Credit Risk Management in Financial Institutions: A Case Study of Ghana Commercial Bank Limited

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Abstract

The purpose of this study is to identify the challenges financial institutions and customers of those financial institutions go through in obtaining credit and loan facilities and their repayment. Financial institutions are increasingly facing credit risk in various financial instruments other than loans, including acceptances, trade financing, foreign exchange transactions, financial futures, options, bonds, equities, swaps and in the extension of commitments and guarantees.. This study uses Ghana Commercial Bank as a case study with particular reference to the Risk Department. Credit risk management in a financial institutions starts with the establishment of sound lending principles and an efficient framework for managing risk. Policies, industry specific standards and guidelines, together with risk concentration limits are designed under the supervision of risk management committees and departments. The findings may be useful in strengthening the credit practices of Ghana Commercial Bank Limited and other financial institutions in the country Ghana.

Keywords: Credit risk management, financial institutions, financial instruments

CHAPTER 1
BACKGROUND OF THE STUDY

1.1 GENERAL INTRODUCTION

The purpose of this study is to investigate the management of credit risk in financial institutions in Ghana. The study will be basically approached descriptively, as it aims to present descriptive and sound evidence representative of Ghana Commercial Bank Limited. This study will be based on quantitative research and data. The purpose of this study will be explained further as the study progresses, along with the list and explanations of the study's problems and objectives, the hypothesis and other details about the methods it will use. However, it briefly presents and discusses the background of the study.

Credit risk management in a financial institutions starts with the establishment of sound lending principles and an efficient framework for managing risk. Policies, industry specific standards and guidelines, together with risk concentration limits are designed under the supervision of risk management committees and departments.

Credit risk, also known as counterparty risk is the risk of loss due to a debtor's non-payment of a loan or other line of credit (either the principal or interest (coupon) or both). Also, credit risk is most simply defined as the potential that a loan borrower or counterparty will fail to meet its obligations in accordance with agreed terms.

In most banks, loans are the largest and most obvious source of credit risk. However, other sources of credit risk exist throughout the activities of a bank. They include activities in the banking and trading books, and those both on and off the balance sheet. Banks are increasingly facing credit risk or counterparty risk in various financial instruments other than loans. These include bankers' acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options and the settlement of transactions.

Credit risk analysis (finance risk analysis, loan default risk analysis) and credit risk management are important to financial institutions which provide loans to businesses and individuals. Credit can occur for various reasons: bank mortgages (or home loans), motor vehicle purchase finances, credit card purchases, installment purchases, and so on. Credit loans and finances have the risk of default. To know the risk level of credit users, credit providers normally collect vast amount of information on borrowers. Statistical techniques can be used to analyze or determine risk levels involved in credits, finances, and loans, thus default risk levels.

While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, lack of attention to changes in economic factors (interest rates, inflation rates, etc.)

In recent times, the flow of credit in global financial markets has slowed from a glacial pace to a virtual standstill and credit markets threaten to stay that way despite immense amounts of cash being pumped into various economies by their governments and central banks around the world.

Credit risk is a problem faced by banks all over the world and the question mostly asked is "what will it take for banks to regain enough confidence in the financial system to get credit markets moving again?"

1.2 PROBLEM DEFINITION

A look at the Auditor –General's report in recent years in Ghana raises serious concerns about how banks manage the credit (loans) they issue out to customers with particular emphasis on the loans they give and how effectively they manage to recover such loans when the time is due. Most of these financial institutions have departments which supervise the issuing and recovery of loans. However, there are still gross financial improprieties going on in these areas. One would ask whether it is a problem of incompetent personnel, or is it a question of their independence that is hampering their effective operation or the blame should be fully apportioned to customers and beneficiaries who deliberately fault when it comes to the repaying of credit facilities they have enjoyed.

Most of these credit risk improprieties have adverse effects on many economies. This is evident by the low liquidity rate, low capital reserve of most of our financial institutions and the subsequent weak nature of our economy; the credit crunch plagued economy we are witnessing today.

It has come to the realization of the central bank and most financial institutions that there is the need for effective credit risk management in financial institutions in Ghana. Solving these problems noted above will help ensure good corporate governance. The main problem we are interested in, is to know *'The extent to which financial institutions in Ghana have been managing the credit facilities issued out to its customers and members of the public',* with Ghana Commercial Bank Limited as the focal point. This study will delve into these matters comprehensively.

1.3 OBJECTIVES OF THE STUDY

The main objective of the study is to have a bigger picture of how Ghana Commercial Bank Limited manages its credit risk. Thus the study is to,

- Ascertain the extent to which Ghana Commercial Bank Limited manages their credit risk, the models and practices adopted by this financial institution to manage its credit risk and what tools and equipments are at their disposal.
- Examine the types of loans issued at Ghana Commercial Bank Limited
- Know if higher interest income in Ghana Commercial Bank Limited can also lead to lower bad loans.
- Ascertain the type of committees that approve the different category of loans in Ghana Commercial Bank Limited.

1.4 HYPOTHESES.

The hypotheses to be investigated by the study are:

- There is an inverse relationship between interest income and defaulted loans in Ghana Commercial Bank Limited.
- Different levels of committees approve different loans at Ghana Commercial Bank Limited.

1.5 RESEARCH QUESTIONS

In the course of the study, we shall answer these important questions.

- What steps does Ghana Commercial Bank Limited take in retrieving its bad loans?
- Does high interest rate in Ghana Commercial Bank Limited reduce bad loans?
- What types of loans are issued at Ghana Commercial Bank Limited?
- How does Ghana Commercial Bank Limited determine when a loan has been defaulted?

1.6 IMPORTANCE OF THE STUDY.

This study is a step in the right direction as it comes at the time when there is a public outcry against financial mismanagement and the failure of many debtors of various financial institutions to honor their obligations thus, paying monies they have enjoyed from these financial institutions as a result of loans granted to them for various reasons.

The recent financial crisis that have engulfed the globe should give us cause to worry about how our various financial institutions plan and take steps to recover loans granted out.

This study will add to existing knowledge and contribute to the building of literature on this topic. Also, the hypothesis would help examine the effectiveness of risk management departments and the processes in granting of credit (loans, etc) in Ghana.

This study will especially be useful to customers and other stakeholders in the corporate world who have interests either directly or indirectly with banks. It will give an insight into how management is offering quality for their assets and how they are maintaining the health of the business through their risk intermediation function.

1.7 LIMITATIONS OF THE STUDY

The prime challenge was in the area of finance as the financing of this study involved a lot when it came to the visiting of the various branches, the printing of questionnaires, resources used in the surveys amongst others.

Also, the researcher was heavily constrained by the time available for the completion of the research. The researcher intended to visit many branches in the Accra metropolis but due to the busy nature of most of the banks' branches and members in the risk department, data collection was delayed.

Also, due to the scanty nature of relevant literature on the credit activities of Ghana Commercial Bank Limited foreign documentation was also relied on as part of information needed for the study.

However, these limitations in their entirety did not reduce the accuracy of the findings since several measures were put in place to ensure that relevant facts were reached.

Several statistical measures such as increasing the sample size of the data collected in years (annual reports) to reduce the sampling error to an appreciable level was included.

1.8 ORGANIZATION OF STUDY

The study is organized in five chapters which are as follows;
- Chapter One: Background of the Study
- Chapter Two: Literature Review
- Chapter Three: Methodology
- Chapter Four: Data Analysis of Research Findings
- Chapter Five: Summary and Recommendations

The first chapter covered the background to the study, thus a general introduction, problem definition, and objectives of the study. It also entails the hypotheses statement, research questions, the importance and limitations of the study.

Chapter Two is entirely on the literature review. This chapter contains reports and reviews made by people and firms on credit risk management including the gaps and loopholes identified in their reports and reviews. The chapter concludes with an assessment of how this study fills the gaps that has been created by the study of others.

Chapter Three and Four are respectively on the methodology and research findings and analysis of the data gathered. The methodology contains the general construction of ordinary least square regression from which our hypothesis will be tested. The fourth chapter is on the analysis of our research findings and data gathered during the study.

Chapter Five is the summary of findings of the study, conclusion, useful suggestions and recommendations to the research findings made and avenues for further study by other researchers.

CHAPTER 2
LITERATURE REVIEW

Most financial institutions find that loans are the largest and most obvious source of credit risk. Other sources of credit risk exist throughout the activities of a bank. Financial institutions are increasingly facing credit risk in various financial instruments other than loans, including acceptances, trade financing, foreign exchange transactions, financial futures, options, bonds, equities, swaps and in the extension of commitments and guarantees.

Since exposure to credit risk continues to be the leading source of problems in banks worldwide, banks and their regulators should be able to draw useful lessons from past experiences. Banks now have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks. It is also vital that they are adequately compensated for the risks incurred in the running of their business.

The Basel Committee's capital adequacy guideline aims to encourage global banking supervisors to promote sound practices for managing credit risk. The list include
(i)   Establishing an appropriate credit risk environment;
(ii)   Operating under a sound credit-granting process;
(iii)   Maintaining an appropriate credit administration, measurement and monitoring process.
(iv)   Ensuring adequate controls over credit risk.

Due to the importance of the credit risk management approaches, (Claessens, Krahnen and Lang, 2005) stressed that Basel II is to encourage banks to upgrade these practices and banks with sufficiently sophisticated risk measurement and management systems have more flexibility to use their own internal systems to determine regulatory capital minimums.

Although specific credit risk management may differ in banks depending upon the nature and complexity of their credit activities, a comprehensive credit risk management program should address all these issues. Implementation of the credit risk management strategies should also be applied in conjunction with sound

practices related to the assessment of asset quality, the adequacy of provisions and reserves and the disclosure of credit risk.

Illustrated by the theoretical models of (O'Brien, 1983) and recently modified to better current practices, a set of guidelines is released to promote better understanding of credit agreements to assist the banking industry to improve their services. These guidelines include full disclosure or credit history, independent credit analysis, legal consideration, sharing credit information between agents and prompt response to problems. Based on another study by (Wu and Huang, 2007), top management support is most important for management to be successful.

In this context, and in order to solve these problems of bad loans, this study identifies and decomposes the origin of bad loans and to obtain efficiency measures adjusted for risk and environment, more refined than those hitherto proposed in other studies. The procedure proposed enables the total bad loans of each bank to be decomposed, into its two components: one part due to bad risk management and another due to exogenous economic and environmental factors.

The very existence of banks is often interpreted in terms of its superior ability to overcome three basic problems of information asymmetry, namely ex ante, interim and ex post (Uyemura and Deventer, 1993). The management of credit risk in banking industry follows the process of risk identification, measurement, assessment, monitoring and control. It involves identification of potential risk factors, estimate their consequences, monitor activities exposed to the identified risk factors and put in place control measures to prevent or reduce the undesirable effects. This process is applied within the strategic and operational framework of the bank.

Several risk-adjusted performance measures have been proposed (Heffernan, 1996; Kealhofer, 2003). The measures, however, focus on risk-return trade-off, i.e. measuring the risk inherent in each activity or product and charge it accordingly for the capital required to support it. This does not solve the issue of recovering loanable amount. Effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric information problems and in reducing the level of loan losses, thus the long-term success of any banking organization (Basel, 1999; IAIS, 2003). Effective credit risk management involves establishing an appropriate credit risk environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as adequate controls over credit risk (Basel, 1999; Greuning and Bratanovic, 2003; IAIS, 2003). It requires top management to ensure that there are proper and clear guidelines in managing credit risk, thus all guidelines are properly communicated throughout the organization; and that everybody involved in credit risk management understand them.

Considerations that form the basis for sound credit risk management system include: policy and strategies (guidelines) that clearly outline the scope and allocation of a bank credit facilities and the manner in which a credit portfolio is managed, i.e. how loans are originated, appraised, supervised and collected (Basel, 1999; Greuning and Bratanovic, 2003; PriceWaterhouse, 1994). Screening borrowers is an activity that has widely been recommended by, among others, (Derban et al. 2005). The recommendation has been put to use in the banking sector in the form of credit assessment. According to the asymmetric information theory, a collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening.

The assessment of borrowers can be performed through the use of qualitative as well as quantitative techniques. One major challenge of using qualitative models is their subjective nature (Bryant, 1999; Chijoriga, 1997). However, borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique is termed as "credit scoring" (Heffernan, 1996; Uyemura and Deventer, 1993). The technique cannot only minimize processing costs but also reduce subjective judgments and possible biases (Kraft, 2000; Bluhm et al., 2003; Derban et al., 2005). The rating systems if meaningful should signal changes in expected level of loan loss (Santomero, 1997).(Chijoriga, 1997) concluded that quantitative models make it possible to, among others, numerically establish which factors are important in explaining default risk, evaluate the relative degree of importance of the factors, improve the pricing of default risk, be more able to screen out bad loan applicants and be in a better position to calculate any reserve needed to meet expected future loan losses.

Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing credit risk (Heffernan, 1996). Further, monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables (Donaldson, 1994; Mwisho, 2001), and also very important in dealing with moral hazard problem (Derban et al., 2005). Monitoring involves, among others, frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser; develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation; monitoring the flow of borrower's business through the bank's account; regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing the

borrowers rating assigned at the time the credit was granted (Donaldson, 1994; Treacy and Carey, 1998; Tummala and Burchett, 1999; Basel, 1999; Mwisho, 2001).

Tools like covenants, collateral, credit rationing, loan securitization and loan syndication have been used by banks in developing the world in controlling credit losses (Benveniste and Berger, 1987; Greenbaum and Thakor, 1987; Berger and Udell, 1992; Hugh, 2001). It has also been observed that high-quality crdit risk management staffs are critical to ensure that the depth of knowledge and judgment needed is always available, thus successfully managing the credit risk in the financial institutions (Koford and Tschoegl, 1997; Wyman, 1999). (Donaldson, 1994), PricewaterhouseCoopers in their survey report on Barclays bank noted that low motivation and lack of due diligence on the part of the banking staff as a major contributor to loan default. (Jeremy and Stein, 1999) observed that computers are useful in credit analysis, monitoring and control, as they make it easy to keep track on trend of credits within the portfolio. (Marphatia and Tiwari, 2004) argued that risk management is primarily about people – how they think and how they interact with one another. Technology is just a tool; in the wrong hands it is useless. This stresses further the critical importance of qualified staff in managing credit risk.

Credit risk has caused loan losses problem in developing countries, including Ghana. The problem has its roots in information problems that particularly cause adverse selection and moral hazards. The Ghana economy being in a transition makes information asymmetry more pronounced. Effective credit risk management system minimizes the credit risk, hence the level of loan losses. Empirical studies show differences in approaches to credit risk management when different contexts are considered (Menkhoff et al., 2006; Mlabwa, 2004). It was important therefore to take into consideration the context within which the study was conducted. This situation required the incorporation of an inductive approach (Haider and Birley, 1999).

International comparisons of banking efficiency have not loomed large in the literature. The lack of homogeneous accounting data and the existence of different regulatory frameworks notably complicate these comparisons. The very few studies in this field, based on the construction of a common frontier for all countries, have traditionally found high degrees of inefficiency. This result may be due to the fact that the procedure used implicitly assumes that any difference of efficiency between countries is exclusively due to bad management, without also considering the possible existence of technological differences (Pastor, Perez and Quesada, 1997) or differences in the economic environment (Pastor, Lozano and Pastor, 1997) which may bias the results and provide under-estimated efficiency measures for those banking systems that are subjected to less favorable economic environments. To avoid this problem it is necessary to introduce environmental variables to control the different economic circumstances under which the banking firms of different countries carry out their activities. In this respect, the most notable exceptions are the recent studies by (Dietsch and Lozano, 1996) and (Pastor, Lozano and Pastor, 1997) which incorporate environmental variables with the aim of establishing a common standard of comparison for all firms.

Loans that constitute a large proportion of the assets in most banks' portfolios are relatively illiquid and exhibit the highest credit risk (Koch and MacDonald, 2000). The theory of asymmetric information argues that it may be impossible to distinguish good borrowers from bad borrowers (Auronen, 2003), which may result in adverse selection and moral hazards problems. Adverse selection and moral hazards have led to substantial accumulation of non-performing accounts in banks (Bester, 1994; Bofondi and Gobbi, 2003). The increased competition associated with the process of liberalization and globalization and the attempts of European banks to increase their presence in other markets especially Africa may have affected the efficiency and credit risk of the banking institutions in Africa with Ghana being no exception. There are two aspects to this dimension. The first of these aspects, already analyzed in other studies, is based on the incentive to the banks to reduce costs and to improve the management of their resources in order to gain in competitive advantage. The second aspect, which has not yet been analyzed, is explained by the poorer knowledge of the new markets by the newly entered banks and/or the greater permissiveness in the acceptance of risk with a view to increasing the market share in certain sectors and/or regions. Despite the importance of these two aspects, banking literature has usually analyzed banking efficiency without considering them together. Efficiency measures, based on the consideration of outputs and inputs, are usually a good instrument of analysis of the performance of firms; however, it is sometimes necessary to consider other factors. In the case of banking, one of the most important of these is risk, as it is desirable not only that a banking firm should be efficient, but also that it should be secured. This is certainly not exclusive to the banking sector, but it is of greater importance than in other sectors, given the potential economic repercussions of banking failures. However, despite its importance, the relationship between cause and effect of bad loans has hardly been studied in any literature. Only the studies by (Berg et al. 1992), (Hughes et al. 1993 and 1996 ; Mester, 1994a, 1994b) have attempted to obtain risk-adjusted efficiency measures in relation to bad loan causes. However, their approaches may be unsuitable insofar as they are based on the inclusion of risk (measured by means of total bad loans) as an additional input, implicitly assuming that all bad loans are caused by the bad management of banks, without considering that some may be due to adverse economic circumstances beyond the banks' control. If these exogenous or uncontrollable factors are not filtered

out, the efficiency of those firms whose bad loans are due to an adverse economic environment will be underestimated. Furthermore, none of the existing studies attempts to decompose total bad loans into these two components: bad loans due to bad management (internal factors) and bad loans due to economic environment (external factors).

The nature of the study required an understanding of the credit risk management phenomena within a Ghanaian context. The credit risk management as a phenomenon is a process whose understanding required rich data in its respective context to be collected. It is very clear in the above discussions that little or no emphasis has been placed on the causes of bad loans. This study approach is therefore an appropriate strategy in collecting the required empirical data which will help to enumerate the causes of loan default or bad loans. The information required is qualitative and contextual in nature and is therefore to be analyze qualitatively.

CHAPTER 3
METHODOLOGY

3.1 Introduction
This chapter articulates the means by which data will be gathered for the study. The methodology of this study would be mainly through the use data from annual reports and questionnaires. Other methods to be used for data collection are an interview with staff of the risk division of Ghana Commercial Bank Limited.

3.2 Population of Study
The population under consideration is financial institutions in Ghana. A Financial institution is an institution that provides financial services for its clients or members. Probably the most important financial service provided by financial institutions is acting as financial intermediaries. Financial institutions in Ghana are regulated by government or by private sources. (Siklos, Pierre, 2001)

Broadly speaking, there are three major types of financial institutions:
1. Deposit-taking institutions that accept and manage deposits and make loans, including banks, building societies, credit unions, trust companies, and mortgage loan companies
2. Insurance companies and pension funds; and
3. Brokers, underwriters and investment funds.

Siklos, Pierre (2001). Money, Banking, and Financial Institutions: Canada in the Global Environment. Toronto: McGraw-Hill Ryerson. p. 40

3.3 Area of Study
The area of study is the Risk Division in the head office of the Ghana Commercial Bank Limited, other branches in the Accra Metropolis and customers of the bank especially those who enjoy loans.

3.1.1 Data and sampling method
The data information to be used would be both primary and secondary data. Primary data will mainly be collected through conduction of interviews and general observations. A guideline of questions in the form of questionnaires which reflect the objectives of the study would be used to gather information from respondents. The secondary data will come from published works, records of Ghana Commercial Bank Ltd and the internet. Instruments such as pens, papers, notepads, tape recorders and to some extent a video camera would be used in the gathering of the data.

The questionnaires would be designed in a way that would help test the hypothesis and research questions appropriately to enable the researcher obtain enough information on which conclusions will be drawn on the gaps as identified in the literature review. Questionnaires would be administered to customers of the bank and staff of the bank as well as retail managers in other branches of the bank to respond appropriately. Based on their responses, an opinion will be formed.

Also, the researcher would seek the views of independent sources on the internet which we hope will give us a lot insight into our study.

Apart from the above, existing literature such as journals, books, and periodicals would be relied upon to get an accurate knowledge of credit risk management in Ghana.

Both quantitative and explanatory analysis would be used in this study. However, the researcher expects to use more quantitative analyses in this research.

Two hundred questionnaires each would be given out to the staff and customers of Ghana Commercial Ghana Limited in the Accra metropolis which will throw more insight on the research objectives.

3.2 Hypotheses
• Higher profitability (ROE, ROA) in Zenith Bank leads to lower loan losses (defaulted loans).
• There is an inverse relationship between interest income and defaulted loans in Ghana Commercial Bank Limited

Thus the hypothesis is tested using the following regression model:

P (ROA, ROE) = α + βNPL/TL+μ

Where, NPL denotes non-performing loans, TL denotes total loan and P denotes profitability (ROA, ROE). Also, α is the intercept and β is the parameter of explanatory variable ROA and ROE, μ represents the disturbance terms.

The researcher will use the data from the Ghana Commercial Bank Limited.

A simple regression analysis of a ten year financial data of Ghana Commercial Bank Limited, to examine the relationship between profitability (ROE and ROA, separately) which are performance indicators and loan losses (NPL/TL) which represent the credit risk management effectiveness.

In the researchers' quest for a good analysis of the data from Ghana Commercial Bank Limited, valid and concrete results would be obtained for a ten year period analysis because it is a good time frame.

3.4 Limitations of the study

Although this is an important area of research, the researcher is encountered by challenges in trying to come out with an acceptable conclusion.

The researcher intends to visit the head office and possibly other branches of the bank to obtain enough data for a solid conclusion but looking at the busy nature of most of the staff of the risk department and the retail managers (branch managers), there will be expected delays in the answering of the questionnaires and the obtaining of relevant data for the study. Also there is another constraint, which is the number of questionnaires to be sent out to the banking staff and bank customers to answer, and how many answered questionnaires to be received. Since the researcher is not sure of the number, the sample size would be large, thus about 200 questionnaires will be administered, with approximately 150 of the answered questionnaires expected to be returned for further analysis.

Financial constraints would also hamper the research process. This may result from the number of Ghana Commercial Bank Limited branches that the researcher intends to visit being reduced to the level of capacity of available resources.

However, these limitations in their entirety would not reduce the accuracy of the findings since several measures have been put in place to ensure that the researcher comes out with relevant facts.

The researcher used several statistical measures like increasing the sample size to reduce the sampling error to an appreciable level.

Analysis of data will be made using responses to be obtained from questionnaires yet to be administered to respondents. A descriptive analysis will be made from all information gathered.

CHAPTER FOUR
ANALYSIS OF DATA

4.1 INTRODUCTION

This chapter entails the analysis and interpretations deducted from data acquired from the annual reports of Ghana Commercial Bank Limited for the past fifteen years, which starts from the 1995, down to the 2009 financial year. It also includes data gathered from an interview with staff of the risk department of GCB and questionnaires distributed to customers of the bank. A least square regression analysis was done using the E-views statistical package to test the study's hypotheses. The details are as follows;

*Profitability (ROE) =Net Profit/Shareholders' Fund.

*Loan Loss (NPA/TLA) = Non Performing Assets/ Total Loans and Advances.

*NETINCOM= Net Interest Income

*In the early years of the bank's preparation of annual reports, exact figures for non performing assets (Cash and Balances with Bank of Ghana) were not stated on clear basis but rather in the form of cash and short term funds. Hence cash and short term funds were used as replacement for cash and balances with Bank of Ghana in some of years.

4.2 Data Presentation 1

The least squares regression model in the double log function was used in addressing the first hypothesis, which states that banks with higher profitability also, have lower loan losses. The result is shown below where Net Profit/Shareholders fund (ROE) represents profitability and Non Performing Assets/Total Loans and Advances (NPA/TLA) represents loan loss.

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4.2.1 Data Of Profitability (ROE) And Loan loss (NPA/TLA) Of The Ghana Commercial Bank Limited. (1995-2009)
Table: 1

YEARS	ROE (Y)	NPA/TLA (X)
1	53.65	202.51
2	51.21	198.97
3	41.64	36.28
4	26.99	87.96
5	46.75	49.99
6	61.02	43
7	51.02	41.32
8	41.08	51.52
9	19.76	28.08
10	28.44	32.41
11	18.06	28.76
12	28.7	19.89
13	15.1	15.53
14	18.15	18.66
15	9.1	11.62
TOTAL	510.67	866.5

The regression model used the double log linear function as shown: $\text{Log (ROE)} = \alpha + \log \beta_0 \text{(NPA/TLA)}$

Dependent Variable: LOG(ROE)

Method: Least Squares

Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(NPA/TLA)	0.493158	0.127044	3.881797	0.0019
C	1.578884	0.479338	3.293886	0.0058

R-squared	0.536845	Mean dependent var		3.396693
Adjusted R-squared	0.501218	S.D. dependent var		0.561088
Prob (F-statistic)	0.001890	F-statistic		15.06835

The table above shows the regression coefficients between loan losses (NPA/TLA) and profitability (ROE) of GCB. The intercept is 1.579 with a standard error of 0.479 and the slope of 0.493 with a standard error of 0.127. The coefficient of 0.493 implies that there is a positive relationship between profitability and loan loss. Hence, 49.3 percent of the variation in profitability (ROE) is explained by associating the variable with Loan losses (NPA/TLA). The magnitude elasticity shows that loan loss will have a significant influence on profitability. This implies that loan losses of GCB are positively related to profitability for the period pertaining to this study.

The R square statistic (R^2) tells us the proportion of variability in the dependent variable profitability (ROE), that is explained by the independent variable, loan losses (NPA/TLA). From the table above, the estimated R^2 value of 0.5367 means that loan losses (NPA/TLA) explained 53.7% of the total variation in the dependent variable profitability (ROE). Thus, 1 percent increase in loan loss accounts for 53.7 percent increase in profitability (ROE).

The estimated F- value also suggested that the effect of the explanatory variable included in the model is significant at a level of 1% percent.

The results verify our hypothesis that a higher profitability (ROE) in Ghana Commercial Bank Limited (GCB) leads to lower loan losses. It is worth noting that profitability can influence the magnitude of loan loss, since better profitability affords the GCB to write off more bad loans. However, the study focuses the analysis on one sided relations of loan loss on profitability for our purpose.

A close study of the graphs below (figure 1 and figure 2), depicts a positive relationship between the two variables, i.e. Loan loss and Profitability.

Figure 1- SCATTER DIAGRAM SHOWING THE RELATIONSHIP BETWEEN ROE AND NPA/TLA
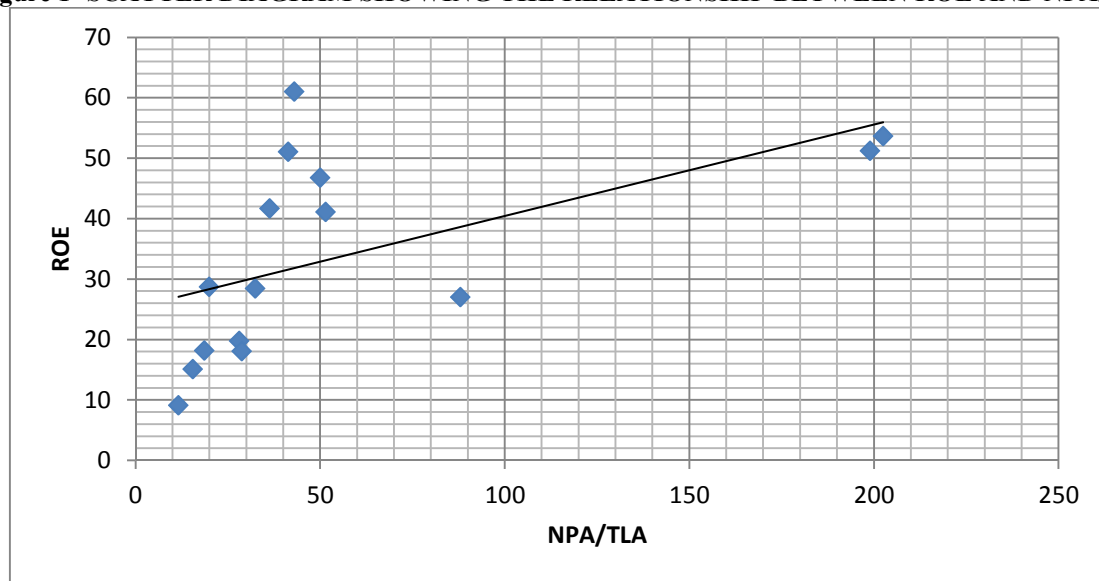

As depicted in figure 1, the scatter diagram shows the dependent variable (ROE) plotted on the vertical axis and the independent variable loan loss (NPA/TLA) on the horizontal axis. There exists a positive relationship between the dependent variable and the independent variable as the line of best fit slopes from left to right for the period used in the study. The nature of the scatter diagram also shows that loan loss accounts for part and not the only cause of variations in the profitability of the bank as there are other factors such as bad management, inefficiencies of employees amongst others that account for variations in profitability.

Figure 2, the line graph below also illustrates evidence of the positive relationship between the dependent variable (ROE) and the independent (NPA/TLA).The values of both the dependent and independent variables are plotted on the vertical axis with the period(number of years) on the horizontal axis. It can be deduced from the line graph below that the variations are similar across the years, thus ROE and NPA/TLA decrease and increase together generally for the period 1995 to 2009 per the financial data from GCB.

Figure 2.

LINE GRAPH SHOWING THE RELATIONSHIP BETWEEN ROE AND NPA/TLA
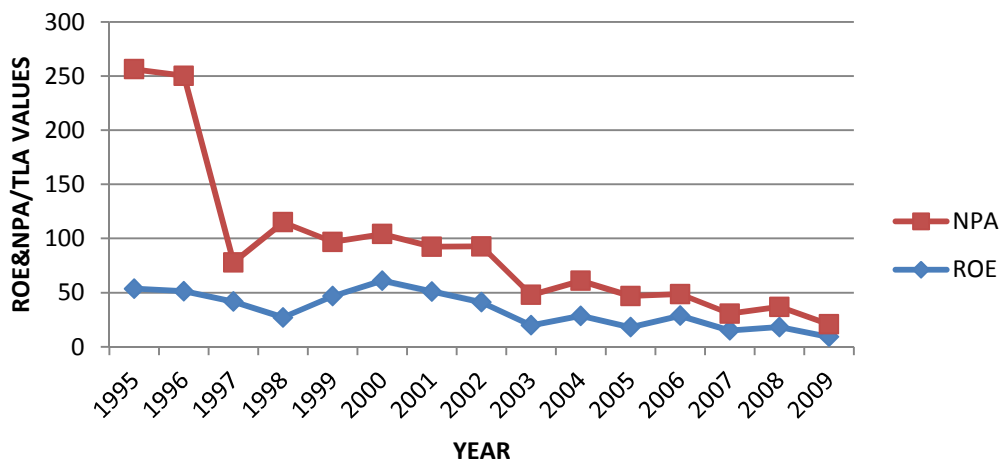
4.3 Data Presentation 2

The least squares regression model in the double log function was used in addressing the second hypothesis, which states that banks with higher interest income also, have lower loan losses. The result is shown below where NETINCOM represents net interest income and NPA/TLA representing loan loss.

Table 2- Data of Net Interest Income and Loan loss (NPA/TLA) Of the Ghana Commercial Bank Limited (1995-2009).

YEAR	NET INTERESTINCOME (Y) GH¢	NPA/TLA (X)
1	4611800	202.51
2	5279900	198.97
3	6765100	36.28
4	7690500	87.96
5	11919800	49.99
6	23232500	43
7	58679300	41.32
8	50987300	51.52
9	57530600	28.08
10	59841600	32.41
11	70086900	28.76
12	87419100	19.89
13	89821846	15.53
14	132052693	18.66
15	131707298	11.62
total	797626237	866.5

The regression model used the double log linear function as shown:

$\text{Log (NETINCOM)} = \alpha + \log \beta_0 \, (\text{NPA/LA})$

Dependent Variable: LOG(NETINCOM)

Method: Least Squares

Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(NPA/LA)	-1.255997	0.202717	-6.195813	0.0000
C	21.90504	0.764855	28.63949	0.0000

R-squared	0.747023	Mean dependent var		17.27536
Adjusted R-squared	0.727563	S.D. dependent var		1.211410
F-statistic	38.38809	Prob(F-statistic)		0.000032

The regression table above shows the regression coefficients between net interest income and loan loss (NPA/TLA) of GCB. The intercept is 21.905 with a standard error of 0.765 and a slope of -1.256 with a standard error of 0.203. The coefficient of loan losses (NPA/LA) is -1.26 implying that there is a negative relationship between net interest income and loan loss. The term R-squared tells us the proportion of variability in the dependent variable (net interest income) that is explained by the independent variable (loan losses). From the table above, the value corresponding to R squared is 0.747, implying that the variations in the net interest income is been explained by 74.7 percent. The results verify our hypothesis that having a higher interest income amounts to lower loan losses, thus an inverse relationship between net interest income and loan losses. This implies that, a unit decrease in loan loss accounts for an increase in the net interest income.

The estimated F- value also suggested that the effect of the explanatory variable included in the model is significant at a level of 1% percent.

FIGURE 3 - SCATTER DIAGRAM SHOWING THE RELATIONSHIP BETWEEN NET INTEREST INCOME AND NPA/TLA
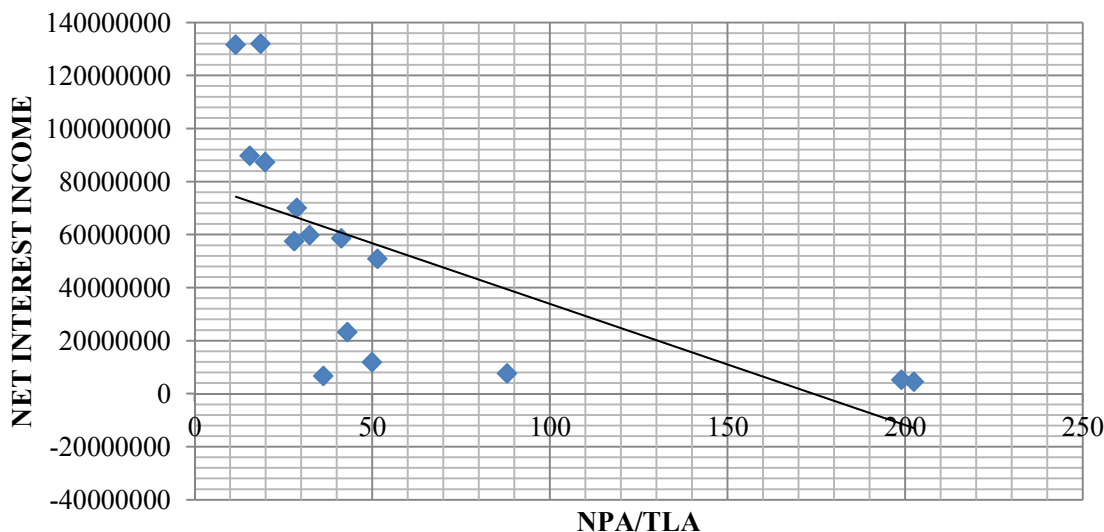

Figure 3 above, shows the relationship between the net interest income and loan losses. The net interest income which is the dependent variable is plotted on the vertical axis while loan loss, the independent variable is plotted on the horizontal axis. The diagram shows a negative relationship between the net interest income and loan losses. This verifies the hypothesis that a higher interest income accounts for lower loan losses in the case of GCB per the financial data for the period being analysed.

4.3 *Data Presentation 3*

Ghana Commercial Bank Limited (GCB) like all other financial institutions in the country and worldwide have placed a premium on risks in general. It has become imperative to effectively manage risks to build a reputation and to realize operational and strategic objectives. GCB has an established risk division that readily handles risks, credit risk inclusive that surface regularly in their line of work. This presentation summarises information gathered through the conduct of an interview of the staff of the risk division at the head office of GCB in Accra. This interaction gave an insight into the practices, tools as well as the processes of GCB in granting credit, management of default and other relevant matters on credit risk management. Included also, is a summary of responses from questionnaires distributed to customers of the bank to sample their views on a range of issues related to the credit process of the bank.

4.3.1 *CREDIT POLICY*

The credit policy of Ghana Commercial Bank is a comprehensive document stating the processes staff and customers are to go through before and after loans are issued out to the customers.

It includes a checklist stating the necessary documents needed to be presented by enterprises and companies who seek corporate loans respectively. Ideally the credit policy of the bank should be reviewed yearly to incorporate changes necessitated by events from previous financial years.

GCB provides its customers with different types of loans, some of which are:

- ***Term loans-*** These include short- term and medium term loans.

GCB extends Short term loans for a period of 12 -24 months and Medium term loans for a period of 24-36 months.

As a matter of policy, GCB does not issue out long term loans to customers due to its long gestation period.

- ***Revolving facilities*-** Credit facilities of this nature include an overdraft where a customer overdraws an account to a specified amount.
- ***Trade finance loans*** -These are loans for financing pre-shipments (imports and exports), production and purchases from markets.

4.3.2 *CREDIT PROCESS*

At GCB, customers can apply for loans from any branch. For first time customers seeking loans, screening is done to check if the loan application should be considered. GCB has different committees at different levels or stages of their organizational structure who approve loans. These include;

- ➢ **Branch Credit Committee (Branch level)** – This committee is made up of the branch manager, operations manager and credit officer. They approve loans below GH¢ 3,000.

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> **Area Credit Committee**- This committee approves loans of GH¢ 3,000-5,000.
> **Head Office Credit Committee (HOCC)** –This committee approves loans of GH¢5,000-50,000
> **Executive Credit Committee (ECC)** – This committee approves loans of GH¢ 50,000-300,000.
> **Board Approval**- This is highest loan approval body at GCB and approve loans above GH¢ 300,000.

For personal loans to individual customers, the bank calculates one third (1/3) of the net salary of the customer multiplied by the term of the facility. (1/3 of net salary * term of facility in months). The amount arrived at is the amount of loan that can be given to the customer. This is done as a matter of policy, primarily to mitigate the risk of default and with the conviction that, the customer can comfortably repay the facility given him or her as anything more than this increases the probability of default. It is also important to note that, the International Labour Organisation (ILO) regulations obligates banks not to take more than forty percent of a customer's net salary for loan repayment. GCB takes vital notice of these important issues amongst others in determining the amount of credit given to applicants of these facilities.

4.3.3 CREDIT RISK MANAGEMENT

The Bank of Ghana (BOG) has specific guidelines for all banks in the country to follow when loans are to be declared bad or when loan payments are deteriorating depending on the type of loans. These guidelines are categorized into;

> **OLEM**- Other loans exceptionally mentioned. This level of default shows inactivity of a loan account or default for 30 days.
> **SUBSTANDARD**- This is the level of default which shows inactivity of a loan account or default for a further 90 DAYS.
> **DOUBTFUL**- This is the level of default which shows inactivity of a loan account or default for a further 180 days.
> **LOSS LOAN**- This is the level of default or the inactivity of a loan account after 360 days.

Additionally, BOG insists that when these deteriorating loans reach any of these categories, the bank has to make provisions out of their capital or funds for these defaulted facilities. Below are the percentage (%) repayment provisions stipulated by BOG for banks.

- OLEM- 10%
- SUBSTANDARD- 25%
- DOUBTFUL- 50%
- LOSS LOAN- 100%

The bank's modus operandi when experiencing loan defaults involves the following key actions to retrieve the deteriorating loans;

- The first line of action of the bank is to send a demand notice giving the defaulting customer 14 days to repay the loan. After the 14 days expire and the customer's situation persists, an overdue debt report is prepared by the relationship manager and is forwarded to the risk division. The division then sends a final notice of demand (FND) to the customer giving him/her another 14 days to respond or face legal action.
- For a collateral decree, an FND of 30 days is sent to the customer to pay back the loan or present a proposal for payment. The proposal offers both parties an avenue to reach a mutually beneficial arrangement in an effort to retrieve the defaulted loan. The proposal presented by the customer is assessed by the bank and if it is considered good enough, the court decision is rescinded. On the contrary if the proposal is not accepted by the bank and the 30 day FND expires, the case is transferred to the legal department of the bank for prosecution if the customer's default position still prevails.

In recent times, BOG has introduced the Borrowers and Lenders Act stating that, collaterals can be registered at the Bank of Ghana Collateral Registry. On default, a notice is sent to BOG and permission would be granted to the bank to sell the registered collateral in order to realize loan repayment amount.

4.3.4 QUESTIONNAIRES

A total of one hundred and thirty (130) questionnaires were distributed amongst some branches of the Ghana Commercial Bank Limited (GCB) in the Greater Accra metropolis. These questionnaires were distributed to sample views of customers of the bank on some insightful questions on the credit or lending process, the constraints in the process as well as suggestions on how the bank could improve the process. These views are not representative of customers in all Ghana Commercial Bank Limited (GCB) branches as a whole and the metropolis in particular but sample a fair representation.

Figure 4. Gender Distribution of Respondents
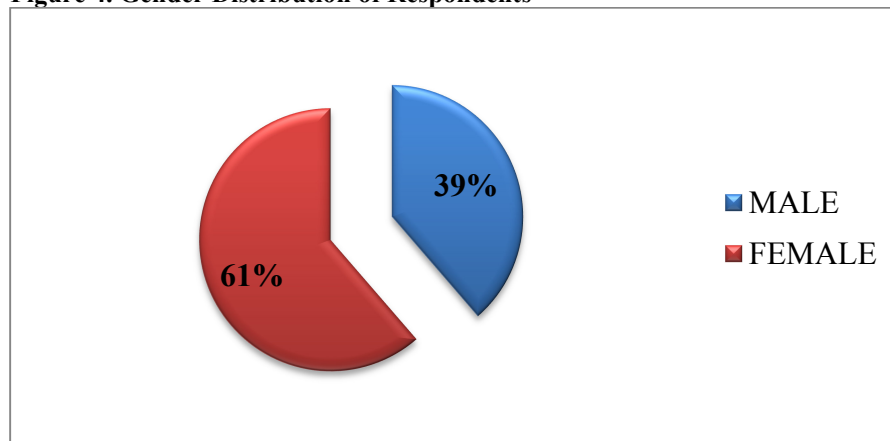
Out of a hundred and thirty (130) questionnaires, eighty-eight (88) questionnaires were reclaimed representing 67.69% of total anticipated respondents. Fifty-four (54) females and thirty-four (34) males across the ages of 18-60 years representing 61.36% and 38.64% respectively as indicated in figure 4.

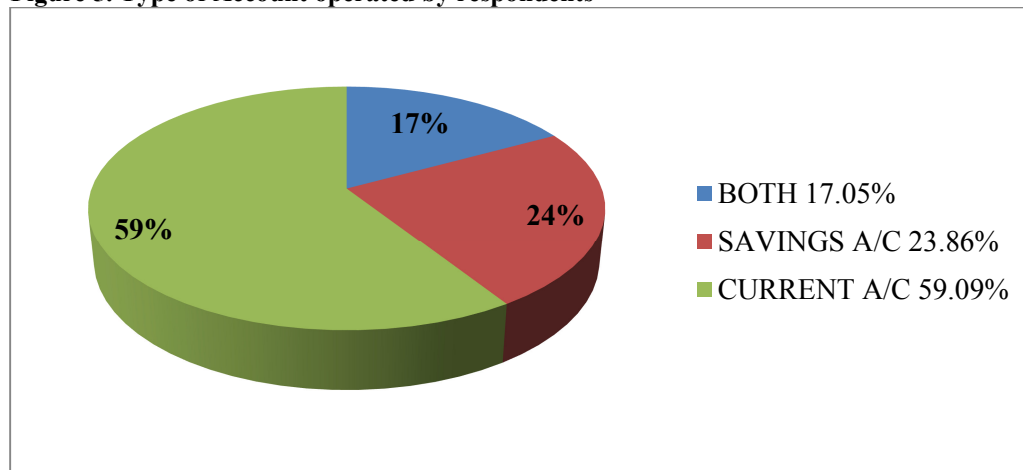**Figure 5. Type of Account operated by respondents**

Figure 5 depicts the type of account that the customers sampled own and operate in at Ghana Commercial Bank. It indicates that 59.09% operate current account whiles 23.86% have savings account and 17.05% have both savings and current account.

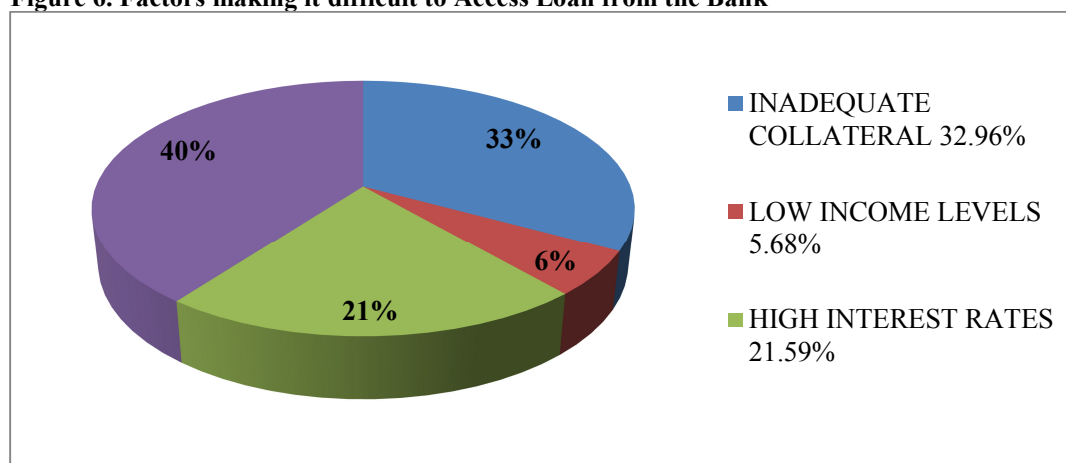**Figure 6. Factors making it difficult to Access Loan from the Bank**

Figure 6 shows the factors that respondents agree makes it difficult to access a loan from their bank. Forty percent of the customers revealed that insufficient documentation represented the major difficulty they faced in assessing loan whiles about 33 percent indicated that inadequate collateral makes it difficult to access

loans. High interest rate and low income levels representing 21 and 6 percent respectively were also identified as impediments in acquiring loans.

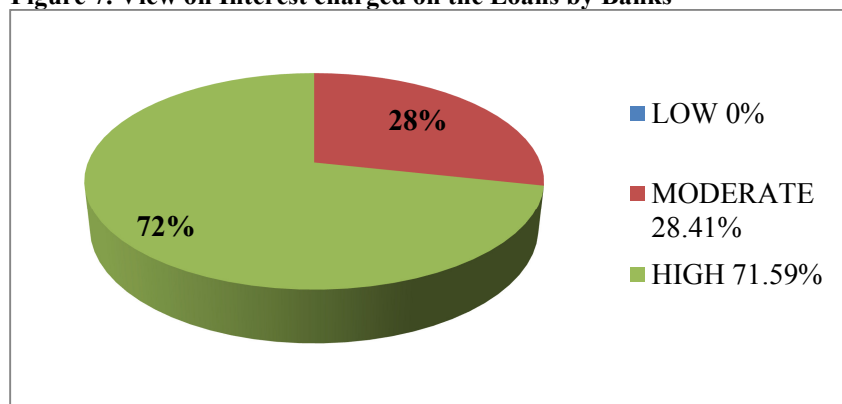**Figure 7. View on Interest charged on the Loans by Banks**

Figure 1.3 indicates how respondents assess the interest charged on the loans by banks. About 72 percent of the customers indicated that the interest charged on the loans obtained is high whiles about 28 percent indicated that the interest charged on loans is moderate. None of the customers indicated that the interest rate is low.

Figure 8. Factors leading to Loan Default on the part of Customers
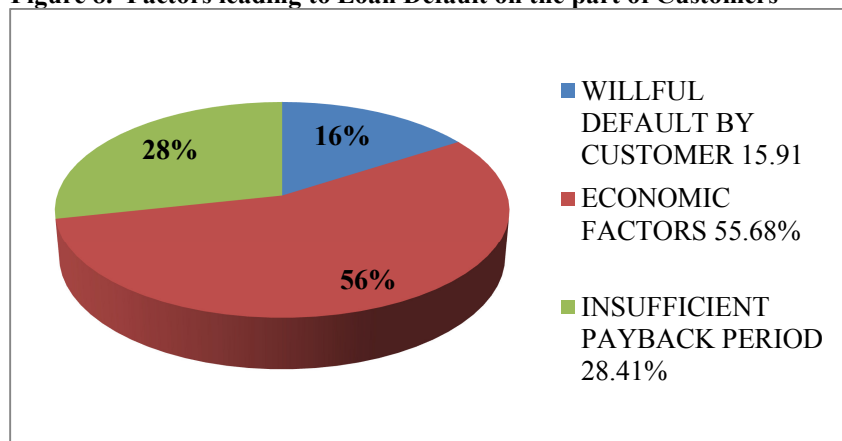
In determining the opinion of customers about the factors that lead to loan default on their part, 58.68 percent contend that economic factors (inflation, high cost of living, interest rates) were major factors leading to customer loan default. Insufficient payback period ranked second at 28.41% and 15.91% attributing loan default to customers willfully defaulting as shown in figure 8.

Figure 9.Strategies to be adopted by Banks to improve the Lending process
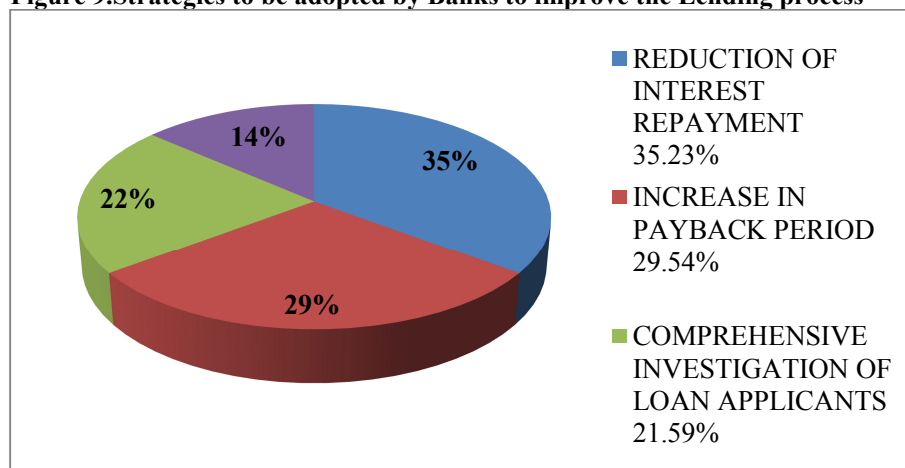
Finally, 35.23% of total respondents suggested a reduction in interest rates, 29.54% suggesting an increase in the payback period of loans granted to improve the process. 21.59% and 13.64% recommended a comprehensive investigation of loan applicants and improved documentation respectively as shown in figure 9.

These are the views of sampled customers of GCB in response to questionnaires administered to them. The responses and respective percentages are graphically presented using pie charts executed in excel.

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CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

</div>

5.1 Introduction

This chapter provides a summary of findings, conclusions and recommendations of the study. In particular, the conclusions and findings that emerged from the study are highlighted. In addition to the summary of the study, recommendations are given to improve the credit risk management practices of Ghana Commercial Bank Limited so as to improve credit risk management. The chapter closes with highlights on avenues for future studies.

5.2 Summary of Findings

This study as seen in previous chapters was a study on credit risk management in financial institutions, using Ghana Commercial Bank as a case study. A least square method of regression was performed, to verify the first hypotheses. From the regression performed on the first hypothesis (Banks with higher profitability have lower loan losses), the estimated R-squared value implied that nonperforming assets or loans and advances explained 53.7% of the total variation in profitability (ROE). Also the estimated F- value suggested that the effect of the explanatory variable included in the model is significant at a level of 1%.

From the first hypothesis (banks with higher interest income also have lower loan losses), the R-squared value of 0.747 implies that the variations in the net interest income is being explained by 74.7 percent. The coefficient of Loan loss (NPA/LA) is -1.26 implying that there is an inverse relationship between net interest income and loan loss. The results verify our hypothesis that interest income and loan losses have an inverse relationship.

Our research questions have been better answered based on the interview conducted with the head of risk management at Ghana Commercial Bank and questionnaires sent out to various branches of the bank.

The credit policy of Ghana Commercial Bank is a comprehensive document stating the processes staff and customers are to go through before and after loans are issued out to the customers.

It includes a checklist stating the necessary documents needed to be presented by enterprises and companies who seek corporate loans respectively. Ideally the credit policy of the bank is reviewed yearly to incorporate changes necessitated by events from previous financial years.

GCB provides its customers with different types of loans, some of which are:
- Term loans
- Revolving facilities
- Trade finance loans -

At GCB, customers can apply for loans from any branch. Screening is done to check if the loan application should be considered especially, for first time customers seeking loans. GCB has different committees at different levels or stages of their organizational structure who approve loans. These include;

Branch Credit Committee (Branch level)

Area Credit Committee

Head Office Credit Committee (HOCC)
Executive Credit Committee (ECC)
Board Approval

GCB takes notice of important issues as the International Labour Organisation (ILO) regulations amongst others in determining the amount of credit given to applicants of credit facilities. For personal loans to individual customers, the bank calculates one third (1/3) of the net salary of the customer times the term of the facility. (1/3 of net salary * term of facility in months). This is done as a matter of policy, primarily to mitigate the risk of default.

In managing of deteriorating loan repayments, BOG insists that banks make provisions out of their profits for these defaulted facilities. Below are the summary of the guidelines stipulated by BOG and their respective provisions in percentages.

- **OLEM-** for this level of default, a provision of 10% is required by BOG.
- **SUBSTANDARD-** for this level of default, a provision of 25% is required by BOG.
- **DOUBTFUL-** for this is level of default, a provision of 50% is required by BOG.
- **LOSS LOAN-**for this level of default a provision of 100% is required by BOG.

In retrieving its deteriorating loans, the bank sends a demand notice giving the customer 14 days to repay the loan. After the 14 days expire, an overdue debt report is prepared by the relationship manager and is forwarded to the risk management division. The division then sends a final notice of demand (FND) giving the customer 14 days to respond or face legal action.

For a collateral decree, an FND of 30 days is sent to the customer to pay back the loan or present a proposal for payment. A court decision is rescinded if the proposal is accepted. In recent times , Bank of Ghana has introduced the Borrowers and Lenders ACT stating that instead of registering collaterals at the Mortgage Land, it can be registered at Bank of Ghana Collateral Registry. On default, a notice could be sent to Bank of Ghana and permission would be granted to the Bank to sell that collateral.

Finally responses by customers in the questionnaires indicated that, high interest rates do not reduce bad loans but rather increases the rate of default. A majority of 56% believed that economic factors increased loan default. Additionally 71.59% indicated that interest rates charged on loans were high. Also 35% of customers suggested that interest rates be reduced in order to make it easier for customers to repay the loan when time is due.

5.3 Conclusion

This study shows that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance. Thus, it is of importance that banks practice prudent credit risk management to safeguard assets of the bank and protect the investors' interest.

Furthermore, the study shows that there is a positive relationship between profitability (ROE) and loan loss (NPA\TLA). It also shows there is an inverse relationship between higher interest income and lower loan losses.

These results are in line with our expectations and actually tallies with conventional wisdom.

5.4 RECOMMENDATIONS

Based on the foregoing deductions the researchers wish to make the following recommendations to management and staff of Ghana Commercial Bank Limited, academia and other stakeholders. These recommendations are meant to strengthen the lending practices in order to reduce credit risk in Ghana Commercial Bank Limited and the banking industry as a whole. They include;

- Credit officers should find out from customers exactly what kind of facilities they want, to prevent them from giving out wrong facilities which in turn would make it difficult for customers to pay-back the loan. E.g. issuing a loan instead of an overdraft or vice versa.
- Customers should be certain of the amount they need before requesting for the facility .E.g. Customers may need GH¢ 3,000 but may wrongly ask for GH¢ 30,000
- The bank should extend the range of required documentation needed by customers. This is to help customers meet the requirements of the bank, which will help them access loan facilities easier without being asked to provide certain documents they do not have while they could have presented other equally good documents.
- There should be effective credit training across the bank for credit officers.
- Assessment and the continuous monitoring of counterparty and portfolio credit exposures should be carried out by the Credit Monitoring Division when loans are given out.

5.5 FURTHER RESEARCH AVENUES

The study has investigated the challenges faced by Ghana Commercial Bank Limited in managing its credit risk. Furthermore, this study will provide enough insight that will prompt further research into credit risk practices in other banks operating in Ghana. Researchers are of the view that the findings of this study will enable more attention to be given to credit risk management in financial institutions.

Decomposition of total bad loans into these two components: bad loans due to bad management (internal factors) and bad loans due to economic environment (external factors), was also an area the researchers hoped to explore but failed to due to time constraint and the availability of data. It is the hope of the researchers that further studies by other researchers will be directed towards this area.

Also further studies of other explanatory and non explanatory variables that cause variations in profitability not considered in the study should be explored by other researchers.

REFERENCES

Auronen, L. (2003), "Asymmetric information: theory and applications", paper presented at the Seminar of Strategy and International Business, Helsinki University of Technology, Helsinki.

Barth, J.R., Caprio, G. Jr, Levine, R. (2004), "Bank regulation and supervision: what works best?", *Journal of Financial Intermediation*, Vol. 13 pp.205-48.

Basel (1999), "Principles for the management of credit risk", Consultative paper issued by the Basel Committee on Banking Supervision, Basel, .

Basel (2004), "Bank failures in mature economies", Working Paper No. 13, Basel Committee on Banking Supervision, Basel, .

Benveniste, L.M., Berger, A.N. (1987), "Securitization with recourse: an instrument that offers uninsured bank depositor sequential claims", *Journal of Banking & Finance*, Vol. 11 pp.403-24.

Berger, A. N. and D. B. Humphrey (1997) "Efficiency of financial institutions: International survey and directions for future research", European Journal of Operational Research 98, 175-212.

Berger, A. N. and R. De Young (1997) "Problem loans and cost efficiency in commercial banks" Journal of Banking And Finance (21)6, pp. 849-870.

Berger, A. N. and D. B. Humphrey (1992) "Measurement and Efficiency Issues in Commercial Banking", in Z. Griliches, ed., Output Measurement in the Service

Berger, A.N., Udell, G.F. (1992), "Some evidence on the empirical significance of credit rationing", *Journal of Political Economy*, Vol. 100 No.5, pp.1047-77.

Bester, H. (1994), "The role of collateral in a model of debt renegotiation", *Journal of Money, Credit and Banking*, Vol. 26 No.1, pp.72-86.

Bluhm, C., Overbeck, L., Wagner, C. (2003), *Credit Risk Modeling*, Wiley, New York, NY, .

Bofondi, M., Gobbi, G. (2003), *Bad Loans and Entry in Local Credit Markets*, Bank of Italy Research Department, Rome, .

BrownBridge, M. (1998), "Financial distress in local banks in Kenya, Uganda and Zambia: causes and implications for regulatory policy", *Development Policy Review Journal*, Vol. 16 No.2, pp.173-89.

BrownBridge, M., Harvey, C. (1998), *Banking in Africa*, James Currey, Oxford, .

Bryant, K. (1999), *The Integration of Qualitative Factors into Expert Systems for Evaluating Agricultural Loans*, School of Information Systems and Management Science, Griffith University, Gold Coast, .

Chijoriga, M.M. (1997), "Application of credit scoring and financial distress prediction models to commercial banks lending: the case of Tanzania", Wirts Chaftsnnversitat Wien (WU), Vienna, .

Cornett, M.M., Saunders, A. (1999), *Fundamentals of Financial Institutions Management*, Irwin/McGraw-Hill, Boston, MA, .

Derban, W.K., Binner, J.M., Mullineux, A. (2005), "Loan repayment performance in community development finance institutions in the UK", *Small Business Economics*, Vol. 25 pp.319-32.

Donaldson, T.H. (1994), *Credit Control in Boom and Recession*, The Macmillan Press, Basingstoke, .

Greenbaum, S.I., Thakor, A.V. (1987), "Bank funding modes: securitization versus deposits", *Journal of Banking & Finance*, Vol. 11 pp.379-401.

Greuning, H., Bratanovic, S.B. (2003), *Analyzing and Managing Banking Risk: A Framework for Assessing Corporate Governance and Financial Risk*, 2nd ed., The World Bank, Washington, DC, .

Haider, A., Birley, S. (1999), "Integrating deductive and inductive approaches in a study of new ventures and customer perceived risk qualitative market research", *An International Journal*, Vol. 2 No.2, pp.103-10.

Heffernan, S. (1996), *Modern Banking in Theory and Practice*, Wiley, New York, NY, .

Huberman, A.M., Miles, M.B. (1998), "Data management and analysis methods", in Denzin, N.K., Lincon, Y.S. (Eds),*Collecting and Interpreting Qualitative Materials*, pp.179-210.

Hugh, T. (2001), "Effect of asset securitization on seller claimants", *Journal of Financial Intermediation*, Vol. 10 pp.306-30.

Hughes, J. P., W. Lang, L. J. Mester and C. Moon (1996) : "Efficient banking under Interstate branching". Journal of Money Credit and Banking 28 (4), November 1045-1071.

Hughes, J. P. and L. Mester (1993) "A quality and risk-adjusted cost function for banks:

Evidence on the `Too-Big.To-Fail´ doctrine", The Journal of Productivity Analysis 4,293-315

IAIS – International Association of Insurance Supervisors (2003), paper on Credit Risk Transfer between Insurance, Banking and Other Financial Sectors, March, .

Johnson, B., Christensen, L. (2004), *Educational Research: Quantitative, Qualitative and Mixed Approaches*, 2nd ed., Pearson Education, Harlow, .

Jose M.Poster, WP-EC 99-18, Credit risk and efficiency in the European Banking Systems: A Three-Stage Analysis.

Kealhofer, S. (2003), "Quantifying credit risk I: default prediction", *Financial Analysts Journal*, Vol. 59 No.1, pp.30-44.

Kimei, C.S. (1998), "Sound banking management and macroeconomic stability in Africa", paper presented at the Seminar for Chief Executives on Monetary Policy Stance in Tanzania, .

Kitua, D.Y. (1996), "Application of multiple discriminant analysis in developing a commercial banks loan classification model and assessment of significance of contributing variables: a case of National Bank of Commerce", .

Koch, T.W., MacDonald, S.S. (2000), *Bank Management*, The Dryden Press/Harcourt College Publishers, Hinsdale, IL/Orlando, FL, .

Koford, K., Tschoegl, A.D. (1997), *Problems of Bank Lending in Bulgaria: Information Asymmetry and Institutional Learning*, Financial Institutions Center, The Wharton School University of Pennsylvania, Philadelphia, PA, .

Kraft, E. (2000), *The Lending Policies of Croatian Banks: Results of the Second CNB Bank Interview Project*, CNB Occasional Publication – Surveys, CNB, Zagreb, .

Liukisila, C. (1996), "IMF Survey", *Healthy Banks are Vital for a Strong Economy, Finance and Development*, Washington, DC, .

Marphatia, A.C., Tiwari, N. (2004), *Risk Management in the Financial Services Industry: An Overview*, TATA Consultancy Services, Mumbai, .

Menkhoff, L., Neuberger, D., Suwanaporn, C. (2006), "Collateral-based lending in emerging markets: evidence from Thailand", *Journal of Banking & Finance*, Vol. 30 No.1, pp.1-21.

Mester, L. (1994a) "How efficient are third district banks?", Federal Reserve Bank of Philadelphia, Business Review, January.

Mester, L. (1994b) "Efficiency of banks in the third Federal Reserve district", Federal Reserve Bank of Philadelphia, Working Paper 94-1.

Mlabwa, A (2004), "Usefulness of collateral as a means of mitigating risk by banks in Tanzania: a case study of CRDB Bank Limited", .

Morse, J.M. (1994), "Designing funded qualitative studies", in Denzil, N.K., Lincoln, Y.S. (Eds),*Handbook of Qualitative Research*, Sage, London, .

Pastor, J. M. (1995a) "Eficiencia, cambio productivo y cambio técnico en los bancos y cajas de ahorro españolas: Un análisis frontera no paramétrico". Revista Española de Economía 12, 35-73.

Pastor, J. T. (1995b) "How to account for environmental effects in DEA: An application to Bank Branches", Working Paper, Departamento de Estadística e Investigación Operativa, Universidad de Alicante, Alicante, Spain.

Pastor, J. M. (1996) "Diferentes metodologías para el análisis de la eficiencia de los bancos y cajas de ahorro españolas". Fundación FIES. Documento de Trabajo nº 123.

Pastor, J.M (1999): "Efficiency and risk management in Banking Firms: A method to decompose risk". Applied Financial Economics (en prensa).

Pastor, J.T., A. Lozano and J.M. Pastor (1997) "Efficiency of European banking systems: A correction by environmental variables", Working Paper IVIE. WP-EC 97-12.

Pastor, J.M., Pérez, F.and Quesada, J. (1997): "Efficiency analysis in Banking Firms: An International comparison ". European Journal of Operational Research 98(2), 395-407.

PriceWaterhouse (1994), "The credit policy of financial institutions and the factors underlying it", paper presented at the 8th Conference of Financial Institutions, AICC, 5-7 December, .

Ray, S. (1988) : "Data Envelpment Analysis, Nondiscretionary Inputs and Efficiency : AnAlternative Interpretation". Socio-Economic Planning Sciences 22(4), 167-176.

Richard, E. (2006), *Credit Risk Management Policy and Strategies: The Case of a Commercial Bank in Tanzania*, BA Publications, .

Santomero, A.M. (1997), *Commercial Bank Risk Management: An Analysis of the Process*, The Wharton School of the University of Pennsylvania, Philadelphia, PA, .

Shanmugan, B., Bourke, P. (1990), *The Management of Financial Institutions: Selected Readings*, Addison-Wesley Publishing, Reading, MA, .

Tellis, W. (1997), "Application of a case study methodology", *The Qualitative Report*, September, Vol. 3 No.3, .

Treacy, W.F., Carey, M.S. (1998), "Credit risk rating at large US Banks", *Federal Reserve Bulletin*, No.November, .

Tummala, V.M.R., Burchett, J.F. (1999), "Applying a risk management process to manage cost risk for a EHV transmission line project", *International Journal of Project Management*, Vol. 17 No.4, pp.223-35.

Uyemura, D.G., Deventer, D.R. (1993), *Risk Management in Banking: Theory and Applications of Assets and Liability Management*, Banking Publication, Kamakura, Honolulu, HI, .

Wyman, O. (1999), "Credit process redesign: rethinking the fundamentals", *ERisk.com Report*, Vol. 9 No.1, .

Yin, R.K. (2003), *Applications of Case Study Research*, 2nd ed., Sage, Newbury Park, CA, .

Sectors, National Bureau of Economic Research, Studies in Income and Wealth, Vol. 56, University of Chicago Press, 245-279.

C:\WINDOWS\hinhem.scrPatton, M.Q. (1990), *Qualitative Evaluation and Research Methods*, Sage, Beverly Hills, .

QUESTIONNAIRE FOR GHANA COMMERCIAL BANK LIMITED(CUSTOMERS)

This is an academic work in partial fulfillment of a degree in BSc. Administration. I will be more grateful if the required information with regards to the questionnaire is provided . Any information given will be treated with utmost confidentiality for academic purposes only.

1. Gender   male [   ]   female [   ]
2. Age   18-27[   ] 28-37[   ] 38-47[   ] 48-60[   ]   60 and over [   ]
3. What type of account do you have with Ghana commercial bank limited?
    a) Current account   [   ]
    b) Saving account   [   ]
    c) Other(s)...
       ....
4. Which of these would you agree makes it difficult to access a loan from the bank?
   a) Inadequate collateral   [   ]
   b) Low income levels   [   ]
   c) High interest rate   [   ]
   d) Insufficient documentation   [   ]
   e) Other(s)..
      ....
5. What is your view on interest charged on the loans of the bank?
    a) Low   [   ]
    b) Moderate   [   ]
    c) High   [   ]
6. In your opinion, which of these factors lead to loan default on the part of a customer?
    a) Willful default by a customer   [ ]
    b) Economic factors(high cost of living, low income levels, inflation, high interest rates)
                                                          [   ]
       c) Insufficient payback period   [   ]
7. Which of these should the bank do to improve the lending process?
    a) Reduction of interest repayment   [   ]
    b) Increase payback period   [   ]
    c) Comprehensive investigation of loan applicants   [   ]
    d) Improved documentation   [   ]

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