Kwame Nkrumah University of Science & Technology, Kumasi

Institute of Distance Learning

EFFECTIVENESS OF CREDIT MANAGEMENT SYSTEMS IN GHANAIAN BANKS: A CASE STUDY OF HFC BANK (GH) LTD AND BARCLAYS BANK GHANA LTD.

By:

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A Thesis submitted to the Institute of Distance Learning of Kwame Nkrumah University of Science and Technology in partial fulfillment of requirements for the degree of Executive Masters in Business Administration.

September 2011

DECLARATION

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

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PROF. KWAME DONTWI   ------------------------------   ------------------

Dean, Inst of Dist. Learning   Signature   Date
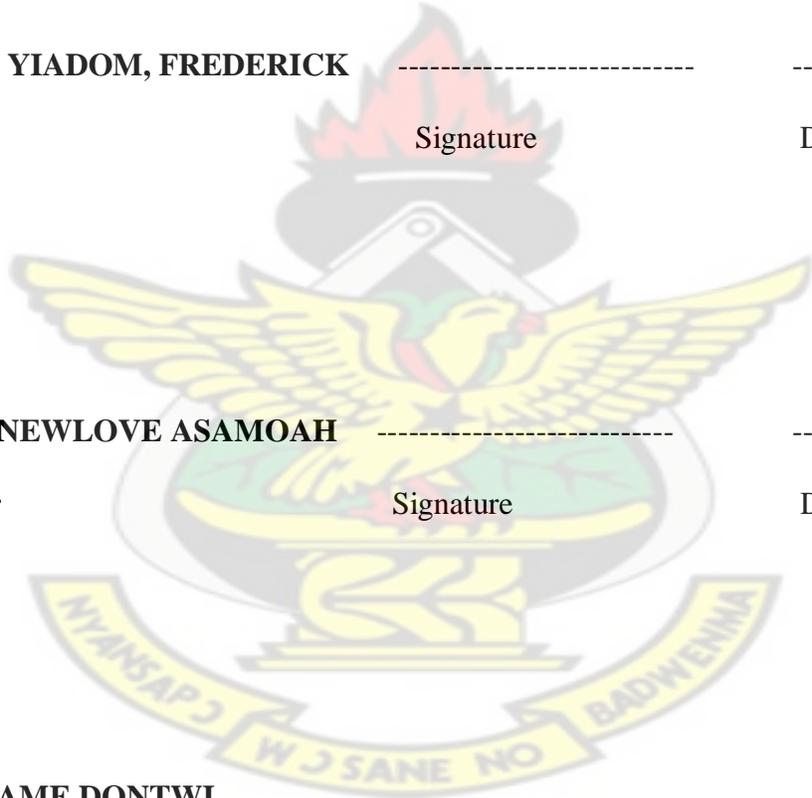
ABSTRACT

The objective of the study was to examine the credit risk management practices of the banks in Ghana using HFC Bank and Barclays Bank as case study. The study also sought to identify the major sources of credit risk exposures and the mitigating measures put in place to manage the exposures and to assess the impact of these exposures on the banks capital adequacy, asset quality, management, earnings and liquidity positions and sensitivity to market risk. The methodology used for the study was the camels' module.

According to the study commercial loans, mortgage loans and consumer loans were found to be the major source of credit risk. Capital adequacy was right as banks kept minimum capital. However, asset quality was questionable as banks had high loan loss ratio. Earning ability was found not adequate in spite of the high interest rate regimes. Liquidity positions amongst the banks were however, found to be high. Finally, it was revealed that, banks in Ghana were more sensitive to asset repricing than liability repricing as a percentage increase in interest rate environment in the short term could impact positively on the interest margins of banks.

It was therefore recommended for bank in Ghana to diversify their risk exposures to reduce the risk of concentration. Banks should constantly review and conduct further studies on periodic basis into the management of their credit policies and strategies; and work out plans to determine whether they are in tune with the recommended best practices. Finally, due to the limitations of this study and the extensive nature of credit risk management, it was also recommended that, further studies be conducted to address the deficiencies of this study.

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This study would not have been possible without the help and encouragement from a number of people.

First of all, I would wish express my gratitude to the Almighty God who has brought me this far. I have been able to do all things through him who strengthens me. Indeed, if it not been for the Lord on our side, where would we have been. So for His grace, mercies and loving-kindness, I say thank you, Lord.

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DEDICATION

This work is dedicated to my wife; Esther Boatemah Boateng and my children Kojo Sarpong

Boakye – Yiadom and Abena Boatemah Boakye - Yiadom.

CHAPTER ONE

GENERAL INTRODUCTION

1.1   Background to the study

Since the information between banks (lenders) and their counter parties (borrowers) is asymmetry, lending has over the years been a risky activity. Banks need to monitor their borrowers to ensure that the credit extended is reimbursed in accordance with the pre-agreed terms and conditions.

The issue of problem loan remains crucial for most economies the world over and Ghana is no exception. For instance, according to the Koizumi cabinet in 2001, "One of the underlying causes of Japan's prolonged economic stagnation was the non-performing or bad loan problem". Park (2002), stated in a study that, according to the Financial Agency Services, the total sum of bad loans extinguished from the books for the entire banking industry of Japan since 1992 amounted to nearly ¥69 trillion (sixty-nine trillion Japanese Yen). However, the new bad loans cropped up faster than the ones retired. According to Kone (2006), the same study also revealed that, 13 large city banks of the country had written off ¥8 trillion (eight trillion Japanese Yen) of bad loans as at the end of March 2002. However, their combined bad loans outstanding increased by ¥8.7 trillion (eight point seven trillion Japanese Yen) over the previous year due to a faster accumulation of new bad loans. These figures show that problem loans have become a very serious issue and finding a solution is becoming an emergency. This problem is not restricted to only Japan; it is a global concern.

According to Quarterly (2002), European banks were owed $900 billion (nine hundred billion United States Dollars) in non-performing loan. The study also noted that dealing with bad loans has become so worrying for banks that some of them have discerned the seeds for a new business. Some banks and other financial are now specializing in debt recovery as a way of dealing with the problem of non-performing loans. For instance, in 2000, the weighted average cost of bad debt as share of total profits in these European banks was 48 %.(Kone, 2006).

The Basel Community for Banking Supervision defines the business of banking as one of financial intermediary and credit risk is one of the core risks of the banking industry. The survival of banks is dependent on their ability to effectively manage their credit risks portfolios. Over the years, a number of factors have been assigned to the problems been faced by banks. However, the major cause of serious banking problems have been related to lax in credit standards for borrowers and counter parties, poor portfolio management, lack of attention to the changes in the economic conditions and many more. These have resulted in deteriorating credit standing of banks' counter parties.

Similarly, Ghana is also facing growing problem of bad loans. The reasons for this could be attributed to; the growing number of lending institutions, the development of financial markets and stock exchanges and the weaknesses in the Banking Supervision roles of the Central Bank.

The number of banks in Ghana has increased greatly in recent years from 18 banks in 2004 to about 25 banks in 2008. It is evident that this growth in the number of banks has led to a competitive environment resulting in increased credit extensions to customers. In the height of these competitions, more money has been lent with moderate regards to the banks credit policies. These occurrences have resulted in the creation of problem loans.

Additionally, the growth in lending activities by rural banks and non-bank financial institutions, whose number have also increased significantly over the years; one hundred & twenty nine (129) and forty – five (45) respectively have also heighten competition in the lending sector and has made the credit conditions for bank more flexible. Since the number of borrowers has increased due to probable decrease of credit requirements, the likeliness that banks had lent to bad borrowers had also increase. Hence, prudent credit risk management systems and ability to manage problem loans has become critical success factor.

The issue of problem loans is not new to the Ghanaian banking industry. According to the Bank of Ghana, the percentage of non-performing loans to total loans amounted 12.8% and 11.9% in 1999 and 2000 respectively. After this marginal fall, non-performing loans ratio increased to 19.6% in 2001 and further to 22.7% by December 2002. These 'up-and-down' movements in non- performing loans is indicative that Ghanaian banks were yet to get a firm grasp of the bad loan menace.

The objective of this study is to examine the credit risks management practices of banks in Ghana using Barclays Bank Ghana Limited and HFC Bank Ghana Limited as case study. The

study also sought to indentify the major sources of credit risk exposures of banks in Ghana and the mitigating techniques put in places to manage these risk exposures. The study also sought to assess the impact of these credit exposures on the capital structures of the banks in Ghana and make recommendation (where appropriate).

HFC Bank and Barclays Bank Ghana Ltd were chosen for this study because of their strategic positions in the Ghanaian banking industry. The Ghanaian banking industry is divided into four (4) quartiles in terms of their assets and liabilities. Each quartile comprises of approximately one-fourth of the total population. HFC Bank is currently located in the third quartile whereas Barclays Bank Ghana Limited is located in the first quartile.

HFC Bank has over the years grown from a small mortgage financing institution with only two branches in the 1990s to a full-fledged universal banking institution in 2005. The bank currently has more than 21 branches nationwide (across six regions) and three subsidiaries; HFC Investment Services Ltd, HFC Realty Ltd and HFC Boafo Micro- finance Ltd. The Bank has also seen a growth in its assets by more than 133% from GH¢161 million in 2007 to GH¢376 million in December 2008. Impairment for loan loss over the same period has also increased by more 90%.

Barclays Bank on the other hand is the oldest bank in Ghana with more than 93 years of experience in Ghana. The bank currently has more than 140 branches and 118 ATMs including 9 world class Prestige and Premier Centers. It has presence in all ten (10) regions of Ghana and has maintained its position as one of the most profitable banks in Ghana until

2008 when it declared huge loss. The bank's total assets as at December 2008 stood at GH¢1,385 million representing 16% increase over the previous year's figure of GH¢1,191 million. Additionally, the bank's impairment for loan losses for the same period also increased by more than 748% from GH¢6.283 million in 2007 to GH¢47 million in 2008.

These growths in impairment for loan losses by the banks raises an number of concerns as to how the banks in Ghana are managing their credit risk assets in order to preserve shareholders fund and prevent a possible collapse. This study therefore sought to indentify the major causes/sources of credit risk exposures of banks in Ghana and the mitigating techniques put in places to manage these risk exposures. The study also sought to assess the impact of these credit exposures on the capital structures of the banks in Ghana.

1.2   Problem Statement

Concerns over credit risk management have grown over the years, fuelled by a number of factors. These include inaccurate and unreliable information provided by borrowing customers, level of subjectivity by loan appraising officers, unexpected down turn in general economic and counter party's industry and unwillingness of borrowers to meet their obligations with lending institutions. One of the cardinal principles of Basel II was to develop a credit risk that seeks to answer the question; 'what magnitude of loan loss could be expected if an adverse situation should occur in the future?' The current recognition given to this has led to many banks developing their own risk management models such as establishing an appropriate credit environment, sound credit approval processes, maintaining an appropriate credit administration, measurement and monitoring processes and ensuring

adequate controls to assess their exposures. However, these models have not fully absorb banks and lending institutions from probable loan losses, growing loan loss provisions, loss of income (reduce profitability) and the long term survivor of the bank.

The 2008 annual reports of the banks showed an increase in impairment for loan losses by 90.5% and 748% for HFC Bank and Barclays Bank respectively between 2007 and 2008. These increases raise a lot of concern as to how banks are managing their risk assets. Even though, it is difficult to predict when these losses will occur, it is important that an efficient and effective systems are put in place to enable banks appropriately mitigate these risks.

1.3 Objective of Study

The main objective of this study is to review the credit risk management systems of these banks by undertaking the following sub-objectives:

1. To identifying the main sources of the bank's credit risk exposures and the mitigating techniques put in place to reduce or manage these exposures.

2. To examine the bank's credit policies as stated in their annual reports and compare them with the best practices such as Basel II.

3. To examine impact of the banks exposures on their Capital Structures and compare with Bank of Ghana set standard.

4. To examine the quality of the bank's credit portfolio

5. To examine the bank's Capital Adequacy Ratio (CAR) and compare it with the standards set by the Bank of Ghana under the prudential banking requirements.

1.4   Research Questions

This research is therefore intended to find answers to the questions;

1. What are the main sources of banks credit risk exposures and what mitigating measures have been put in place to manage these exposures?

2. What measures have been put in places to prevent or minimize the creation of problem loans and how effective have these measures been?

3. How has these credit exposures impacted on the capital structures of the banks?

4. What is the quality of the banks' credit portfolio?

5. Do banks in Ghana have enough cushioning for depositors fund in the form of capital?

In summary, the research sought to find answers to how can losses due to problem loans be reduced by banks in Ghana?

1.5   Relevance of the study

Credit Risk Management has been a prominent issue given the degree of impact it has on financial institutions' management and operations anytime such risks emerge. This study is significant as it deals with the issues banks are facing and will continue to confront in the future. According to the IMF , the average level of non-performing loans (NPLs) as at December 2010 in Ghana is around 17.6% and several banks including systematically important domestic banks and subsidiaries of reputable international banks reported higher NPL in the ranges of 20-40%. This study is also intended to enable the case study banks re-assess their credit risk management processes/practices in order to reduce the losses

associated with non-performing loans (NPL). This study is also of particular importance for the whole banking community in order to provide a benchmark for other banks in the country. Over the last three (3) years, banks in Ghana have been rated annually on the basis of their profitability with credit risk being the major determinant. This study is to enable the banks create more value for their shareholders, employees, government and the society in which they operate. The study is also relevant for educational purposes and to form the basis of future researches.

1.6   Methodology (Overview)

In order to have a broader and complementary view of the research problem, the camels' modulation was used.   CAMELS is an acronym for Capital adequacy, Asset quality, Management competence, Earning ability, Liquidity risk and *Sensitivity to market risk* used to identifying, evaluating and monitoring internal controls put in place by banks or financial institutions to mitigate the impact of their credit risk exposures. This method seeks to assess the different aspects of the banks' operations in order to determine the soundness of their conditions. The research methodology also consisted of; sampling (sample selection) data collection (sources of data and method of data collection), interviews, to ascertain the validity and reliability of the research.

1.7   Scope of the study

This study was limited to HFC Bank and Barclays Bank. This is because the banks' strategic positions in the Ghanaian banking industry; HFC Bank currently located in the third quartile

whiles Barclays Bank was located in the first quartile. Again, the banks were also chosen on the basis of their product mix; HFC Bank was more involved in commercial (corporate) and mortgage loans whilst Barclays Bank was also involved in commercial (corporate) & retail (consumer) loans. The banks were also chosen on the basis of the ownership or shareholding structures; HFC Bank is a wholly owned Ghanaian bank whereas Barclays Bank is wholly owned by Barclays Bank Plc in the United Kingdom. Finally, the banks were also chosen on the basis of their number of years in operation; whilst HFC Bank is amongst the young banks with a little over 7 years of operation in Ghana, Barclays Bank can be counted amongst the oldest banks in Ghana with more than 93 years of operation in Ghana. Information for this study were generally sourced from the banks 2008 annual reports, interviews and other data were also sourced from the two banks and the Banking Supervision Department of the Bank of Ghana.

1.8   Limitation of this study

Although this study has been completed successfully, there were practical difficulties. The study did not examine the credit approval processes of the banks due to time constraint. Finding the relevant information from the banks was another difficulty encountered in the study. Due to sensitive nature of this area in the intensely competitive banking industry, access to vital information such as delinquent loan files, credit risk management policies and procedural manuals which are viewed as the preserve of the banks were difficult. The study did not also consider the credit risk management practices of the rural banks and the savings & loans institutions.

1.9   Organization of the study

This study was organized into five (5) main chapters. Chapter one (1) covered the general introduction consisting of the background information of the study, the problem statement, the objectives of study, the relevance of the study, scope and limitation of study and finally the organization of study. In chapter two (2) the relevant literature on credit risk management, the Ghanaian economy and the developments in the Ghanaian banking industry are reviewed. Chapter three (3) captures the methodology used in the data collection and analysis whilst Chapter four (4) is devoted to the discussions and analysis of the results and findings of the study. Chapter five (5) represents the general conclusion, recommendations and summary of the study.
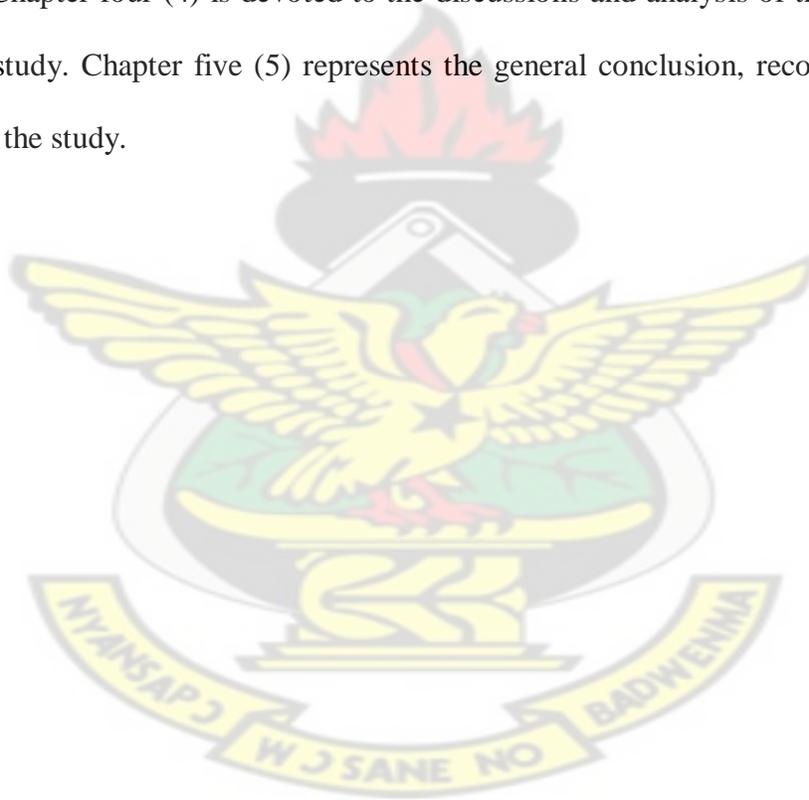
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The business of banking is primarily one of financial intermediation involving the acceptance of deposits of money from the public, repayable on demand or otherwise and withdrawal by cheques, draft or by other means. It also involves the provision of financial support, whether in whole or in part or by way of short, medium or long term loans or advances to trade industries, commerce or agriculture and any other business activities that the Bank of Ghana (Central Bank) may prescribe or recognize as being part of the banking business. (Banking Act, 2004). Credit risk forms the core risk of the banking business and banks ability to effectively manage this risk is imperative for their survival.

2.2 Credit Risk Management

While financial institutions have faced difficulties over the years for a number of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counter parties, poor portfolio risk management, lack of attention to changes in economic or other circumstances that can lead to a deterioration of credit standings of a bank's counter parties.

The Basel Community for Banking Supervision (1999), defined credit risk simply as the potential that a bank's borrower or counter party will fail to meet its obligations in accordance with the agreed terms. The goal of credit risk management is to maximize a bank's risk adjusted rate of returns by maintaining credit risk exposures within acceptable parameters. Bank need to manage the credit risk inherent in the entire portfolio and also individual credit transactions.

According to Rose et al (2008), Credit risk is also defined as "the probability that some financial institution's asset, especially its loan will decline in value and perhaps become worthless". Because financial firms tend to hold little of owner's capital relative to the aggregate value of their asset, only a small percentage of the total loan needs to turn bad to push them to the brink of failure.

Besis (1998), also defined credit risk as by the losses incurred in the event of the bank's counter party or in the event of deterioration in the client's credit quality. Besis, therefore classify losses as ranging from temporary delay of payments to chronic counterparty's inability to meet its financial obligations, which often ends in formal bankruptcy.

Credit risk is therefore the risk of loss to a bank through default by an obligor. It is thus the inability of a counter party of a transaction to meet the agreed upon obligation of principal and interest repayment. This inability has various degrees of impact depending on whether the default occurs before the value date or on the value date of the contract.

According to Rose et al, (2008), credit risk management is a system or tool designed to assess the level of default associated with a loan customer seeking to borrow funds. Effective credit risk management is therefore a critical component of a bank's overall risk management strategy in that it is essential for long sustainability in the banking industry as it reflects its tolerance for risk and the level of expected profitability as it incurs risks.

2.3   Risk Management Concepts

Risk management is the process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision – making according to the Investment Dictionary. It occurs anytime fund managers analyze and accept to quantify the potential for loss in an investment and then take the appropriate action (or inaction) given the investment objective or risk tolerance.

The Banking Dictionary (2006) defines risk management as a set of services rather than a specific product aimed at controlling financial risk including credit risk and interest rate risk through hedging devices, financial futures and interest rate caps. It aims at controlling funding cost, budget interest rate expense and limit exposures to interest rate fluctuations. Risk management involves identifying, analyzing and taking steps to reduce or eliminate the exposures to loss faced by organization or individuals.

The International Organization for Standardization (ISO-31000), (2009) also defines risk management as the identification, assessment and prioritization of risk (effect of uncertainty on objective) followed by coordinated and economical application of resources to minimize, monitor and control the probability and or impact of unfortunate events or to maximize the realization of opportunities. Every business encounters risk, some predictable and controllable whilst others are unpredictable and uncontrollable. Risk management is vital for many businesses since some common losses can destroy in a few minutes what has taken the organization many years to build. Such losses also affect the day to day operations, reduce profits and financial hardship severely enough to cripple or bankrupt the business. The strategy of managing risk includes transferring the risk to another party, avoiding the risk,

reducing the negative effect of the risk and sharing or accepting some or all of the consequences of a particular risk.

2.3.1 Risk Management Processes

According to the ISO-31000, (2009) the processes of risk management consist of several steps as follows;

   i.   **Establishing the context**: This includes identification of the risk, playing the remainder of the process and mapping out the following; the scope of the risk management, the identifying the objective of stakeholders and the basis upon which the risk will be evaluated and constraints.

  ii.   Defining the framework for the activity and the agenda for identification.

 iii.   Developing an analysis of risk involved in the process.

 iv.   Mitigation of risk using available technological, human or organizational resources.

  v.   Risk source analysis – risk sources may be internal or external to the system that is the target of risk management.

 vi.   Problem analysis.

2.4 Components of Credit Risk Management

Lepus, a UK based investment, banking management consultancy identified five (5) key components of effective credit risk management during a survey of eight (8) banks in the

United Kingdom. These include technology, business processes, policies, exposures and robust analysis. (www.sas.com)

Technology was mentioned as the most critical component contributing about 38% of banks credit risk management systems. It was thought to help banks identify measure, manage and validate counter party risk even though it is of less value without effective credit risk policies and business processes in place. Technology plays an important role in enabling active portfolio management and assessment. It facilitates the elimination of manual processes and allows information to be managed in an efficient and active manner. It also facilitates the innovation of credit risk management procedures as it enables key questions to be answered.

In twenty –five percent (25%) of the banks, having a comprehensive and strategic vision for credit policy was vital as it sets guidelines for businesses, giving rise to effective credit risk management. These guidelines included a set of general principles that apply to all credit risk situations as well as specific principles applicable to some types of counter parties and transactions.

Twenty –five percent (25%) of the interviewed banks also mentioned exposures as a vital component in effective credit risk management. It was explained that, the ability to measure and forecast potential credit risk exposures across the entire firm at both counterparty and portfolio levels are vital.

About thirteen percent (13%) of the UK banks mentioned robust analysis a vital ingredient to effective credit risk management. Managers of these banks explained that efficient and accurate credit analytics enable risk managers to make better and more informed decisions. The availability of better information combined with timeliness in its delivery leads to a more effective balancing of risk and reward and the possibility of higher long term profitability.

According to Basel (1999), each bank should have in place a clean credit risk policy or strategy and an effective credit risk management processes approved by the Board and implemented by senior management. The credit risk strategy should define the bank's risk appetite, its desire risk return trade –off and a mix of products or market. An effective credit risk management process includes appropriate documentation, comprehensive financial information, effective due diligence, use of risk mitigants such as collateral, covenants, methodologies for measuring current forte exposures to and the changing risk profile of the counter parties.

Effective credit risk management also serves as value –enhancing activity by providing a competitive advantage (going beyond regulatory compliance) to those organizations that execute it properly. Effective credit risk management also allows banking institutions to utilize their economic and regulatory capital efficiency by ensuring that those institutions have safe level of capital to guard against any further risk to met regulatory requirement.

2.5   How do Banks measure Credit Risk?

Over the years banks have developed models or systems aimed at improving their analysis or measurement of their economic and financial (credit) threats. This is because Central Banks,

the Bank regulators have began imposing rules and standards for regulatory capital functions and assessment as a way of regulating and validating these models.

In order to manage risk in general and credit risk in particular, Barle (2000), outlined the under-listed important instruments as a way of managing credit risk:

Bank Capital: This is all purpose instruments for protection against all types of risk. Central Bank in recognizing this has set minimum capital requirements for all commercial banks. In Ghana this has been raised from the current $7 million to $60 million by December 2010 for foreign banks and December 2012 by local banks. (Bank of Ghana, 2008)

 Loan loss allowances: This is the valuation of reserves against a bank's total loans on the balance sheet, representing the amount thought to be adequate to cover estimated future losses in loan portfolio. (Basel, 1988). As a credit risk management tool, loan loss allowance helps increase flexibility in compiling banks balance sheet and income statement. Loan loss allowances also represent the mechanism by which the sources of risk within the bank can be explicitly and easily identified.

The International Accounting Standards (IAS 37) requires banks to disclose details of the movement in any allowance for impairment losses on loan and advances during the period and the aggregate amount of any allowance account for impairment losses on loans and advances at the balance sheet date. (Willams, 1999).

Selling the sources of risk: This is the closing of a position (investor's stake) in a particular security or foreign currency. It is usually done by selling a security and its delivery to the buyer in exchange for payment.

Portfolio diversification: Portfolio is a group of investments held by an individual or organization (Encarta 2007). Pike et al (2006), defined portfolio as a combination of investment – securities or physical assets – into a single 'bundled' investment. A well diversified portfolio has the potential capacity to lower the investor's exposure to the risk of fluctuation in overall economy.

Markowitz (1952) defines portfolio as a group of financial assets usually classified by the type of assets under management. Although the idea of not putting all your eggs into one basket has been with banks for many years as a risk management instrument, Markowitz was the first to formalize and apply it for a quantitative analysis of financial risks. Portfolio diversification is the one of the most important risk management instrument because dependencies between credit risks of loans are much smaller and the number of loans in a loan portfolio is much higher. It is the act of spreading out credit among a wide variety of customers including many large and small business in different sectors, geographical locations, households age groups in order to reduce lenders risk of loss. (Rose et al, 2008).

Use of credit derivatives: A Credit derivative is defined as financial instruments which transfer credit from one party to another. The common feature of this credit risk management tool is that assets are retained in the books of the originating institution (bank) while

transferring some portions of the credit exposures inherent in these assets to other parties. This means banks have a vehicle that transfers credit risk without requiring the sale of the asset. However, the main problem is how to the price these instruments as there are no accurate pricing model except by the regulatory capital arbitrage possibilities. However, these are not operative in Ghana yet.

According to International Swaps and Derivatives Association (ISDA, 1998), how an organization manages its credit risk is dependent on three factors:

Probability of default: This is the probability of failure to pay over the period stipulated in the loan contract. The quality of credit is usually assessed through credit scoring. It involves getting information such as Income Statement, Balance Sheet and the like through well defined formulae. Such formulae are applied to the gathered information and a score assigned. The bank then decides whether to grant the credit or not depending on the score.

Exposure of credit: This is how big the amount of debt will be in case of default. As a result banks also instigate credit risk limits by stipulating the maximum amount an individual or a counter party can borrow. This practice protects the bank and the counter party from loan more than they are capable of paying. A practice also known as the single obligor limit.

According to Section 42 of the Banking Act 673, (2004), a bank holding general banking license shall not assume any financial exposure in respect of any one person or group of persons which constitutes in the aggregate a liability to the bank amounting to:

1. More than twenty – five percent (25%) of the net own funds of the bank if secured.

2. More than ten percent (10%) of the net own fund of the bank if unsecured as a way of managing their credit risk exposures.

The Act also places restriction on the exposures to directors or shareholders, firms in which such directors have interest in or are interested parties, or firms in which their relatives are interested parties unless with the written approval from the Bank of Ghana where such exposures are unsecured. Where such financial exposures are on a secured basis, the aggregate liability to the bank in respect of such shareholder or their related parties shall not exceed ten percent (10%) of the bank's net own funds.   Any bank which contravenes such provisions shall pay to the Bank of Ghana a fine of one thousand (1,000) penalty units.

Estimated rate of recovery: This is the portion of the debt that can be regained through freezing of asset and collateral should a default.

2.6   Steps to Credit Risk Analysis

According to the Basle Committee for Banking Supervision, (Basle 1999), an effective credit approval process is the first step or line of defense against excessive counter party credit risk. A sound credit approval process for counter parties should begin with comprehensive financial and non-financial information which provides a clean picture of the counter party's risk profile and risk management standards. However, the credit process should identify the purpose, structure of the transaction for which approval is requested and provides a forward-

looking analysis of the repayment capacity from various scenarios. The ensuing are the specific steps to be used in identifying and analyzing the components of credit risk.

2.6.1 Knowing Your Customer (KYC)

Before entering into any new relationship with a counter party, a bank must become familiar with the counter party and be confident that it is dealing with an entity of sound repute and credit worthiness. (Basel 1999). This can be achieved in a number of ways such as asking for references from known parties, accessing credit register, evaluating legal status and becoming knowledgeable about the individual responsibility for managing counter party. Knowing your customer do not only contribute to the overall safety of banks but it also protect the integrity of the banking system by reducing the likelihood of banks becoming a vehicle for money laundering, terrorist financing and other unlawful activities. Without due diligence banks can become subject to reputational, operational, legal concentration and credit risk which can result in significant financial loss.

Credit risk management brings up the prospect of applicability of knowing your borrower (kyb) which highlights the lenders and borrowers' behaviour and attitude.

2.6.2 Identifying the purpose of Credit in Lending

The purpose of the credit facility is important to the lending institution as it enables them to assess the legality of the loan transaction contracting with customers relative to laws of the country in which they operate.

2.6.3 Identification and assessment of sources of repayment

A borrower's repayment capacity is measured by identifying the source of repayment, and carefully reviewing future cash income from that source to ensure that it is enough to meet borrower's needs and help generate enough cashflows from the core business to repay debt, pay a competitive return to shareholders or owners and replace long term operating assets.

2.6.4 Assessing the Business Risk

Business risk is the variability in operating cashflows or profit before interest. (Pike et al, 2006). A firm's business risk depends on the underlying economic environment within which it operates. A business variability in operating cashflows can be heavily affected by the cost structure of the business and hence the operating gearing.

Rose et al (2008) also defined business risk as "the probability that the economy will turn down into a recession, with reduced demand for loan, deposits and other products and services." In assessing business risk for credit decision, financial institutions consider such factors as; age of the business, authorized business of the counter party, directors behind the business, capital structure or ownership of the business, credit record with bank and other banks, account performance, management of style and type and market environment in which the business operates.

2.6.5 Financial Risk Analysis

Also known as financial gearing, it is the risk over and above the business risk from the use of debt capital. (Pike et al, 2006). It seeks to assess the impact of the credit on the capital structure of the counter party. By financial analysis, lending institutions are able to assess the borrowing needs, capital structure and borrower's ability to meet their obligation as per terms of contract.

Financial risk analysis has become an important factor in banks credit risk analysis as it gives an indication of the proportion of both external and internal funding used to finance the assets of the business. It also gives an indication of the extent to which external shareholders have contributed to the financial structure of a business. Financial risk is also a useful step because it affects the level of earning risk capital providers can enjoy. The presence of relatively large sums of debts is a risk for further funding.

2.6.6 Security Analysis

Because business risk is always present, most financial institutions rely heavily on their security portfolio as a means to offset the impact of credit risk on their loan portfolio. (Rose et al 2008). The security analysis in credit risk management involves the evaluation of;

i. **The marketability of the security**: it involves determining how easy is it for the bank to realise the value of its credit through the sale of the security it is holding. In determining the marketability of the security, banks consider the type of security it

holds, location of security (if landed property), open market value of the security as well as the forced sale value of its security.

ii. **Security control**: this is the degree to which the bank controls the security it is holding (ease of possession) and how easy can the bank obtain favourable judgement. However, this has been made easy with the enactment of the Borrowers and Lenders Act 2008, (Act 773) which gives bank in Ghana right to possess securities without recourse to the court of law. Sections 33 (b) and 34 of the Act gives banks enough powers to possess and foreclose any security in their possession once the said security has been registered with the collateral registry without further recourse to the law court.

iii. Price stability of security being offered.

2.6.7 Credit Referencing Bureau

A credit referencing bureau a resipotory of credit information is an entity that collates consumer credit information by soliciting creditors such as banks, insurance company and lending institutions to contribute and share the credit information of their customers. It helps lending institutions with an easy means of carrying out their KYCs and enable banks to better manage their risk exposures.

In November 2007, the Parliament of Ghana passed the Credit Reporting Act (Act 726), an Act which formed the foundation for the establishment of a credit referencing bureau in

Ghana. XDSdata was granted the license to become the first credit referencing Bureau in Ghana and West Africa to operate a credit bureau to provide a comprehensive and reliable credit information system available to lenders and thus prevent the practice where they relied solely on borrowers for information. Due to this information asymmetry, financial institutions are unable to make informed and reliable decisions in relation to the allocation of credit. This lack of credit information system increases the risks of lending and causes financial institutions to provide less credit, thereby reducing the availability of credit for small and medium size businesses. Credit Information regarding each loan account with a bank (s), retailers, and/or other lenders such as: Initial loan amount, monthly installment, outstanding balance, date loan was granted, account status (active, closed, doubtful, bad debt etc) are provided to lending institutions to help inform their decision on a credit facility. Other personal data such as name, current and previous address, telephone numbers, personal identifications etc and public data such as fraudulent dishonoured cheques, monetary judgments from the courts etc are also provided to assist lenders establish the "true" identities of prospective clients accessing credit.

Since its establishment, the bureau has been able to gather information from banks, rural banks, savings & loans institutions, insurance companies, utility companies, courts, mortgage companies and consumer retail outlets for its operations. By subscribing to the bureau, banks have positioned themselves to reduce the incidents of bad debt in their books as information on good and bad borrowers are shared with other banks in order to improve the quality of their loan portfolios. (www.xdsdata.com).

2.7   The Basel II Accord

Officially known as the International Convergence of Capital Measurement and Capital Standards, the Basel accord is a set of international banking regulation put forth by the Basel Committee for Banking Supervision to set out the minimum capital requirement for financial institutions with the goal of minimizing credit risk. Basel 1 proposed that, each commercial bank must maintain a capital (Tier 1 and Tier 2) at least equal to 8% of its risk rated assets.

Basel II on the other hand permits banks to employ their own internal risk assessment methods and calculate their own minimum capital requirements as well as mandating periodic stress testing to estimate the impact of changing market conditions on each of the bank's financial position. It is a new set of international standards and best practices that defines the minimum capital for requirement for internationally active banks. Basel II is built on three pillars, namely; Pillar 1 deals with the maintenance of minimum regulatory capital based on the banks own risk exposures from risk that banks face- credit risk, operative risk and market risk. Pillar II describes the supervisory review of each bank's risk assessment procedure and the adequacy of its capital to ensure that they are reasonable and Pillar III covers transparency and obligation of banks to disclose meaningful information to all stakeholders.

In summary the main differences between the Basel II and Basel 1 accords are that the Basel II accord affords banks and bank supervisors a multiple option from which to calculate minimum capital requirements. It also affords banks to systematically accounts for the credit risk differences among various assets and introduces new capital requirement for operational

risks. Finally Base II enables banks to incorporate off-balance sheet risk exposures as against Basel 1 which does not give banks such flexibility.

The fundamental purpose of the Basel II Credit Risk Model is to ask and answer the question: if an adverse situation develops in the future, what magnitude of losses through loan default and declining loan values can be expected?

Each bank was to develop its own in-house risk management models and stress tests for assessing its risk exposures but which must address the following under the prudential requirement of Basel II;

   i.   Establishment of an appropriate credit risk environment and operations guided by credit policy covering maintenance of a credit relationship management.

   ii.   Maintaining an appropriate credit administration, measurement and monitoring process.

   iii.   Ensured adequate controls over credit risk.

The Bank of Ghana (BoG), in its efforts to ensure that the local banking industry meets the more rigorous requirements of the Basle II, initiated the promulgation the passage of the of the new Banking Act 2004 (Act 673), by Parliament in October 2004 to replace the then existing Banking Law 1989 (PNDCL 225). The Act 673 in consonance with Basel II expected banks to:

   i.   Upgrade and report on credit and operational risk capabilities;

   ii.   Improve and report on technological system and data gathering; and

iii. Disclose standard procedures for routine operations as well as market risk positioning.

Under the new Act, the minimum capital adequacy ratio was increased from 6% to 10%, and banks operating in the local industry were be expected to construct and report the risk profile of the assets they carry within the medium to long term in order to adequately justify their capital allocation processes. Furthermore, banks were also expected to disclose their assessment of the risk levels of the various sectors in which they invest and to continually adjust their provisioning levels as the complexion of risk changes in those sectors by December 2006.

2.8   THE ECONOMIC SETTING OF GHANA'S BANKING INDUSTRY

Ghanaian banks operate in a medium sized economy along the west coasts of Africa has a total population size nearly twenty-three million (23 million) and a total land size of about 238,533 square kilometers. According to the Bank of Ghana annual report (2008), the gross domestic product (GDP) per capita is low at 7.3%. Inflation rate as at December 2008 was 18.1%. Average life expectancy is sixty (60) years and a literacy rate of seventy –four percent (74%).

The Ghanaian economy has traditionally been depended on primary production and export. Gold, cocoa and timber still accounts for the bulk of the total export. According to the Ghana Banking Survey in 2008, the agricultural sector remains the dominant sector employing about two-thirds (2/3rd) of the labour forces and accounting for more than thirty – four

percent (34%) of the total GDP as at the end of 2007. The service sector including the financial and banking sub-sector also contributed about thirty – one (31%).

The banking industry has made a lot of contributions in all sectors of the Ghanaian economy ever since there have been banks in Ghana. For much of its history, the banking industry has primarily been conducted as an act of faith and is logically and intuitively appealing. It has provided access to capital and other financial services by both businesses and households which has gone a long way to smoothen and soften the financial impacts of crises (such as illness) and stabilize borrowers' income. Banking in Ghana has enabled businesses to expand and increased profits.

The banking industry in Ghana also has positive economic impacts on individual households and the community at large through the creation of jobs and economic activities. Quality of life of households such as educational for children, healthcare, quality housing and nutrition have improved as a result of the various products introduced by the industry. In general, the banking industry has not only brought an improvement in the economic and general welfare of businesses but access to additional income has also helped in alleviating poverty and provided long term benefit to businesses and family.

2.9   BANKING INDUSTRY IN GHANA

According to the Bank of Ghana's 2009 annual report, there were twenty – five (25) commercial banks and more than 129 rural banks operating in Ghana's banking sector. Between December 2002 and June 2009 total asset of the banks has grown by 520% from

GH¢1,923.6 million to GH¢11,857million. Total liabilities of the industry has also grown from GH¢3,062.8 million as at December 2002 to GH¢5,526.40 million in June 2009. Total branches of the major banks stood at six hundred and forty (640) as at December 2008.

The banking industry has since 2003 experienced a continued growth and thus has pushed up the industry's aggregate for many of the balance sheet items mainly; net loans and advances in particular. According to the Ghana Banking Survey 2008, five (5) banks namely Barclays Bank (BBG), Ghana Commercial Bank (GCB), Standard Chartered Bank (SCB), Ecobank Ghana (EBG) and Merchant Bank (MBG) have been the players contributing more than 58% of the industry's market share both in deposit and advances as at December 2007. BBG remained the second biggest bank both in term of deposit and net advances contributing 18.19% and 16.52% of the total industry share whereas HFC Bank had 1.48% and 2.64% of the industry's share of net deposit and net advances around the same period. At the centre of the industry's continued growth were robust drive by some banks to drive retail presence, enhanced and diversified product mix by some banks to attract more retail and corporate funds, satisfying banking hall experiences, good customer services and convincing images of a strong brands were among the factors pushing the industry's growth.

Since 2003, a regime of declining market signaling rate and intense competition has created an environment in which interest rates for the industry has fallen. Industry average net spread has fallen from 12.710% in 2003 to an average of 9.40% in 2007. (Ghana Banking Survey, 2008). Fierce competition within the industry and between other non-banking financial institutions over the period also pushed major performance indicators of the banking industry

in Ghana downwards. For example profit before tax (PBT) for the industry fell from 39.3% in 2003 to 32.4% in 2007. The industry's return on assets (ROA) also dropped from 3.9% in 2003 to 2.9% in 2007 according to the Ghana Banking Survey in 2008.

These downward trends called for a paradigm shift from orthodox ways of generating the bulk of their income from high interest rates to a more effective management of the banks' credit portfolio in order hedge against some of the losses which may arise from reducing income on interest spread.

2.9.1 Key Reforms in the Banking Industry Landscape

The Ghanaian banking industry has since 2003 undergone through a number of reforms culminating in the passage of a number of legislations including the following;

i. In 2003, the Bank of Ghana (BoG) introduce the Universal Banking License where banks with GH¢7 million capital were allowed to carry out any form of banking. In view of this, commercial banks whose operating capital fell short of the GH¢7 million capital threshold were required to raise such funds. This was to enable banks holding universal license undertake retail, merchant, development and investment banking without the need to acquire separate license. The introduction and compliance of the BoG directive resulted in increased industry lending by 66% from GH¢1,055 billion in 2003 to GH¢2.464 billion (2007). In the same year, the Bank of Ghana also abolished the maintenance, transaction and transfer fees being charged by banks.

ii.   In October 2004, the Bank of Ghana (BoG) also initiated the promulgation and passage of the new Banking Act (Act 673), by Parliament to replace the then existing Banking Law 1989 (PNDCL 225). This act has enabled banks to upgrade and report on credit and operational risk capabilities, improved and reported on technological system and data gathering and disclosed standard procedures for routine operations as well as market risk positioning.

iii. In 2006, the BoG abolished the secondary deposit requirement of 15%. This abolishing resulted in increased lending by the industry as banks had excess funds at their disposal. It also de-emphasized banks over dependence on BoG treasury notes as their major source of profitability.

iv.   Another reform in the industry was the amendment of the Banking (Amendment) Act 2007 (Act 738). This was an act to amend the Banking Act, 2004 (Act 673) and facilitate the establishment of an International Financial Services Centre that seeks to attract foreign direct investment, income from license fees payable on foreign currencies, create employment, enhance local skill and knowledge, strengthen the financial sector through expansion in the use of investment banking instruments and to provide for related matters. (Bank of Ghana, 2008)

v.   The passage of the Home Mortgage Finance Act, (Act 770) in 2008 to regulate home mortgage financing and transactions between financial institutions and their

customers was another key reform experience in the Ghana banking industry in 2008. (Bank of Ghana, 2008)

vi.   The passage of the Borrowers and Lenders Act, 2008 (Act 773) to provide the legal framework for credit, improves standard disclosure of information by borrowers and lenders, prohibit certain credit practices, promote a consistent enforcement framework to related credit and to provide for related items. (Bank of Ghana, 2008)

vii.   The passage of the Non-banking Financial Institutions Act, 2008 (Act 774) to provide for the regulation for the non-banking financial institutions and to related purpose. It replaced the financial institutions (non – banking) Law, 1993 (PNDC Law 328). (Bank of Ghana, 2008).

2.9.2   Performance of the Ghanaian Banking Industry

Ghana has remained an attractive destination for financial institutions as evidence in the opening of two major banks, two rural banks and four non-banking financial institutions in during the year. (Bank of Ghana, 2008).This brought the number of banks to twenty – five (25), rural banks to one hundred and twenty nine (129), and forty-five (45) non-banking financial institutions (Savings & Loans institutions). Over the last five (5) years (2003 to 2007) the banking industry in Ghana has seen a remarkable improvement in the areas of asset and liability growth, profitability and returns on assets. Fierce competition, however, within the industry and between other non-banking financial institutions over the period also pushed major performance indicators of the banking industry in Ghana downwards.

In responses to the various reforms in the industry, the industry girded up for growth. Between 2003 and 2007, the industry operating assets (mainly made up of net loans and advances, cash assets, liquid assets) almost trebled with Stanbic Bank leading this momentum of growth with its operating assets growing by more than eight (8) fold over the period. The industry's total operating assets increases from a little over GH¢2.37 billion (2003) to approximately GH¢7.08 billion (2007). The industry's net loans and advances grew by 333.8% from GH¢0.89 billion in 2003 to GH¢ 3.89 billion in 2007. The industry's loan was distributed among the sub-sectors of agriculture, mining & quarrying, manufacturing, construction, energy, commerce & finance, transport & communication, service and personal loans.

According to the Banking Survey, 2008, the industry's deposit over the five (5) year period also grew 120% from GH¢1.65 billion in 2003 to GH¢3.63 billion. . As the competition got keener, the industry's margins and returns shriveled but remained attractive. Banks paid more attention to credit risk management systems in order to improve on their asset quality. Net profit before tax however, fell from 39.3% in 2003 to 32.4% in 2007eshe industry's cumulative loan loss reserves also dropped from 15.7% in 2003 to 5.3% in 2007. The industry's average net spread also fell from 12.710% in 2003 to an average of 9.40% in 2007.

2.9.3 Global Financial meltdown and its impact on the Ghana Banking Industry

Even though the global financial crisis began in a small corner of the US mortgage market, the fallout from the collapse of this sub-prime lending institution spread across the globe.

What started as a crisis in an individual market formed the basis to collapse the foundations of the entire global financial system.

In Ghana, the limited participation and lack of integration with the global financial market appeared to have shielded the banking industry in Ghana from the direct impact of the crisis. This notwithstanding, the global financial meltdown had impact on Ghana's financial market, according to the BoG's Financial Stability Report (Vol. 5 No. 1/2009). The possible direct linkages with the global financial crisis by the industry were their exposures to counterparties abroad which were mainly in the form of nostro balances and placement.

According to the report, the nostro balances and placement of the industry constituted about 82% of the industry's net worth as at December 2008. Borrowings from foreign banks were the major source of funding for the local banks. A stress analysis conducted by the BOG showed that, only a significant default or recall of borrowings in excess of 50% could pose a threat to the industry as placement, nostro balances and borrowings were concentrated with few international banks.

Another threat to the industry was the weakening in customers' incomes and debt servicing capabilities in the economic downturn and thus resulting in the deterioration of asset quality of the industry by 2.2%.

In effect, the potential effect of the global financial meltdown was the possible risk of contagion from distressed foreign banks to local ones. Parent banks could withdraw funds

from subsidiaries by distributing profits, call in loans to subsidiaries or cut back investment in local subsidiaries in emerging markets including Ghana.

2.10 CAMELS TECHNIQUE OR MODEL

CAMELS' model is an acronym through which banks are rated and given points on the basis of set parameters. CAMELS' evaluates the banks credit management systems on the basis of six parameters - Capital Adequacy, Asset Quality, Management, Earning Ability, Liquidity and Sensitivity to market risk.

2.10.1 Capital Adequacy

The business of banking involves risk such as credit, operational, liquidity, market, strategic etc. Banks in order to protect customer's deposit from being unduly affected by the afore-mentioned risk are expected to provide cushioning to depositors in the form of capital. Section 23-28 of the Banking Act 2004 Act 673 enjoins banks at all time to maintain a capital adequacy of 10%. Capital Adequacy is therefore measured as adjusted capital as a percentage of adjusted to total assets. It involves analyzing the financial ratios of the banks. A healthy capital adequacy ratio strengthens the confidence of depositors in the bank. The assessment of capital adequacy involved the computation of dependency ratio, Capital to asset ratio and debt to asset ratio.

2.10.2 Asset Quality

Asset quality takes into account the percentage of banks non-performing assets (existing and potential loss exposures) primarily in their loan portfolio but also in the investment portfolio

and other assets as well. The assessment of asset quality involved the calculation of loan loss ratios and gross non- performing loans and credit concentration. Higher non-performing assets ratio implies that loans givens banks are of lower quality and therefore not a good sign for the banks.

2.10.3 Management

Measurable by non-financial ratio analysis, management is an important parameter in evaluating the soundness of bank as it has direct impact on the quality of asset, capital adequacy and earnings. Management involves reviewing the banks' credit policy highlighting the banks' policies and strategies, credit risk management structure and operations and control system put in place.

2.10.4 Earning Ability

Earning ability refers to the ratio of net profit that is made by banks after the granting of credit. Earnings are analyzed based on such parameters as – return on performing assets, return on average total assets and financial cost ratio. A higher earning is indicative of the bank doing well.

2.10.5 Liquidity

Liquidity management involves the ability of banking institution to fund increases in assets, manage unplanned changes in funding sources and meet obligations when required without incurring additional cost or inducing a cashflow crisis. Liquidity is to ensure that banks have adequate funds to meet their customer's unexpected withdrawal and agreed loan commitments. Primarily, an effective liquidity management policy framework will ensure

that a bank has sufficient liquid assets to meet liabilities that fall due in a short term and meet any unexpected demand for funds by depositors or creditors. The effectiveness of a bank's liquidity management policy determines the extent to which the banking institution may be subjected to cashflow crisis and additional cost.

Section 31-33 of the Banking Act 2004, Act 673 enjoins banks to have at least 9% of total domestic and foreign deposits respectively in their clearing account with the Bank of Ghana. At minimum banks' liquidity positions are measured using one of the many tools such as indicators (loan to deposit ratio, liquid assets to total assets ratio, liquid asset to volatile deposit ratio etc), maturity ladder analysis, cashflow projections, diversification of liabilities and stock of liquid assets.

2.10.6 Sensitivity to market risk

This refers to the risk that changes in market conditions could adversely affect the earnings and/ or capital. It encompasses exposures associated with change in foreign exchange, commodity prices equity prices and especially interest rates which is the primary market risk for banks. (fdic). According to Haidar (2011), market forces are a major reason for shift in the fortunes of businesses. Favourable movements can boost the fortunes of a bank, while unfavourable ones can send the bank packing to the cleaners. A sound bank is expected to have sound risk management practices in place to take care of the known and unknown market risks.

2.11   SUMMARY

In summary it can be inferred that banks in Ghana encounter a number of risks in their delivery of services. Credit risk continues to be one of the greatest contributors of a bank's risk since it has been noted to be the number one cause of a bank's failure the world over and Ghana are no exception. Credit risk has been defined as the default of a borrower to meet its obligation. This risk has worsen by the growing number of banks and the competition deriving from, the need for financing by counter parties, the ineffectiveness of credit management practices and ineffective banking supervision among others.

The issue of problem loans is not new for Ghanaian banks. The Bank of Ghana in its annual reports showed that the percentage of non-performing loans to total loans amounted 12.8% and 11.9% in 1999 and 2000 respectively. After this marginal fall, non-performing loans ratio increased to 19.6% in 2001 and further to 22.7 by December 2002. In December 2003, it dropped to 17.9%. The up-and-down movement described by these figures is indicative that Ghanaian banks were yet to get a firm grasp of the bad loan menace. Therefore, for bank in Ghana to be able to effectively manage this risk, there was the need for the banks to:

(i) Know their borrowers by asking for references from known parties, accessing credit register, evaluating legal status of borrowers and other. In Ghana, such information could be accessed by sending banker's opinion on borrowers to other banks, from credit references bureaus such as the XDSdata Credit referencing and from Registrar General's Department. Without such due diligence on borrowers, banks in Ghana could be subjected to reputational, operational, legal, concentration and credit risk which can result in significant financial loss.

(ii)   Identify and assess the 'true' purpose of borrowing to determine the legibility of the loan contract with counter parties. This is to prevent situations where banks enter into ultra varies contracts with borrowers.

(iii)   Identifying and assessing the repayment capabilities and repayment sources of banks' counter parties. To undertake this assessment, banks in Ghana undertake financial and non- financial analysis of their counter parties. The financial analysis include determination of working capital or transaction cycles of counter parties, impact of loan on their capital structures, cashflow analysis and other variables. Whereas the non-financial analysis include the effect of economy on industry in which counter party operates, character of principal actors of bank's counter, market analysis and security coverage.

(iv)   Monitor and maintain systems to control these exposures.

Basel II which has been the main driver of an effective credit risk management has outlined five cardinal principles upon which each bank including banks in Ghana's in-house models for managing credit risk are based. Basel II however, recommends that the principles adopted should suit the lending activities and the capital requirement of the individual bank. Basel II has afforded banks and bank supervisors a multiple option from which to calculate minimum capital requirements. It has also afforded banks to systematically account for the credit risk differences which may have existed among their various assets, and introduced new capital requirements for operational risks. Finally Base II has enabled banks to incorporate off-

balance sheet risk exposures into the preparation of their final accounts as against Basel 1 which did not give banks such flexibility.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the plan for collating, organizing and interpreting the data so that at the end, the purpose can be reached. It also sets out the sampling procedures and the tools used in analyzing and interpreting the results obtained. It was grouped into three (3) sections. Section one (1) described the procedures for sampling and the population from which the banks under study were chosen. The second part also outlined the research methodology

employed for the data analysis so that the objectives of the study could be achieved. Section three (3) also discusses the profile of the banks on which the study was carried out.

3.2   RESEARCH METHODOLOGY

The research design for the study used the two (2) banks as case studies to draw conclusions and collect information from theoretical and empirical sources for analysis and drawing conclusions. The theoretical analysis covered the risk theories and concepts on credit risk management framework and practices of Ghanaian banks. The empirical analysis consists of the use of lending models such as the 'CAMELS' model to identify the risk in the bank's internal processes, evaluation and monitoring procedures put in place to mitigate the impact of credit risk.

3.3   SAMPLING PROCEDURE

The sampling procedure for this study includes; the study population, the target population, sample selection and sample size.

3.3.1   Study Population

The study population included the entire Universal banking industry in Ghana. The universal banking industry was grouped into four quartiles using operating assets as the basis for grouping. The grouping of banks based on operating assets was because operating assets are considered to the core arsenal for doing business and creating value for shareholders. As at 2008, quartile one (1) consist of six (6) banks, quartile two (2); five (5) banks, quartile three (3); five (5) banks and quartile four (4), six (6) banks. The population size was twenty – five

(25). However, the following banks were not included in the population; UT Bank (UTB), Sahel Sahara Bank (BSIC) and Bank of Baroda.

3.3.2 The Target Population

The target population was banks in the first quartile and third quartile. The first quartile comprised of comprising of Barclays Bank Ghana Limited (BBG), Ghana Commercial Bank (GCB), Standard Chartered Bank (SCB), Ecobank Ghana Limited (EBG), Merchant Bank Ghana (MBG) and the Agricultural Development Bank (ADB) whilst the third quarter is made up of banks such as the 'The' Trust Bank (TTB), First Atlantic Merchant Bank (FAMB), HFC Bank, Zenith Bank, Fidelity Bank. Target population was selected based on their contribution to the total operating assets of the industry. Quartile one (Q1) banks account for 62.1% of the industry's total operating asset whilst quartile three (Q3) banks also account for 11.42% of the industry's total operating asset.

3.3.3 Sample Selection

Case study banks HFC Bank and Barclays Bank Ghana Limited were selected based on the purposive sampling technique due to their strategic positioning in the Ghanaian banking industry. HFC Bank was located on the third position in the third quartile whereas Barclays Bank Ghana Limited was located on the first position in the first quartile. HFC Bank has since its incorporation in the 1990s grown from a small mortgage financing institution with only two branches to a full-fledged universal banking institution in 2005. The bank has more

than 21 branches nationwide (across six regions) and three subsidiaries; HFC Investment Services Ltd, HFC Realty Ltd and HFC Boafo Micro- finance Ltd. The bank's core competence was mortgage and SME financing. Barclays Bank (BBG) on the other hand was also selected because it was the oldest bank in Ghana with more than 93 years of experience. The bank currently has more than 140 branches and 118 ATMs including 9 world class Prestige and Premier Centers. It had presence in all ten (10) regions of Ghana and had maintained its position as one of the most profitable banks

The Banks were also selected on the basis of the growth experienced in their operating assets between the years 2003 and 2007. HFC Bank in the period under review grew its operating assets by 228% from GH¢47,125, 000 in 2003 to GH¢154,713, 000 in 2007. Similarly, BBG also had its operating assets grown by 206% from GH¢356,710,000 in 2003 to GH¢ 1,090,673,000 in 2007. Operating assets of HFC Bank was 2.19% of the industry's total operating assets whereas the operating asset of BBG represented the industry's highest of 15.41% as at December 2008.

Impairment to loan loss was another basis for the selection of case study to represent the industry. HFC Bank reduced its cumulative loan loss reserves to gross loan and advances from 5.76% in 2003 to 3.49% and BBG from 6.11% in 2003 to 2.57% in 2007. However, in 2008, impairment for loan losses for HFC Bank grew by more than 90% and that of BBG also grew by more than 748%.

(Source: the Ghana Banking Survey, 2008 and annual reports of HFC & BBG 2008)

3.3.4 Data Collection Technique

The data collection techniques used for this research comprised of direct interviews administered to the banks certain individuals such as Credit & Relationship Officers in the banks' Credit & Relationship Banking Departments and Risk Management Departments to get other information which not were included in their annual reports. The Camels' technique was also used in analyzing the data collected. CAMELS' model is an acronym through which banks are rated and given points on the basis of set parameters. CAMELS' evaluates the banks credit management systems on the basis of six parameters - Capital Adequacy, Asset Quality, Management Competence, Earning Ability, Liquidity and Sensitivity to market risk.

3.3.5 Sources of Data

Data for the study were sourced largely from secondary sources except the data from the interviews which were sourced from primary sources. The primary data were sourced from interviews conducted on certain officers of the banks' Credit & Relationship Banking Departments and Risk Management Department. The secondary data on the other hand were sourced mainly from the banks' annual reports for 2008. Other supplementary data were also sourced from written materials, periodicals, brochures, journals, past research works, articles, internet search, the bank's credit policy manuals, and newsletters.

3.3.6 Method of Data Analysis

The CAMELS' model was the main method of analysis used. The data obtained were analyzed based on set parameters such as capital adequacy, asset quality, management

competence, earning ability, liquidity and sensitivity to market risk. These parameters were re-grouped into;

i. Quantitative or financial parameters which included the analysis of capital adequacy, earning ability, liquidity, asset quality and sensitivity to market risk.

ii. Qualitative or non –financial parameters such as management competence.

3.3.6.1 Capital Adequacy

The assessment of capital adequacy involved the computation of dependency ratio, Capital to asset ratio and debt to asset ratio.

3.3.6.2 Asset Quality

The assessment of asset quality involved the calculation of loan loss ratios and gross non-performing loans and credit concentration.

3.3.6.3 Management

Management was assessed using the banks' credit policy highlighting the banks' policies and strategies, credit risk management structure and operations and control system put in place.

3.3.6.4 Earning Ability

Earnings were analyzed based on such parameters as – return on performing assets, return on average total assets and financial cost ratio. A higher earning is indicative that the banks were doing well.

3.3.6.5 Liquidity

It was measured as percentage of total deposit. Banks' liquidity was assessed using the indicator analysis and the maturity ladder analysis. The indicators included the banks internal guidelines for loan to deposit ratio, liquid assets to total assets ratio and ratio of liquid asset to volatile deposit where as the maturity ladder comprised of comparing the inflows and outflows periodically and over a series of time band.

3.3.6.6 Sensitivity to market risk

This was analyzed using the primary market risk for most banks – the interest rate risk module by balancing the quantity of repricing the bank' assets with the quantity of repricing liabilities. When a bank has more liabilities repricing in a rising rate environment than assets repricing, the net interest margin (NIM) shrinks. Conversely, if a bank is asset sensitive in a rising interest rate environment, the NIM will improve because there are more assets repricing at higher rate.

3.3.7 Validity and Reliability of the research

The validity and reliability of the data used in the research can be proven beyond all reasonable doubt as they were sourced from the publications, banks' annual reports, credit policy manuals, newsletters etc whose validity could be authenticated.

3.4   COMPANY PROFILE

3.4.1   HFC Bank Ghana Ltd

HFC Bank obtained its universal banking license in November 2003 after having operated a Mortgage non-banking financial institution since May 1990. It was listed on the Ghana Stock Exchange in March 1995 and has remained on the market till date. It currently has 21 branches/business offices nationwide and across in six regions, three subsidiaries (HFC Realty, HFC Investment Services Ltd, HFC Boafo Micro-Finance Ltd) and two joint venture companies in Sierra Leon and The Gambia (HFC Sierra Leon and HFC Gambia).

The vision of the bank is to be a leading universal banking institution in the West Africa sub-region providing world-class financial services. Among the principal activities of the bank include commercial banking, mortgage financing and investment banking services.

As at December 2009, the largest shareholders of HFC Bank were Social Security & National Insurance Trust (SSNIT), Union Bank of Nigeria Plc, Ghana Union Assurance Company Ltd, State Insurance Company (SIC), Ghana Cocoa Board, MIHL/Union Homes Savings and Loans Ltd (Nigeria) MIHL/Union Homes Pension Fund (Nigeria) SSB Eaton Vance Tax- Managed and HFC Unit Trust.

Over a five (5) period, HFC Bank has grown its operating assets by more than 674% from GH¢47,125,000 in 2003 to GH¢364,677,000 as at December 2008. In terms of market share, the bank had about 2.6% and 1.4% of the industry's total operating assets and total deposit respectively as at December 2008. The bank was ranked tenth (10th) and was placed in the second quartile (Q2) in 2008. (**Source: Ghana Banking Surveys, 2008 & 2009.)**

3.4.2 Barclays Bank Ghana Ltd

Barclays Bank Ghana Limited (BBG) on the other hand is the oldest bank in Ghana with more than 93 years of experience in Ghana. With its first branch commissioned in 1917 on February 14, Barclays Bank currently has more than 140 branches and 118 ATMs including 9 world class Prestige and Premier centres. The bank has presence in all ten (10) regions of Ghana and had maintained its position as one of the most profitable banks in Ghana until 2008 when it declared huge loss.

Initially wholly owned by Barclays Plc, the government of Ghana in 1972 acquired 40% in Barclays Bank Ghana. This was reduced to 10% and eventually in June 2003, Barclays Plc acquired the remaining 10% shares of government of Ghana making Barclays Bank Ghana a wholly owned subsidiary of Barclay Bank Plc.

According to the Ghana Banking Survey, 2009, total operating asset of BBG in 2008 was GH¢1,275,904,000 representing 13.3% of the industry's total operating asset. BBG also had about 15.7% of the industry's total deposit. The bank was ranked second according the survey in 2008.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS.

4.1 INTRODUCTION

This chapter contains the findings, analysis and discussions on the results obtained from the study.

4.2   SOURCES OF CREDIT RISK EXPOSURES

Two sources of the banks' credit risk exposures were;

    i.   Loans and Advances to customers.

    ii. Loans and Advances to other financial institutions.

(Source: Annual report, 2008; HFC Bank & Barclays Bank Ghana.)

Gross loans & advances by the banks to customers contributed 88.49% of the banks' total risk asset portfolio whereas the 11.51% of the banks' total risk assets were contributed by loans & advances to banks and other financial institution. (See appendix 3).

HFC Bank

Gross loans and advances by HFC Bank to its customers amounted to GH¢153,205,721. This represented 99.19% of its total loans and advances to customers of the bank. Out of this, contingent liabilities (indirect liabilities) contributed about 3.85% (GH¢5,950,783). Loans and advances to other financial institutions also contributed about 0.81% (GH¢1,250,000) of total loans and advances by the bank. (See appendix 3)

Barclays Bank

Barclays Bank on the other hand, had its gross total loans and advances as follows; 86.84% (GH¢867,197,000) to customers and 13.16% to other financial institutions. Gross loans and advances to customer was comprised of 78.18% (GH¢780,761,000) direct loans and advances to customers whereas contingent liabilities (indirect loans & advances) also contributed about 8.66% (GH¢80,436,000). (See appendix 3).

4.2.1   Loans & Advances to customers

Exposures to customers were analyzed by grouping customers of the banks into categories such as type of customer, type of exposure, business segments and industry/sector of the Ghanaian economy.

4.2.1.1 Analysis of exposures by type of customer

Customers of the banks were grouped into individuals (including staffs), private businesses/enterprises and government. Extract of exposures by type of customer have been outlined in table 1. Table 1 analyzed exposures by type of customer on individual bank basis.

Table 1   Analysis of exposure by type of customer on individual bank basis

Type of customer	HFC BANK		BARCLAYS BANK	
	Contribution (GH¢)	Percentage (%)	Contribution (GH¢)	Percentage (%)
Individual (including staff)	55,834,630	37.92	45,442,000	5.82
Private Business	91,420,308	62.08	480,427,000	61.53

			254,892,000	32.65
Government				
Total	**147,254,938**	**100**	**780,761,000**	**100**

Source: Annual report 2008 of HFC Bank & Barclays Bank pages 49 and 55 respectively. (See Appendix 3)

Sixty –Two percent (62%) of HFC Bank's exposures were to private business whereas thirty – eight percent (38%) were to individuals including staff. The bank was not exposed to government.

For Barclays Bank Ghana, sixty – one point fifty three percent (61.53%) of its risk exposures were to private businesses, thirty –two point sixty five percent (32.65%) were exposed to government and five point eighty –two percent (5.82%) of the bank's risk exposures were to individuals including staff members.

It can be inferred that, the major sources of risk exposures to banks are private businesses, government and individuals respectively.

4.2.1.2 Analysis exposures by type of exposures

The types of exposures by the banks included direct exposures such as commercial loans (term loans and overdrafts), consumer loans (including personal loans and staff loans), mortgage loans and indirect exposures such as guarantees and bonds (usually referred to as contingent liabilities). Extract of exposures by type of exposure have been outlined in table 2. Table 2 analyses the exposures by type of exposure to the individual banks.

Table 2   Analysis of exposures by type of exposure

Type of Exposure	HFC BANK		BARCLAYS BANK	
	Contribution (GH¢)	%	Contribution (GH¢)	%
Commercial loans	91,420,308	59.67	450,378,000	53.71
Consumer loans	17,930,987	11.70	290,189,000	34.60
Mortgage loan	37,903,643	24.74	40,194,000	4.79
Contingent liabilities	5,950,783	3.88	57,815,000	6.43
Total	**153,205,721**	**100**	**838,576,000**	**100**

Source: Source: Annual report 2008 of HFC Bank & Barclays Bank pages 49 and 55 respectively. See appendix 3.

For HFC Bank, the major type of exposure was commercial loans with 59.76%. This was followed by mortgage loan exposures with 24.74% and consumer loans with 11.70%. Exposures by contingent liabilities were the least with 3.88%.

Barclays Bank on the other hand, had commercial loans contributing the highest (53.71%) to the bank's risk exposures. However, contrary to HFC Bank, consumer loans and contingent liabilities contributed 34.60% and 6.89% respectively. Exposures to mortgage were the least with 4.79%. (See appendix 3).

It can be inferred from table 2 that, the major type of exposures of the banks include Commercial loans, Consumer loans, mortgage loans and contingent liabilities.

4.2.1.3 Analysis of exposures by sector or industry

The banks' exposures to customers were also analyzed in terms of exposures to various sectors or industry of the economy. The industries were grouped into business & financial services, manufacturing, mortgage & construction, transport & communication, energy & water, Commerce (wholesale/retail trade), agriculture, forestry & fishing and individuals. Table 5 below outlines the exposures to the various industries bank by bank and their respective contributions to the banks total exposures to customers.

Table 3 Analysis of individual bank exposure by industry/sector of the economy

Type of Exposure	HFC BANK		BARCLAYS BANK	
	Contribution (GH¢)	%	Contribution (GH¢)	%
Business & Financial Services	9,019,283	6.12	91554,000	11.73
Individuals	37,741,039	25.63	494,228,000	63.30
Manufacturing	30,982,369	21.04	56,273,000	7.21
Mortgage & Construction	37,903,643	25.74	34,226,000	4.38
Transport & Communication	752,028	0.51	20,871,000	2.67
Commerce (Wholesale & Retail	30,856,576	20.95	36,732,000	4.70
Agric, Forestry & Fishing	0	0	19,765,000	2.53
Energy & Water	0	0	27,112,000	3.47
Total	**147,254,938**	**100**	**780,761,000**	**100**

Source: Annual report 2008 of HFC Bank & Barclays Bank pages 72 and 33 respectively. See appendix 3.

HFC Bank

It can be inferred from table 3 above that, exposures by HFC Bank were to mainly four industries or sectors; namely individuals, manufacturing, mortgages & construction and commerce (wholesale & retail). Exposures to mortgages & construction were high, contributing 25.74% (GH¢37,903,643) of the banks' total exposure to customers. This was followed by exposures to individuals with 25.63%, manufacturing with 21.04% and commerce (wholesale & retail) with 20.95%. The bank was not exposed to sectors such as agriculture, forestry & fishing and energy and water. Exposures to business & financial services and transport & communication sectors were among the least with 6.12% and 0.51% respectively.

Barclays Bank

Conversely, exposures to sectors or industries by Barclays Bank were however, skewed. Exposures to individuals were the highest contributing about 63.30% of the banks' total exposure to customers. This was followed by exposures to business & financial services with 11.73% and manufacturing with 7.21%. Exposures to sectors such as the mortgage & construction, commerce (wholesale or retail), energy & water and transport & communication were 4.38%, 4.70%, 3.47% and 2.67% respectively. The bank's exposure to agriculture, forestry & fishing sector was least, at 2.53%. (See appendix 3).

4.2.1.4 Summary

In summary, the main sources of risk exposures identified were direct commercial loans granted to private businesses and enterprises. These accounted for more than half of the banks' credit risk exposures to customers. Consumer loan and mortgage loans exposures were also identified to be major sources of banks credit risk exposures. Indirect risk exposures such as contingent liabilities were identified as the least source of the banks' credit risk exposure.

The major sources of the commercial loans were identified to be exposures to individuals, businesses & financial services, manufacturing, commerce (wholesaling & retailing), mortgages & construction, energy, transport & communication. In spite of it being the highest contributor to Ghana GDP, the agricultural sub-sector was identified to be the least source of risk exposure to the banks with regards to commercial loans.

Other sources of risk exposures identified were financial derivatives such as repos, financial futures, forward contracts and swaps. However, the effects of these exposures were minimal since trading in these instruments was not conducted in large quantities.

4.2.2 Risk Mitigating Measures Employed by the Banks

4.2.2.1 HFC Bank Ghana Ltd

The Bank actively manages its credit risk exposures. When weaknesses in exposures are detected – either in individual exposures or in groups of exposures (industry) – action is taken to immediately manage and mitigate the risks. Any exposure to credit risk by the bank was usually managed through regular analysis of the ability of borrower or potential borrower to meet interest and capital repayment obligations. Among the major mitigating

measures employed by the bank to reduce the effects of credit risk exposures have been outlined below.

4.2.2.1.1 Collateralization/Securitization

HFC Bank employed securitization as one of the main mitigating measures against its credit risk exposures. The principal collateral types accepted by the bank for loans and advances were:

i. Mortgages over landed properties (in most cases residential properties). Usually, first legal charges over leasehold properties with a lease of not less than thirty years to run, backed by original title deeds are acceptable. Security margins were almost always thirty percent (30%) minimum on current values of the properties. This was to ensure adequate cover of at least the principal amount lent.

ii. Charge over business assets such as premises, inventory and account receivables were also employed. Also known as Debentures or Fixed and Floating charge, this security arrangement covers identifiable but wasting assets used as security for loans. Fixed and floating debentures were considered solely for large, long established and reputable companies and were considered solely for fixed loans payable over a maximum period of three years. Security margins were also thirty percent (30%) minimum on cost of new items. The 30% minimum margin was to cater for the depreciating nature of the assets and ensure adequate cover of principal amount lent.

Where receivables sources were regular and reliable, an Irrevocable Letter of Undertaking from borrowers' counter party to make payments in the joint names of borrower and the Banks were accepted as security. This prevented diversion of funds by borrower and also gave the bank the right to collect receivables directly from borrowers' counter party.

iii. Charge over financial instruments such as debt securities and equities were also used as security for loans. Among the financial instruments accepted as security for loans included Treasury bill, shares of other companies and other government papers. Margins of 30% of current value of shares were acceptable. However, the Banks do not accept their own shares as security.

iv. Other securities accepted by the banks also were assignment of stocks and guarantees by owners of the business.

4.2.2.1.2 Portfolio Diversification

The Bank also managed its credit risk exposures by diversifying its portfolio to avoid unwanted credit risk concentrations. Usually dependant on the banks' core competence, strategic direction and the government policy direction, the bank assigned quotas to the various industries within the sector of the economy. For instance, as at December 2008, the credit risk portfolio of the bank was distributed as follows; business services (6.07%), financial sector (0.84%), individuals (25.41%), manufacturing (20.85%), mortgages

(25.52%), transport & communication (0.51%) and trade & commerce (20.78%). This meant that, the bank had evenly diversified its portfolio in such as a manner that a collapse in a particular sector does not adversely affect is credit portfolio.

4.2.2.1.3 Credit Referencing Bureau

The establishment of the credit referencing bureau had been a major referencing point for the bank to know the true identifies of its borrowers. The bank has as a policy included the submission of a report from the XDSdata as a requirement for its loan approvals. All credit proposals going for approval are to be accompanied by a printout report from the credit reference bureau. This has enabled the bank to turndown some credit requests right the initiation stage due to unsatisfactory report from the bureau. It has also enabled the bank to know how some of its customers who are multi-banked are performing on their credit facilities with other banks.

4.2.2.2 Barclays Bank Ghana Ltd

Barclays Bank on the other hand uses statistical modeling techniques in managing its credit risk exposures. These techniques employed by the bank enabled it to take frontline credit decisions on new commitments and in managing the portfolio of existing exposures. The building blocks of these techniques are;

i. The probability of default (PD expressed through internal risk rating): the bank assesses its credit quality and assigns an internal risk rating to all

borrowers and other counter parties. Each internal rating corresponds to a statistical probability of a customer in that rating class defaulting within twelve (12) months.

ii. Exposure at default (EAD): This represents the expected level of utilization of a credit facility when default occurs. At default, the customer may not have drawn the loan fully or may already have repaid some of the principal.

iii. Severity of loss-given –default (LGD): this technique measures the actual loss of the loan exposure. It is that part of the loan exposure not recovered in case of default.

4.2.2.2.1 Portfolio diversification

Similarly, Barclays Bank also employed the portfolio diversity technique in addition to the risk mitigating techniques earlier mentioned. The portfolio diversification technique is employed to reduce the incidence of risk concentration. As at December 2008, credit portfolio of the bank were distributed as follows; individuals (63.30%), business services (11%), manufacturing (7.23%) with agriculture, construction, transport & communication, commerce and energy all contributing less than 5% to the total credit portfolio. It can be inferred that Barclays Bank's credit portfolio is concentrated along individuals. However, this was in line with the banks' strategy of becoming the market leader in retail banking in Ghana. Again, the beauty of this is that, these individual are involved in varied economic activities and cannot all default on their obligations.

4.2.2.3 Summary

From the above, it can be inferred that, the banks in Ghana employed a varied techniques in mitigating their credit risk exposures. Some of these measures include the use of collateralization, portfolio diversity, exposures at default, probability of default, loan-given loss and the use of credit referencing bureau.

It can also be inferred that, banks in Ghana employ the collateralization technique as one of their risk mitigating measures. The principal forms of collateral required were landed properties, charge over fixed and floating assets, and charge over receivables, financial instruments and assignment of stocks. The banks in Ghana also employ the portfolio diversification measure to mitigate against its risk exposures. Most of the risk assets were diversified among five major economic sectors; business & financial services, individuals, manufacturing, mortgage & construction and commerce (wholesale & retailing). (See appendix 3).

4.3 USING CAMELS IN ASSESSING CREDIT RISK MANAGEMENT

4.3.1 Capital Adequacy

A Bank's Capital Adequacy Ratio (CAR) is a gauge used to determine how much capital is needed to cushion against its credit risk assets. It shows the overall capital sufficiency of the banks. According to section 23-28 of the Banking Act 2004, Act 673, commercial banks operating in Ghana are required to keep a minimum CAR of 10%.

Analysis of the results showed that, HFC Bank's CAR was 12.78% as at December 2008. This was 278 basis points (2.78%) above the BoG's prudential requirement of 10%. The

bank's CAR was largely influence by increases in the bank's Tier 1 capital in 2008. HFC Bank in 2008 increased its share capital by 141%, regulatory risk reserve (161%) and statutory reserve by 69.6%.

The study also revealed that, the bank depended largely on external funding such as donations, grants, deposits and placement from other banks both local and foreign, long term loans and bonds to fund its operations. HFC Bank had 60.69% of its funding from such external sources. Notable among them were IDA loan, SSNIT loan, Standard Chartered loan and Ghana International Bank (GHIB) loan, long term bonds such as Ghana Government Bond, SSNIT Bond, HFC Dollar Housbonds and CLP bonds and donations from the Housing Development Assistance fund etc.

Barclays Bank on the other hand had maintained 13.81% minimum cushioning of depositors fund in a form of capital as at December 2008. This was also 381 basis points (3.81%) above the BoG's prudential requirement of 10%. The bank also increased its stated capital by 559% and regulatory risk reserves by 117%. Similarly, the study also revealed that, Barclays Bank also depended on external funding mainly placement from related parties to fund its operations. The bank also had 79.78% of its funding from Barclays Bank Plc and medium term bonds.

4.3.2 Asset Quality

The assessment of asset quality involved the analysis of loan loss ratios and gross non-performing loan ratio in addition to past due portfolio in arrears and credit concentration.

4.3.2.1 HFC Bank

The study revealed that, HFC Bank had a lower loan loss provisioning ratio of 3.2% (See appendix 4). This meant that a total of 3.2% of the bank's credit risk assets or exposures were potential losses and were written off. The bank's gross non-performing loans ratio was 6.6% as at December 2008. A total of 11% of HFC Bank's portfolio were in arrears. Portfolio in arrears refers to all outstanding loan amounts in olem to loss.

4.3.2.2 Barclays Bank

Barclays Bank on the other hand, had a loan loss ratio provisioning ratio of 10.20% and a gross non performing loan ratio of 13%. This meant that, about 13% of Barclays Banks gross loan portfolio were non- performing and were regarded as potential loss. The bank's portfolio in arrears was 13%.

4.3.2.3 Summary

Generally, the asset quality of the banks was questionable, as they maintained a relatively high loan loss ratio and non-performing assets in their book. Comparatively, HFC Bank performed better than Barclays Bank which traditionally had good rankings in the quality of its books. The deteriorating quality in the loan books of the banks in 2008 could be attributable to the increased rates of inflation and interest and the rate of depreciation of the local currency which characterized most part of the year.

4.3.3 Management

Management was analyzed using the banks' credit policy highlighting the banks' policies and strategies, credit risk governance structure and operations and control system put in place.

4.3.3.1 Policies and Strategies

In line with the prudential requirements of Basel II, each bank had its own credit rules and policy guidelines that outline its' willingness to the granting of credit. The banks' willingness to grant credit were largely dependent on their policy and strategic direction at a particular point in time in addition to other set criteria such as economic conditions, type of credit, economic sector/industry, geographical location etc. Even though, the banks generally did not grant credit to customers not outlined in their area of operation, there were few exceptions.

Each bank identified its risk exposures by assessing the probability of default of their counter parties by using internal rating systems tailored to their various counter parties. These tools combined statistically with credit officers' judgment were validated by comparing with externally available data. The bank's counter parties were segmented into five rating classes which are constantly reviewed and upgraded. Each bank also used exposures to counter parties and its likely future impact on the banks' credit portfolio and the likely recovery ratio on defaulted obligations as other means of managing their credit risks.   Table 4 illustrates the each bank internal rating classes for counter parties in line with Bank of Ghana prudential standards.

Table 4   Internal Rating Scale/Class of Banks

Internal Ratings	Description of Grade	Average number of months in delinquency
1	Current	Less than 1 month
2	Olem	Between 1-3 months
3	Sub-standard	4- 6 months
4	Doubtful	6- 12 months
5	Loss	12 months and above.

 Source: Credit Rules & Policy Guidelines & Annual Reports 2008 (page 68).

Each banks' policy manual also spelt out guidelines for risk identification and measurement, credit reporting and mitigating techniques, documentation, legal issues and remedial management for problem loan. It could be inferred from the study that, even though each bank did not have a straight-jacket policy approach of measuring its risk exposures, Barclays Bank largely used the accounting based credit scoring in addition to the internal rating based approach (IRB Approach) to identify and measure its risk assets. Here the bank used weighted accounting variables to produce a credit score for each borrower. Theses scores are compared with key accounting ratios of potential borrower's industry before credit decisions are taken.

HFC Bank on the other hand largely used the expert system's approach in addition to the internal rating based approach to measure and assess it risk exposures. Borrowers of the bank were assessed based on such characteristics as character (reputation or willingness), capital (equity or leverage), capacity (volatility of earnings), lending conditions and collateral before

credit decisions were taken. The bank also used both financial techniques such as profits, working capital cycle cashflow projections etc and other non-financial techniques such as screening the environment to measure the impact of other risk factors such as social, political, economic, technology, ecology, authority and terrorism on the borrower's business to measure their risk exposures.

Each bank's credit policies have also spelt out remedial steps and procedures to be adopted in managing problem loans exposures, foreign exchange lending, lending to group of companies and government entities. The policy also spelt out each bank's risk appetite and acceptable level of risk reward trade-off for its credit granting activities.

4.3.3.2 Credit Risk Governance Structure

In HFC Bank, the Board of Directors (the Board) were vested with the ultimate authority to supervise the performance of all aspect of credit risk management and, in particular with regards to approving the banks' credit risk policies and methodologies, setting limits of credit risk exposures and setting priorities of risk-return consideration in relation to other business – related activities. Even though the Board of Directors was the ultimate authority for approving large credit exposures, they have delegated certain limits in amounts for approval to the Finance & Credit Committees.

The Finance & Credit Committee of the Board were also vested with the powers to approve limits which were above the credit committee and to ensure that the banks risk takings are consistent with shareholders' expectation and the banks' strategic plan. The Credit

Committee on the other hand, has been authorized to approve credit exposures with ceilings established by the Board of Directors. It was also revealed that the bank has various approval chains for authorized senior management such as the Managing Director, Credit Controller, and Heads of Credit with ceilings established by the Executive Committee.

Barclays Bank on the other hand had various Sanctioners who approved or sanctioned credit limits within the Credit Risk Management Department. For instance the Corporate Credit Manager had been vested with the responsibility of sanctioning credit limits up to GHS 300,000. The Credit Director also had been vested with the responsibility of sanctioning limits up to GHS 1,000,000. Anything limit above the Credit Director's limit were transferred to Emerging markets or the UK for sanctioning or approval.

4.3.3.3 Credit Risk Management & Control Systems

Each bank had place a credit risk control system to manage its credit exposures. These systems have been put in place to allow for independent reviews of all credit granting processes to ensure that procedures being used could effectively manage the exposures. Each bank had an independent Risk Management Department that regularly reviews the bank's exposures and updates senior management on the likely impact of the risks on the banks' operations and remedial actions to be taken to control the identified risk.

Each bank had also put in place a system where the numbers of active borrowing customers per credit officer were limited. For instance, HFC Bank had in place a system where the numbers of active borrowers per credit officer were limited to thirty even though there were

few credit officers who had more than sixty active borrowers in their portfolio. Each Credit Officer under this system was responsible for initiating credit memoranda, maintaining relationship, and monitoring the exposures in his or her portfolios. This system, the study revealed was geared at equipping credit officers in the various aspects of the credit management processes. However, it puts pressure on credit officers and creates independence and inefficiency among credit officers as each person is believed to have a part of a skill and not a complete skills.

Barclays Bank on the other hand, had employed the 'team system' where each team was made up of a Relationship Officer, Credit Analyst and Credit Administrator. The Relationship Officers/Managers were responsible for relationship management and customer call visits whereas the roles of the Credit Analyst and Administrator were to review customers' account on regular basis, ensuring lending was conducted and administered in line with the banks credit policy and monitoring respectively. The rationale the study revealed was to improve efficiency of credit officers, ensure accuracy, improve turnaround time and reduce cost of operations.

The study also revealed that each bank has also in place systems to limit and control the concentrations of its risk exposures. Pursuant to the core competences of each bank and prevailing economic conditions, the Board of Directors of each bank were vested with the powers to regularly set limits on exposures to individuals, industries and other counter parties.

HFC Bank had managed its concentration risk by diversifying 92.56% of its portfolio to four sectors or industries (Individuals 25.41%, Manufacturing 20.85%, Mortgages 25.52% and Trade & Commerce 20.78%). On the whole, 29% of the Banks' exposures were exposed to 50 customers.

Barclays Bank on the strength of its core competences and strategy had an average of 75.03% of its credit portfolio concentrated among two industrial sectors; individuals 63.30%, business services 11.73%). However, more than 35% of the banks' exposures were to 50 customers.

Each bank also had an Internal Control Department that conducts periodic audits of the banks exposures to ensure that the banks' policy manuals and guidelines were strictly adhere to. There were also recovery units both internally and externally (outsourced) which were tasked to manage problems loans and mapping out strategies to ensure full recovery or minimize loan losses.

4.3.4 Earning Ability

Earning ability was analyzed in terms of returns on performing assets, returns on total assets and financial cost ratio. The returns on assets performing were to indicate the financial productivity of the banks' credit services and investment activities vis- a-vis returns on the risk free investments. Whereas the financial costs ratio were to show cost of funds affected by the banks' mix of net-worth, soft and hard loans.

4.3.4.1 Return on performing assets

HFC Bank, the study revealed had about 14.12% profitability on its performing assets. This was 2.88% less than the returns on BoG risk free investment of 17% as at December 2008. That is, the bank's credit portfolio which was less than 90 days (between current to Olem) earned a return of 14.12%.

Barclays Bank on the other hand earned a return of 21.06% on its performing assets. (4.06% more than the BoG discount rate).

Barclays Bank was more financially productive in its credit and investment services than HFC Bank. The banks on the average have been more financially productive in their credit and investment services as at December 2008 compared with the central bank's discount rate. However, the study also revealed, the banks were less productive and less efficiency as return on total asset were 17.59%. (0.59% less than the central bank's risk free rate).

4.3.4.2 Financial Cost Ratio

The financial cost ratios showed the banks' cost of funds affected by the mix of net-worth, soft and hard loans. It also included cost generated from liabilities such as deposits, debt outstanding, cost of capital and other short term liabilities. Financial cost was analyzed as cost generated from liabilities such as deposits, interest expense, fees and commission expenses and impairment charges for credit losses.

The financial cost of HFC Bank was revealed to be 13.89%. This meant that, the bank incurred a 13.89% cost on every one hundred Ghana cedi earned. Barclays Bank on the other hand incurred a financial cost 15.11%.

Comparatively, HFC Bank was deemed to be more efficient at controlling its financial cost than Barclays Bank. However, Barclays financial cost were largely influenced by 748% (GH¢46.89million) increase in the impairment charges for credit loss in 2008 compared with the HFC Bank's 90.5% (GH¢2.31million) increase.

It can be inferred that, the banks had not been all that efficient in their earning ability considering the relatively high lending rates regimes that characterized the industry.

4.3.5   Liquidity

Liquidity positions of the banks were assessed using two methods; the maturity ladder analysis and the indicator analysis (liquid asset to total asset ratio and loan deposit ratio).

4.3.5.1 Maturity Ladder Method

The Maturity ladder method was to enable the banks constantly maintained equilibrium between their financial inflows and outlaws over a period of time. It was to determine if the banks had challenges meeting their short to medium term maturing obligations in spite of the profits being made.

The study revealed that, HFC Bank had a strong liquidity position in the short term and in the long. (See appendix 5). That is, within the next three to twelve months, the bank had more of its financial assets maturing within a series of time band than its financial liabilities. The bank had a cumulative liquidity surplus of GH¢138,165,483 over a short term period and GH¢186,817,256 over a five year period. HFC Bank had 57.59% of its financial assets maturing in the short term (1- 12 months) compared with the 40% of its maturing liabilities maturing with the same period. In the medium to the long term, the bank however, had more of its liabilities (59.98%) maturing compared with the 40% of its financial assets. But this effect was neutralized by the cumulative surpluses gain in the short term.

Barclays Bank on the other hand had a weaker liquidity position in the short term (first twelve months. However, in the medium to the long term, Barclays Bank had a stronger liquidity position to meet the unexpected withdrawals of its customers and loan commitments. The bank had an initial liquidity deficit of GH¢406,708,000 over the short term period. However, over the long term, the bank liquidity positioned improved to a surplus of GH¢153,202, 222. This is attributable to the maturity mismatches between assets and liabilities. Barclays Bank had, 51% of its financial assets maturing within the short term (1- 12 months) as against the more than 92% of its liabilities maturing within the same period. To fund this liquidity gap, the bank had to embark on aggressive drive to mobilize funds to meet its maturing obligations. Notable among them was the freeze on loans and fixed deposit promotion which sought to reward potential investment with a rate over and above the going market rate.

4.3.5.2 Liquid Asset to Total Asset Ratio

A bank's liquid asset comprise of cash on hand (cash in vault), balances at BoG, balances due from other banks, money at call, investments, treasury bills and reserves notes. The total asset on the other hand consists of all liquid assets plus other fixed and floating assets.

The analysis revealed that, HFC Bank's liquid asset to total deposit ratio was 59.01% as at December 2008. This meant that as at December 2008, the bank total liquid assets position was capable of funding 59% of its total assets. In line with the provisions in section 31- 33 of the Banking Act 2004, (Act 673), the clearing account of the bank with the Bank of Ghana was 12.41%. This was 3.417% above the statutory requirement of 9% on both domestic and foreign deposits to meet customer's withdrawals and agreed loan commitments.

Barclays Bank on the other hand had a liquid asset to total asset ratio of 95.71%. This meant that Barclays bank as at December 2008 was capable of funding 95.71% of its total assets from its liquid assets. Barclays Bank had its clearing account balance with the Bank of Ghana to be 12.34% compared to the statutory requirement of 9%.

4.3.5.3 Liability diversification

This was to determine how diversified and stable the funding bases of the banks were. It was also to establish how strong and lasting relationship the banks had with depositors and other liability holders. The analysis was to determine the contribution of the banks top twenty (20) depositor to the bank's total deposit. A higher ratio was an indication that, the banks deposit

was concentrated in a few hands whereas a lower ratio was an indication of liability diversification.

The study revealed that, the ratio of the twenty (20) largest deposits to total deposits was 25% for HFC Bank. (Page 57, HFC Bank's annual report, 2008). This meant that, HFC Bank had 25% (GH¢21,301,270) its total deposits of GH¢85,205,083 being controlled by only 20 customers (Businesses or individuals) of the bank. It can be inferred that, the bank's funding base was not very stable as any decision by these twenty customers can seriously impact on its liquidity position.

Barclays Bank on the other hand, had its ratio of twenty (20) largest deposits to total deposit to be 12.7% (GH¢117,329,966). (Annual report, 2008, page 60). It can be inferred that, Barclays Bank had a more stable funding as its depositors portfolio was largely diversified. (See appendix 5).

4.3.6 Summary

In summary, HFC Bank was deemed to more effective in using the maturity to manage its liquidity positions both in the short term and in the long term compared Barclays Bank which had liquidity challenges in the short term as a result of maturity mismatches but managed to rectify the position in the long term. More of the bank's liabilities matured within the short run than its liquid assets maturing within the same period.

The banks were deemed to have enough liquid assets to fund their total assets. However, comparatively, Barclays Bank had more liquid assets to total asset ratio than HFC Bank. Barclays Banks liquid assets were better positioned to fund their operations than HFC Bank.

Additionally, Barclays Bank had a diversified liability portfolio and its deposits were more stable

Again, their liquid assets were not adequately placed to fund their obligations (unexpected withdrawals by depositors and meet agreed loan commitments). However, the banks had adequate funds in their clearing accounts with the Bank of Ghana to meet their statutory obligation of keeping an average of 9% of depositors' fund with the Bank of Ghana.

4.3.7 Sensitivity to market risk

4.3.7.1 Interest Rate Risk (Gap ratio)

The interest rate risk was analyzed by balancing the quantity of banks' repriced assets with the quantity of repriced liabilities. When a bank has more liabilities repricing in a rising rate environment than assets repricing, the Net Interest Margin (NIM) shrinks. Conversely, if a bank is asset sensitive in a rising interest rate environment, the NIM will improve because there are more assets repricing at higher rate.

According to the study (appendix 6), HFC Bank had a **positive** gap ratio of 83.98%, indicating a significant amount of asset sensitivity within the short term (12 months). Thus, HFC Bank, had more of its assets repricing (GH¢207,825,388) than its liabilities repricing (GH¢69,659,905) in the short term. Barclays Bank on the other hand, had a **negative** gap

ratio of 77.87% indicating a significant amount of liability sensitivity within the short term. Thus, Barclays Bank had more of its liabilities repricing (GH¢1,084,523) than its assets repricing (GH¢677,815,000). This means that, in the short term, a rising interest rate environment would have a positive impact on the net interest margins of HFC Bank but will however, have a negative impact on the interest margins of Barclays Bank and vice versa. The study suggested that, a percentage increase in interest rate regime could **generate** an estimated amount of GH¢1,645,212.29 in income for HFC Bank but could **cost** Barclays Bank an estimated amount of GH¢5,222,680 in income.

On the average, it can be inferred that, the banks in Ghana had a positive gap ratio (3.05%) indicating that, Banks in Ghana were marginally sensitive to asset repricing than liabilities repricing in the short term. This means that, a rising interest rate regime would impact positively on the interest margins of banks operating in Ghana.

4.4   CHAPTER SUMMARY

The study revealed two (2) sources of risk exposures to bank; exposures to other financial institutions and exposures to customers. Exposures to customers were identified to be the major causes of risk to bank in lending. The main sources of risk exposures to customers identified were direct commercial loans granted to private businesses and enterprises which accounted for more than half of the banks' credit risk exposures. Consumer loan and mortgage loans exposures were also identified to be other major sources of banks credit risk exposures. Indirect risk exposures such as contingent liabilities were the least causes of the banks' credit risk exposure.

Exposures to individuals, businesses & financial services, manufacturing, commerce (wholesaling & retailing), mortgages & construction, energy, transport & communication were among the major sources of banks commercial loans and advances. Exposures to the agric sub-sectors were identified to be the least, in spite of its high contribution to country's GDP.

The study also identified other sources of risk exposures to banks. These included financial derivatives such as repos, financial futures, forward contracts and swaps. However, the effects of these exposures were minimal since trading in these instruments was not conducted in large quantities.

The study also revealed that, the banks in banks employed varied techniques to mitigate their credit risk exposures. Some of these measures include the use of collateralization (taking of collateral security on loans), portfolio diversification, exposures at default, probability of default, loan-given loss and the use of credit referencing bureau. The principal forms of collateral required were landed properties, charge over fixed and floating assets, and charge over receivables, financial instruments and assignment of stocks.

Generally, the banks had enough capital to cushion them against any possible credit risk losses as each bank had a capital adequacy over and above the minimum prudential requirement set by the Bank of Ghana. However, asset quality of the banks was questionable, as they maintained a relatively high loan loss ratio and non-performing assets in their book as at December 2008. The deteriorating quality in the loan books of the banks could be

attributable to the increased rates of inflation and interest and the rate of depreciation of the local currency which characterized most part of the year.

In keeping with the prudential requirement of Bank of Ghana and the tenets of the Basel II accord, each bank had developed its own internal risk management techniques for managing its credit risk exposures. Some of these included credit policies and strategies that outlines the banks' willingness to the granting of credit, credit governance structures and credit risk management & control systems.

The banks, the study revealed had not been very efficient in their earning ability considering the relatively high lending rates regimes that characterized the industry. Additionally, the banks were deemed to have adequate liquidity positions in spite of the maturity mismatches that Barclays Bank had within the short term. The banks were also deemed to have enough liquid assets to fund their total assets. The study also revealed that, the banks' liquid assets were not adequately placed to fund their obligations (unexpected withdrawals by depositors and meet agreed loan commitments). However, they had adequate funds in their clearing accounts with the Bank of Ghana to meet their statutory obligation of keeping an average of 9% of depositors' fund with the Bank of Ghana.

Finally, it could be inferred that, banks operating in Ghana were more sensitive to asset repricing than liability repricing. This was because banks in Ghana had a **positive** gap ratio indicating that, a percentage increase in interest rate environment in the short term could impact positively on the interest margins of banks operating in Ghana.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter contains the summary of finding, conclusions and recommendations based on the research objectives.

5.2 SUMMARY OF FINDINGS

5.2.1 Sources of Credit Risk Exposures

The study revealed two (2) majors sources of risk exposures to banks; exposures to other financial institutions and exposures to customers. Exposures to customers were identified to be the main sources of risks exposures contributing more than eighty percent (80%) of banks' total loan portfolios. The main types of risk exposures to customers identified were direct commercial loans granted to private businesses and enterprises. These accounted for more than half of the banks' credit risk exposures to customers. Consumer loans and mortgage loans were also identified to be the other major sources of banks credit risk exposures. Indirect risk exposures such as guarantees, documentary letters of credit and bonds were identified to be the least sources of banks' credit risk exposures.

Exposures to individuals, businesses & financial services, manufacturing, commerce (wholesaling & retailing), mortgages & construction, energy, transport & communication were among the major sources of banks' commercial loans and advances. Exposures to the agric sub-sectors were identified to be the least, in spite of its high contribution to country's GDP.

The study also identified other sources of risk exposures to banks. These included financial derivatives such as repos, financial futures, forward contracts and swaps. However, the effects of these exposures were minimal since trading in these instruments was not conducted in larger quantities.

5.2.2 Risk mitigating methods employed by Bank

The study revealed that, banks employed varied techniques to mitigate their credit risk exposures. Some of these measures include the use of collateralization (taking of collateral security on loans), portfolio diversification, exposures at default, probability of default, loan-given loss and the use of credit referencing bureau. The principal forms of collateral required were landed properties, charge over fixed and floating assets, and charge over receivables, financial instruments and assignment of stocks.

The study also revealed that banks also employ portfolio diversity as way of mitigating against risk of concentration and loss. However, these were dependant on the banks' strategic direction, core competences and the government policy directions. The study revealed that, banks have spread their risk among various customers ranging from large businesses to small businesses, different economic sectors, geographic locations and households in order to reduce their borrowers risk of default.

The study revealed that, the banks had enough capital to cushion them against any possible credit risk losses as each bank had a capital adequacy over and above the minimum prudential requirement set by the Bank of Ghana. However, asset quality of the banks was questionable, as they maintained a relatively high loan loss ratio and non-performing assets in their book as at December 2008. The deteriorating quality in the loan books of the banks could be attributable to the increased rates of inflation and interest and the rate of depreciation of the local currency which characterized most part of the year.

The study revealed that, each bank had developed its own internal risk management techniques for managing its credit risk exposures. Some of these included credit policies and strategies that outlines the banks' willingness to the granting of credit, credit governance structures and credit risk management & control systems.

The banks, the study revealed had not been very efficient in their earning ability considering the relatively high lending rates regimes that characterized the industry. Additionally, the banks were deemed to have adequate liquidity positions in spite of the maturity mismatches that Barclays Bank had within the short term. The banks were also deemed to have enough liquid assets to fund their total assets. The study also revealed that, the banks' liquid assets were not adequately placed to fund their obligations (unexpected withdrawals by depositors and meet agreed loan commitments). However, they had adequate funds in their clearing accounts with the Bank of Ghana to meet their statutory obligation of keeping an average of 9% of depositors' fund with the Bank of Ghana.

Finally, it could be inferred that, banks operating in Ghana were more sensitive to asset repricing than liability repricing. This was because banks in Ghana had a **positive** gap ratio indicating that, a percentage increase in interest rate environment in the short term could impact positively on the interest margins of banks operating in Ghana.

5.3 CONCLUSION

The major objectives of the study were;

i. To identifying the main sources of the bank's credit risk exposures and the mitigating techniques put in place to reduce or manage these exposures.

ii. To examine the credit risk management practices of the banks' vis-a-vis the prudential requirement sets by the Bank of Ghana and the Basel Community for Banking Supervision.

iii. To examine the impact of the banks exposures on their capital structure

iv. To examine the quality of the credit portfolio of banks in Ghana using HFC Bank & Barclays Bank as case study.

v. To examine the banks' capital adequacy ratio under the prudential requirements set by the Bank of Ghana.

In conclusion, it can be inferred the main source of credit risk exposures by banks in Ghana was commercial loans granted to customers. These commercial loans were spread across the various sectors of the Ghanaian economy. Notable among them were advances to the wholesale and retail sectors, mortgage & construction sectors, transport & communication, manufacturing, individuals etc. Other sources of credit risk to Ghanaian banks also included consumer loans, mortgage loans and contingent liabilities.

To mitigate against their credit risk exposures, bank in Ghana employed a varied technique in order to reduce the effects of their credit risk losses. Notable among them was the use of collateralization of loans (taking of collateral security on loans). The principal form of collateral required by Ghanaian banks was landed property even though charge over fixed and floating assets, receivables, financial instruments and assignment of stocks were

sometimes taken. The banks preferred the landed properties because they are generally safer compared to the others. Again, the use of collaterals also reduces the occurrences counter party credit risk. However, it should be noted that this, does not entirely eliminate the credit risk especially in cases of negative exposures.

Additionally, banks in Ghana have also diversified their credit portfolios as another means of mitigating against credit risk loss. However, these were dependant on the each bank's strategic direction and core competences. In view of this, banks in Ghana have spread their credit risks across various customers ranging from large businesses to small businesses, different economic sectors, geographic locations and households in order to reduce their borrowers risk of default. However, some banks have over concentrated their credit risk portfolio towards a few customers or few industrial sectors. This is because the prudential requirements from the BoG allow each bank to grant credit to any sectorial industry depending on each bank's strategy in so far as its capital is adequate to compensate for such risk. This is because concentration risk has dire implications on bank's liquidity and solvency.

In line with section 23 – 28 of the Banking Act 2004 Act 673, which enjoins banks to at all times maintain a minimum CAR, banks in Ghana had a capital adequacy over and above the 10% minimum prudential requirement set by the Bank of Ghana. This is good as the banks are able to cushion themselves against any possible credit risk losses emanating from their transactions.

The asset quality of the banks in Ghana was low or questionable, as they have a relatively high loan loss ratio and non-performing assets in their books. This deteriorating quality in the loan books of Ghanaian banks could be attributable to the increased rates of inflation and interest and the rate of depreciation of the local currency which characterized most part of the year under review.

In line with the prudential requirements of Basel II, each bank in Ghana had developed its own internal risk management techniques for managing its credit risk exposures. Some of these include the formulations of credit policies and strategies that outline the banks' willingness to the granting of credit. Each bank also has developed its own credit governance structure and credit risk management & control systems.

It also be inferred that, banks in Ghana have not been very efficient in their earning ability considering the relatively high lending rates regimes that characterized the industry. However, the banks are deemed to have adequate liquidity positions in spite of the various maturity mismatches. The banks were also deemed to have enough liquid assets to fund their total assets.

The study also revealed that, the banks' liquid assets were not adequately placed to fund their obligations (unexpected withdrawals by depositors and meet agreed loan commitments). However, these banks had adequate funds in their clearing accounts with the Bank of Ghana to meet their statutory obligation of keeping an average of 9% of depositors' fund with the Bank of Ghana.

5.4   RECOMMENDATIONS

In view of the afore-mentioned findings, it is recommended that;

Commercial banks operating in Ghana should diversify their risk exposures among the various industries. This will help reduce the risk of concentration. It could be inferred from the study that most of the bank have concentrated their risk exposures among few sectors or industries. For instance, more than ninety –two percent (92%) of HFC Bank's risk exposures were concentrated among four industrial sectors such as manufacturing, mortgage & construction, commerce and individuals. There was little or no exposures to other important sectors such as energy, transport, agriculture and the financial services sectors. The case of Barclays Bank was even worse as almost two-thirds (2/3rd) of its portfolio was concentrated to one sector – Individuals (including staff).

It is also recommended that, commercial banks in Ghana should fully and actively participate in the operations of the credit referencing bureau by providing the centre with relevant information on their borrowing customers. This will enable the banks share information on their recalcitrant borrowers and reduce the risk of default. People with chartered credit history could then be denied access to credit.

The assets quality of banks is very important and banks in Ghana should channel more efforts to improve the quality of their risk asset portfolio. This could be done by adopting some or all of the following;

    i.   Staff motivation: Given the importance loan recovery in the entire credit management system, it is important that staffs of the unit (Credit Department

– both Corporate, Retail & Recovery) are highly motivated by rewarding them based on the number of loan they recover. This will go a long way to discourage them from abandoning the recovery process since it is extremely tiresome, boring and dangerous. In most cases, staffs of the Credit Department are the least remunerated and promoted compared to their counterparts in other departments.
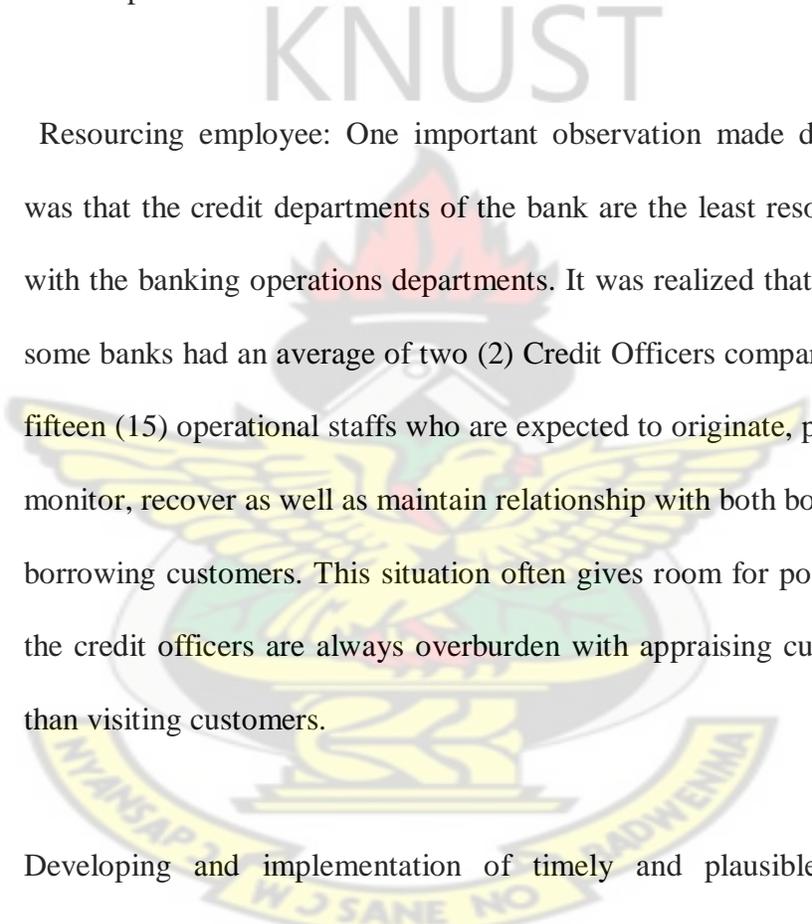
ii.   Resourcing employee: One important observation made during this study was that the credit departments of the bank are the least resourced compared with the banking operations departments. It was realized that, the branches of some banks had an average of two (2) Credit Officers compared to average of fifteen (15) operational staffs who are expected to originate, process, appraise, monitor, recover as well as maintain relationship with both borrowing and non borrowing customers. This situation often gives room for poor monitoring as the credit officers are always overburden with appraising customer's request than visiting customers.

iii.   Developing and implementation of timely and plausible stress test of counterparty risk exposures. These stress testing should be able to evaluate the impact of large market moves on the credit exposures to individual counterparties and the inherent liquidation effect.

It is also recommended for banks in Ghana to align collateral, early termination and other contractual provisions by taking into account particular characteristic of their counter parties such as ability to rapidly change trading strategies, risk profiles and leverage. This is because in doing so, banks may be able to control their credit risks more pre-emptively than is the case when such provisions are driven by net asset values. Even though the use of collateral can significantly reduce banks counter party risks, it does not eliminate credit risk and may entail other risk such as liquidity, legal, custody and operational risk as losses could occur when banks have provided for collateral owing to a negative exposure as the value of this collateral at the time of default may be less than the mark –to- market position.

It is also recommended for banks in Ghana to review and conduct further studies on periodic basis into the activities of the management of their credit policies and strategies and work out plans to determine whether they are in tune with the recommended best practices.

It is also recommended for banks operating in Ghana to continually and effectively monitor the creditworthiness and developments of its exposures to counter parties. Given the degree with which the risk profile of counter parties can change, it important that banks conduct reviews of their counter parties' exposures on frequent basis, at least quarterly. Again, additional reviews should be triggered by significant increases in exposures and market volatility.

Finally, due to the limitations of this study and the extensive nature of credit risk management, it also recommended that further studies be conducted to address the deficiencies of this study.

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