Management*, 4(1), 38-46.
- McCutcheon, D. M. & Meredith, J. R. (1993). Conducting case study research in operations management. *Journal Operations Management*. 11(3), p239–256.
- Miles, M. B. & Huberman, A. M. (1994), *Qualitative Data Analysis: An Expanded Sourcebook*, (2nd ed), Sage Publications, Thousand Oaks, California.
- Miller, G. P. (1996). Is deposit insurance inevitable? Lessons from Argentine. *International Review of Law and Economics*, 16(2), 211-232.
- Muhammed, S., Shahid, F., Munir, E., & Ahad, Z. (2012), “Credit risk and the performance of Nigerian banks” interdisciplinary *Journal of contemporary research in business*.
- Musyoki, D & Kadubo, A. S. (2011), “The impact of credit risk management on the financial performance in Kenya”. *International Journal of Business and Public Management*.
- Naceur, S. B. & Kandil, M. (2006), “The impact of capital requirement on- banks performance: The case of Egypt” Social Science Research Network.
- Naceur, S. B. & Kandil, M., (2008), “The impact of capital requirement on banks costs of intermediation and performance” IMF working paper.
- Nair, A. & Fissaha, A. (2010), “Rural Banking: The Case of Rural and Community Banks in Ghana”, *Agriculture and Rural Development Discussion Paper 48*, the World Bank, Washington, D.C
- Nawaz M., Munir S., Siddiqui S.A, Tahseen-Ul-Ahad, Afzal F., & Asif M., Muhammad Ateeq M. (2012). Credit Risk and the Performance of Nigerian Banks. *Interdisciplinary Journal of Contemporary Research in Business*, 4(7), 49-62.
- Onaolapo, A. R. (2012), “Analysis of credit risk management efficiency in Nigerian commercial banking sector” *Far East Journal of Marketing and Management*.

- Padmanabhan, K. P. (1998). *Rural Credit: Lessons for Rural Bankers and Policy Makers*. Intermediate Technology Publication Ltd., London.
- Polit, D. F., Beck, C. T., & Hungler, B.P. (2001). *Essentials of Nursing Research: Methods, Appraisal, and Utilisation* (5th edn). Philadelphia: Lippincott.
- Poudel, R. P. S. (2012). The impact of credit risk management on financial performance of commercial banks in Nepal. *International Journal of Arts and Commerce*, 1(5), 9-15.
- Rene, S. (2000). Survey of mastering risk: Diminishing the threats to shareholders wealth. *The Financial Times*.
- Robson, S. & Hedges, A. (1993) 'Analysis and Interpretation of Qualitative Findings: Report of the MRS Qualitative Interest Group', *Journal of the Market Research Society*, vol. 35, no. 1, pp. 23 - 35.
- Santomero, A. M. (1997). "Commercial bank risk management: An analysis of the process", *Journal of Financial Services Research*, 12:2(3), 83-115
- Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research Methods for Business Student* (5<sup>th</sup> edn). Edinburgh: Prentice Hall., p218.
- Schroeck, G. (2002). *Risk management and value creation in financial institutions*, New Jersey: John Wiley & Sons, Inc.
- Siegel, S., (1956). *Nonparametric Statistics: For the Behavioral Sciences*. New York: McGraw-Hill.
- Tabari, N. A. Y., Ahmadi, M & Emami, M. (2013) The Effect of Liquidity Risk on the Performance of Commercial Banks. *International Research Journal of Applied and Basic Sciences* Vol, 4 (6) p. 1624-1631
- Van Greuning, H, & Brajovic Bratanovic, S. (2003). *Analyzing and managing banking risk a framework for assessing corporate governance and risk management*, 2nd edition, Washington, D. C.: The World Bank
- Yin, R. (1994). *Case study research: Design and methods*. 2nd ed. Beverly Hills, CA: Sage Publishing, p12.

## APPENDIX

### QUESTIONNAIRE CREDIT OFFICERS & MOBILE BANKERS

#### Dear Respondent,

I am an MBA student of KNUST undertaking a study on the effect of credit risk on the profitability of financial institutions in Ghana: a case of AtwimaKwanwom Rural Bank Limited. This study forms part of the requirement for the program of Master of Business Administration (Finance) in the Business School of KNUST. Please, read each question carefully before responding, and then circle or tick the appropriate answer in the designated space. Please answer to the best of your ability. You are rest assured that the study is for only academic purposes; all and every information provided will therefore be treated with the utmost confidentiality. Thank you for your help.

#### (A) PERSONAL DATA OF RESPONDENT

1. Sex: Male  Female
2. Age: 16-25  26- 35  36-45  46- 55  56+
3. Marital Status: Single  Married  Divorced  Separated  Widowed
4. Type of respondent: Credit Officer  Mobile Bankers
5. Educational level: Never attended any school  Basic  Secondary  Tertiary
6. Working experience in the banking industry:  
1-5 years  6-10 years  11-15 years  16-20 years  21+ years

#### (B) FORMS OF CREDIT RISK IN THE RURAL BANK SECTOR

7. What types of loans do you have for your customers?  
Commercial loan   
Salary loans   
Micro loans   
Managed loans   
All the above   
Others (please specify).....

8. Please indicate your level of agreement to the underlisted as criteria used by the rural bank in appraising customers for loans by choosing from strongly disagree [1] to strongly agree [5]. [Strongly disagree-1, disagree-2, fairly agree-3, agree-4, strongly agree-5]

<b>Appraisal factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Character					
Extent of involvement in the business					
Quality as an entrepreneur					
Experience in credit utilization					
SWOT analysis					
Cash flow statement					
Profit and loss statement					
Security					
Ability to pay					
Borrower's repayment history					
Market for the product or service					
The size and strength of the existing market					
Future prospects of the business					
Liquidity/working capital activity					
Profitability					

9. Please indicate your level of agreement to the underlisted as cause of major credit risk in your rural bank by choosing from strongly disagree [1] to strongly agree [5]. [Strongly disagree-1, disagree-2, fairly agree-3, agree-4, strongly agree-5]

<b>Causes of credit risk</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Borrowers do not fulfill their debt obligations					
Financial loss resulting from changes in the level of credit spreads					
When the debtor is deceased					
When the debtor absconds					
When the debt is economic to pursue					
When the debtor is in solvent					
When the debtor is committed to prison					

10. What has been the amount of loan default and the default rate for the last seven years?

<b>Years</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Amount of loan default							
Default Rate							

**(C) STRATEGIES TO MANAGE CREDIT RISK AT THE BANK**

11. Does the bank have any laid down procedures that are followed in granting credit to client?

Yes [ ] No [ ]

12. If yes to (question 10), what are the laid down procedures?

.....  
 .....

13. Do you have loan policy in place?

Yes [ ] No [ ]

14. If yes to (question 12), please indicate in each case the extent of importance placed on the policy of your bank in managing and controlling credit risk by choosing from Very Much [1] to Not at all Much [5]. [Very Much -1, Much-2, Uncertain-3, Not much -4, Not at all Much-5]

<b>Credit risk management strategies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Establish clear risk policy and a reporting structure					
underwriting authority and loans limit					
Allocation of responsibility and accountability					
Prioritization of the lending process and systems					
timely communication of risk information to top management					
Ensure compliance with internal guidelines					
Ensure completeness of the credits application					
Ensure signing of the credits and collateral agreement					
Establish payment guideline					
Develop an account receivable section					
Write to notify your debtors often					
Provide incentive for prompt payment					
Provide check-and-balances for credit					
Monitoring overall lending rules, policies and guidelines for branches					
Monitoring the loan portfolio and advising management					

**(D) CHALLENGES OF THE CREDIT RISK MANAGEMENT PRACTICES**

15. Do you encounter problems in your credit risk management practices?

Yes [ ] No [ ]

16. What are the problems confronting the bank in processing the loans?

.....  
 .....  
 .....

17. What extent is the problem?

Very High [ ] High [ ] Uncertain [ ] Low [ ] very low [ ]

18. Is the problem causing difficulty in terms of operational growth and improvements in the banks activities?

Yes [ ] No [ ]

19. Please, indicate your level of agreement to the underlisted as major problems encountered in the in the credit risk management practices of the rural bank by choosing from a scale of 1 (strongly disagree) to 5 (strongly agree). (1-strongly disagree, 2-disagree, 3-fairly agree, 4-agree and 5-strongly agree)

<b>Problems</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Inadequate appraisal					
Inadequate monitoring					
Board imposition					
Staff influence					
Staff attitude					
Inadequate security					
Diversion of loans					
Customers business failure					
Loans for social purpose					
Inadequate credit staff					
Inadequate documentation					

20. How does the bank solve these problems?

.....  
 .....  
 .....  
 .....