DECLARATION

This research project is my original work and has not been presented to any other institution for examination.

Sign: .......................................................... Date: ..........................................................

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D53/CTY/PT/20802/2010

This research project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

To my darling wife Catherine and my lovely son Cassidy and all the family members for tireless sacrifice of their precious family time and their moral support throughout the entire study.
ACKNOWLEDGEMENT

A small army of people was instrumental in the writing of this report. First I’d like to thank my supervisors Mr. Theuri and Mr. Thuo for their lessons, support, vision, flexibility and guiding me through the challenging steps of this project whose advice, constant criticisms, guidance, encouraging remarks and intellectually stimulating comments shaped this work to what it is and other lecturers who guided and helped me to achieve MBA programme.

Special thanks to my parents Vincent and Felista who wholeheartedly and continuously encouraged me to move on even when life seemed to be bleak as I went through this study.

Special thanks and appreciation for all the moral support and encouragement accorded by my entire family members who tirelessly encouraged me, not forgetting my darling wife Catherine who helped with typesetting, printing, editing this research project to give it the professional outlook notwithstanding her understanding on the sacrifice she made on our valuable family time during the study.

Thanks also to my colleagues who provided various forms of assistance, information and tools I required to write the report, and lastly to my employer, The Co-operative University College of Kenya for sponsoring me this for this noble course, I will always treasure it.

Above all I thank God almighty for his mercies and grace upon my life and give him all the glory for the success of this work.

To all, only God can reward you.

MAY GOD BLESS YOU ALL
LIST OF ABBREVIATIONS

BSA  Banking Supervision Application
CBK  Central Bank of Kenya
CAPM  Capital Asser Pricing Model
CAMPARI  Character, Ability to repay, Margin of Finance, Purpose, Amount, Repayment terms, and Insurance.
DVPM  Delivery versus Payment Mechanisms
IRB  Internal Rating- Based
MPT  Modern Portfolio Theory
NBFIs  Non Banking Financial Institutions
RM  Risk Management
RBS  Risk Based Supervision
SPSS  Statistical Package for Social Sciences
SSA  Sub- Sahara Africa
LIST OF TABLES

Table 1: Overview of the banking sector.................................................................4
Table 2: Target Population......................................................................................32
Table 3: Sampling Design.......................................................................................33
Table 4: Bank Category of the Respondents...........................................................35
Table 5: Duration of the respondents in the current position...............................36
Table 6: Forms of credit risks in banks.................................................................38
Table 7: Preferred strategies in mitigating existing credit risks............................40
Table 8: Banks sensitivity in mitigating anticipated credit risks.........................42
Table 9: Efficiency of transfer rating.................................................................42
Table 10: Extent of various credit transfer techniques...........................................44
Table 11: Forms of insurance covers against credit defaults...............................45
Table 12: Mechanisms adopted to seek guarantors assistance in loan repayment...46
Table 13: Criteria used to ensure collaterals value are maintained.......................48
Table 14: Measures used to avoid defaults on unsecured credit...........................49
Table 15: Factors considered in determining borrower qualification....................50
Table 16: Variation between application and approval...........................................53
Table 17: Factors determining the highest amount to lend....................................55
Table 18: Relaxing the percentage of security to widen the credit bracket............57
Table 19: Features in the policy that determine the retention level.......................60
Table 20: Mechanisms that influence the risk retention ability................................61
Table 21: Loan to deposits ratio and its effect in managing risk............................63
Table 22: Techniques used to maintain loan to deposit ratio..................................63
LIST OF FIGURES

Figure 1: Conceptual Framework ................................................................. 28
Figure 2: The overall management risk process .............................................. 37
Figure 3: Is all the advanced credit collateralized ........................................ 47
Figure 4: Factors considered in determining borrower qualification .................. 51
Figure 5: Ratio of loan application to approvals ........................................... 52
Figure 6: Relaxing the percentage of security ............................................. 57
Figure 7: Risk Retention policy ................................................................. 59
Figure 8: Credit risk acceptance ............................................................... 65
Figure 9: How the percentage of non-performing loans informs in decision making .............................................................................. 67
Figure 10: The autonomy of branches to advance loans to their customers .......... 69
DEFINITION OF TERMS

Low-Cadre Earner: A section of clientele with a higher credit risk.

Risk: Probability that an actual return on an investment was lower than the expected return.

Risk Management: A systematic process of identification, assessment, and prioritization of risks exposures and subsequent determination of optimal alternatives in mitigation of resulting negative impact.

Risk management strategy: A mean or a set of means through which a risk’s adverse impact is minimized. A risk management strategy provides a structured and coherent approach to identifying, assessing and managing risk. It builds in a process for regularly updating and reviewing the assessment based on new developments or actions taken.

Risk mitigation: It is systematic reduction in the extent of exposure to a risk and/or the likelihood of its occurrence.

Basel two Accord: An agreement formulated by Basel Committee on Bank Supervision to replace Basel 1 accord with a more risk – sensitive framework to take into account the significant transformations that the banking industry has undergone.

Credit risk: Risk due to uncertainty in counterparty’s (obligor's) ability to meet its obligations.

Credit default risk: The risk that counterparty was unable to make further principal or interest payments

Credit risk management: Process of assessing adversity of risk in an investment and subsequently controlling its impact.

Operational risk: A risk arising from execution of a company's business functions. Basel II defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events.

Market risk: A risk that the value of an investment will decrease due to moves in market factors.
# TABLE OF CONTENTS

DECLARATION.................................................................................................................... ii  
DEDICATION ................................................................................................................................. iii  
ACKNOWLEDGEMENT................................................................................................................ iv  
LIST OF ABBREVIATIONS........................................................................................................... v  
LIST OF TABLES........................................................................................................................... vi  
LIST OF FIGURES........................................................................................................................ viii  
ABSTRACT................................................................................................................................... xiii

## CHAPTER ONE: INTRODUCTION ......................................................................................... 1
1.1 Background of the Study ................................................................................................. 1  
1.2 Statement of the Problem ............................................................................................... 3  
1.3 Study Objectives ............................................................................................................. 5  
1.4 Research Questions ......................................................................................................... 5  
1.5 Significance of the Study ............................................................................................... 6  
1.6 Scope of the Study ........................................................................................................... 7  
1.7 Study Limitations ............................................................................................................ 7

## CHAPTER TWO: LITERATURE REVIEW ........................................................................ 8
2.0 Introduction ..................................................................................................................... 8  
2.1 Theoretical Literature Review ....................................................................................... 8  
2.1.1 Basel Accord: Banks’ Choice of Loan Rating ......................................................... 8  
2.1.2 The Loanable Fund Model ...................................................................................... 11  
2.1.3 Portfolio Theory ..................................................................................................... 14  
2.1.4 Credit Risk Models ................................................................................................. 16  
2.1.5 Credit Risk Management ....................................................................................... 21  
2.2 Empirical Literature .................................................................................................... 25  
2.3 Conceptual Framework ................................................................................................. 28  
2.3.1 Risk Transfer ........................................................................................................ 29  
2.3.2 Risk avoidance ......................................................................................................... 29  
2.3.3 Risk Retention ....................................................................................................... 30  
2.3.4 Risk Reduction ...................................................................................................... 30

## CHAPTER THREE: RESEARCH METHODOLOGY ......................................................... 31
3.0 Introduction .................................................................................................................... 31  
3.1 Research Design ........................................................................................................... 31  
3.2 Target Population ........................................................................................................ 31  
3.3 Sample and Sampling Technique ................................................................................. 32  
3.3 Data Collection Procedure .......................................................................................... 33  
3.4 Data Analysis and Interpretation .................................................................................. 34

## CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION ......................................... 35
4.1 Analysis of the response from the questionnaires .......................................................... 35  
4.2 The overall risk management process .......................................................................... 37  
4.3 Forms of credit risks dealt within the jurisdiction ........................................................ 38
The study’s overall objective was to assess how Kenyan banking institutions are prepared in mitigating impacts arising from credit defaults as a basis of enhancing their loan performance. Towards meeting this objective, this study was divided into three chapters: Introduction, Literature Review and Methodology. The introduction section constitutes the study’s background, statement of the problem, research objectives, scope and assumption. In chapter two, the relevant literature was reviewed to assist the researcher understand the problem area and what had already been done. The key areas reviewed include Banks’ Choice of Loan Rating, Loanable Fund Model, Portfolio Theory, Credit Risk Models, Credit Risk Management, Empirical Literature, Conceptual Framework, Operationalization and Conclusion. Under methodology section, all procedures to be adopted by the study were described in detail. A descriptive research design was adopted for the purpose of accessing the study’s general intent. This involves a set of methods that describe the intended variables using statistical logic. The study’s target population constituted a total of 44 respondents tasked with credit risk management in the 44 commercial banks currently operating in Kenya. Keeping the central objective of study in mind, the study opted for both primary and secondary forms of data. The secondary data was collected from the documentations obtainable from the banks and the primary data from various respondents. The collected data was examined to make inferences through a series of operations involving editing to eliminate inconsistencies, classification on the basis of similarity and subsequent tabulation to relate variables. Subsequently, the refined data was analyzed using descriptive statistics involving percentages and mean scores. The research found out that the banks had policies and strategies that governed the loan lending. Though this existed most of the banks didn’t seem to efficiently implement the same. The banks also assumed some of the economic factors which could affect their loan performance. The banks also concentrated highly on collateral as the main security for loans which at times made the banks assume other strategies of preventing risk. In reality, a bank can only adjust for risks through a variety of conventional mechanisms and strategies, but still there are no certainties. Hence, risk managers are constantly obliged to consolidate reliable risk profiles and refined mitigating processes suiting every rate of change within the environment.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Ingham (2004) describes credit as the provision of resources such as granting a loan by one party to another party where the second party does not reimburse the first party immediately, thereby generating a debt, and instead arranges either to repay or return those resources or material(s) of equal value at a later date. The first party is a creditor, also known as a lender, while the second party is a debtor, also known as a borrower. Further, Ingham alludes that the significance of credit could not be over-emphasized in the business environment since movements of financial capital are normally dependent on either its effectiveness or equity transfers. In turn, credit is dependent on the reputation or creditworthiness of the entity which takes responsibility for the funds. Credit need not necessarily be based on formal monetary systems, but the concept can be applied in barter economies based on the direct exchange of goods and services, and some would go so far as to suggest that the true nature of money is best described as a representation of the credit-debt relationships that exist in society (Ingham, 2004).

Credit is traded in the market. The purest form is the credit default swap market, which is essentially a traded market in credit insurance. A credit default swap represents the price at which two parties exchange this risk – the protection "seller" takes the risk of default of the credit in return for a payment, commonly denoted in basis points of the notional amount to be referenced, while the protection "buyer" pays this premium and in the case of default of the underlying (a loan, bond or other receivable), delivers this receivable to the protection seller and receives from the seller the par amount (Duffie and Singleton, 2003).
Despite the returns that accrue from lending, the transactions between parties in some cases face the propensity of non-payment emanating from the borrower’s circumstances, which constitute credit risk. According to Henderson (2011), credit risk occurs when there is a loss in value as a result of a debtor's non-payment of a loan or other line of credit, either the principal or interest (coupon) or both. However, in the quest of managing the crisis most lenders universally employ their own models to rank potential and existing customers according to risk, and then apply appropriate strategies. With products such as unsecured personal loans or mortgages, lenders charge a higher price for higher risk customers and vice versa. Moreover, with revolving products such as credit cards and overdrafts, risk could be controlled through careful setting of credit limits. Some products also require security, most commonly in the form of property (Henderson, 2011). In this study, the intent is focused on the Kenyan banking industry and on how the banks mitigate their credit default risks in order to improve on their loan performance.

Kenya's financial system is among the more developed in Sub-Saharan Africa, with a large banking sector. The banking sector is comprised of a non-bank financial institution (NBFIs), mortgage financial companies, building societies, microfinance banks, savings and credit cooperatives, foreign exchange bureaux and commercial banks, with the six largest accounting for about two-thirds of all assets, loans and deposits of the banking system. The banks, NBFIs, microfinance banks and building societies are supervised by the Central Bank of Kenya while Savings and Credit Cooperatives are regulated by the Commissioner for Cooperatives (CBK, June 2010).

Over the recent years, the banking sector has remained stable mainly due to favourable macroeconomic conditions during the period. For instance, the banking sector improved its asset
quality portfolio as evidenced in high capital adequacy ratios among banks in 2011. The sector also registered growth in deposits and profitability. The improved performance largely resulted from increased income on loans and advances and a significant inflow of foreign deposits. The Central Bank of Kenya (CBK) categorizes commercial banks in peer groups based on their market share index. Market share index is the composite of net assets, deposits, capital, number of loan accounts and number of deposit accounts.

Those banks with more than 5% market share index are categorized as Large Peer Group and there are 6 of such banks in Kenya. Medium Peer Group constitutes banks with between 1% and 5% market share index where there are 15 banks under this peer group while Small Peer Group are those with less than 1% market share index where there are 23 banks under this tier (CBK, Bank Supervision annual report, 2011).

On the basis of the trends and creation of complexity in risk mitigation, the central theme of this research was to assess how Kenyan commercial banks position themselves to actually create and sustain a competitive advantage through effectiveness in credit default risk management. Deeper than this, it will assist in building a bridge between strategy and loan performance, rather than treat these two subjects independently.

1.2 Statement of the Problem

The pervasiveness and complexity of credit risk presents strong challenges to managers, one of the most important being lack of efficient determination of credit worthiness of a potential customer. This, therefore, means establishing mechanisms of insulating the company’s value against huge defaults (Bowman, 2000).
According to Banking Supervision annual report (2011) Kenyan banking industry advances credit to people of different categories including low-cadre earners and self-employed individuals whose default risks are very high yet the banks cannot be pushed out of the niche. In addition, the business environment has become too competitive to the extent of not letting go any quality of clientele. This implies that the banks are subject to a heightened credit risk levels as opposed to other economies with higher-income earning potentials. Given that the industry is still growing with new entrants still finding space, great effort must be spent to ensure that comprehensive and effective strategies are developed that minimize risk and maximize loan performance at any particular point while in operation. If appropriate set of tools are not determined and sustained in time, the likelihood of loss will gradually increase and subject the banks, especially in peer groups I and II, into penalties of illiquidity and downsized profitability.

The table below gives an overview of the banking sector in relation to Asset Base, Loans and advances, Non-Performing Loans and Provision for the non – performing loans for the years 2008 to 2011

Table 1: Overview of the banking sector

<table>
<thead>
<tr>
<th></th>
<th>2008(million)</th>
<th>2009(million)</th>
<th>2010(million)</th>
<th>2011(million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Base</td>
<td>1,183,655</td>
<td>1,353,499</td>
<td>1,678,112</td>
<td>2,020,818</td>
</tr>
<tr>
<td>Loans and advances</td>
<td>670,372</td>
<td>757,760</td>
<td>914,910</td>
<td>1,190,985</td>
</tr>
<tr>
<td>Non-Performing Loans</td>
<td>61,869</td>
<td>60,741</td>
<td>57,637</td>
<td>52,958</td>
</tr>
<tr>
<td>Provision for the non –</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>performing Loans</td>
<td>25,519</td>
<td>26,306</td>
<td>28,645</td>
<td>28,945</td>
</tr>
</tbody>
</table>

(Source: Banking Supervision annual report, 2011)
Based on such decline, it is imperative to investigate the overall relationship between the risk arising from advanced credits vis-à-vis subsequent determination of appropriate management techniques to mitigate against it. This is in line with this study whose intent sought to draw recommendations, based on findings, on how to bolster efficiency in the banks’ risk management processes in order to reduce non-performing asset and increase overall returns.

1.3 Study Objectives

1.3.1 General Objective

The study’s general objective was to investigate the credit risk mitigation strategies adopted by commercial banks in Kenya to improve on loan performance within the Kenyan banking industry.

1.3.2 Specific Objectives

Specifically, the study sought to:

(i) Establish how risk transfer technique is used to mitigate the bank’s credit risk exposure,

(ii) Determine the main factors that inform commercial banks to retain part of the total credit risk,

(iii) Find out how risk avoidance influences the banks’ propensity

(iv) Evaluate the tools at the banks’ disposal used to reduce the severity and frequency of credit risks.

1.4 Research Questions

Towards accomplishing the study’s specific objectives, the researcher sought to find answers to the following set of questions:
(i) How do the commercial banks in Kenya adopt risk transfer technique in order to mitigate against credit risk exposure?
(ii) What main factors inform the decision of commercial banks to retain part of the total credit risk?
(iii) In what ways does the avoidance of risk in commercial banks influences the banks’ propensity?
(iv) What tools do the commercial banks use to reduce the severity and frequency of credit risks in Kenya?

1.5 Significance of the Study

The pervasiveness and complexity of risks present strong challenges to organizational managements, one of the most important, being the coordination of handling risks across areas within the organization. Thus, there is need to accessing adequate multidimensional awareness on risk issues. Moreover, since the ultimate quality of strategic decisions widely depends on prudence levels concerning risk identification, evaluation and mitigation, then an in-depth investigation in this area is vital to proactive managers. In this limelight, the study is destined to appropriately investigate current and potential risk factors whose impacts need consistent recognition whilst making decisions.

In particular the following stakeholders will use this study: - First, Banks – the study will help in enhancing the risk management structures by providing a wider scope of risk parameters within the industry.

Second, new entrants – the study will provide the basis of setting up the various risk parameters, risk scale and further provide a better understanding of the risk management. The study will
create both theoretical and practical lessons towards creating a workable risk management framework.

Third, Regulators (CBK) – the study will provide a feedback on the banks’ preparedness in embracing risk management especially this time of implementing BASEL TWO Accord.

Four, Non Banking Financial Institution (NBFIs) – the study was a basis on establishing a risk framework, especially this time when implementing the new Microfinance bill which allows these banks to accept deposits and lend.

Five, Competitors – quality risk management will lead to improved profitability thus, this study will greatly assist various banking industry players to enhance their risk parameters thereby improving their profitability, asset quality and liquidity.

1.6 Scope of the Study

The study was limited to a set of four independent variables which include risk transfer, risk retention/acceptance, risk avoidance and risk reduction. These four variables form a set of techniques that organizations use to mitigate risk. All these were measured against the dependent variable of credit risk mitigation. Data for the study was collected from a total of 44 respondents obtained from the risk and compliance departments of the banks.

1.7 Study Limitations

The researcher anticipated a limitation of delayed feedback from the respondents on the basis that they work within strict work schedules and limited time is available for the study’s questionnaire completion. However, the research sought to win management backing for the study through a cover letter prior to data collection so that respondents see meaning in the whole exercise
2.0 Introduction

This section presents a review of relevant literature on credit risk management. Firstly, the theoretical review is given and thereafter followed by the empirical review.

2.1 Theoretical Literature Review

Three main theories are reviewed in proceeding section. They include the Basel Accord II, Loanable funds theory and the portfolio theory.

2.1.1 Basel Accord: Banks’ Choice of Loan Rating

In June 1999, the Basel Committee issued a first consultative paper "A New Capital Adequacy Framework" to replace the 1944 Accord. With regard to the minimum regulatory capital requirements, the consultative paper proposes a two-layer regime for the capital treatment of credit risk, with a revised standardized approach, where risk-weights would be partially based on external ratings, and a brand-new internal ratings-based approach (IRB), where risk-weights would be based on banks’ own assessments of credit risk. Other important modifications of the minimum capital requirements are a revised treatment of credit risk mitigation techniques and asset securitization, and the introduction of explicit capital charges for operational risk. The document also suggests complementing the minimum capital requirements with two additional pillars which include a supervisory review process and an effective use of market discipline (Repullo, 2002).

In January 2001 and in April 2003, the Committee issued two additional consultative papers "The New Basel Accord, Consultative paper" and "The New Basel Accord" addressing a number
of issues left open in the first document, especially regarding the structure and the calibration of the IRB approach. The Committee outlined several objectives in revising the Basel Accord: improving the risk sensitivity of the capital requirements, reducing the scope for regulatory arbitrage, and providing more flexibility in the calculation of the capital requirements. The Basel Committee recognized that the "broad brush" nature of the current Accord (where required capital generally does not differ by the degree of risk) encourages regulatory arbitrage (Repullo, 2002).

The two-layer capital framework proposed for credit risk implies that in the segment of corporate borrowers, banks eligible for the standardized approach will face very different capital requirements than those eligible for the IRB approach. For banks using the standardized approach, the capital requirements for claims on corporate borrowers will still look like a risk-insensitive leverage ratio and only a minor fraction of corporate borrowers' dispose of an external rating and the new risk-weighting framework for that kind of borrower deviates from the traditional 100% risk-weight only for very high or low ratings. By contrast, banks eligible for the IRB approach will face risk-sensitive capital requirements. That is, the internal rating coverage is large for all types of corporate borrowers and the risk-weighting scheme for that regime was fine-tuned. The transition to a two-layer capital framework for credit risk is important, as this type of risk constitutes the core of regulatory capital requirements (Kim and Santomero, 1944).

The co-existence of the IRB approach with the standardized approach can raise concerns regarding the risk behavior of the banks that will still have to comply with the second – much less risk-sensitive – regime. In most countries, large sophisticated banks (the more likely to be
eligible for the IRB approach) still compete with smaller and less sophisticated banks (the more likely to be eligible for the standardized approach) in important segments of the domestic loan market. With the two-layer capital requirement framework, this means that sophisticated and unsophisticated banks will have to comply with a different capital requirement when competing for the same borrower. When capital requirements are binding, this can affect the competitiveness of sophisticated banks and unsophisticated banks in the various risk segments and distort the portfolio allocation by the two categories of banks (Décamps, Roger and Rochet, 2002).

The Basel Committee's proposals have stimulated an intense academic research. A large number of papers have been dedicated to credit risk modeling, with a particular focus on the consistency between the IRB risk-weighting framework and the empirical evidence on credit risk. Frey and McNeil (2002) address the non-coherence of VaR as a risk measure in the context of portfolio credit risk. They show that VaR is not sub-additive, which questions its use for the definition of capital requirements, as is proposed under the new Basel Accord. Jackson, Perraudin and Saporta (2002) compare the solvency standard implied by the new Accord to the solvency standard banks choose by their own capital setting decision. They conclude that for large international banks, the minimum regulatory capital requirement would not be binding. A smaller number of papers look at the new Basel Accord from an incentive perspective. Décamps, Roger and Rochet (2002) examine the optimal mix between the three pillars. They show that market discipline can reduce the minimum capital requirement needed to prevent moral hazard. Altman and Saunders (2001) compare the capital charges under the Standardized approach to those obtained under the foundation Internal Ratings-Based (IRB). They argue that for banks with an average quality
portfolio, there is no incentive to shift from the standardized to the foundation IRB approach. Finally, Kirstein (2002) examines whether banks have an incentive to reveal the quality of their loan portfolio under the IRB approach.

Banks fund themselves through deposits and equity, and they have to comply with a minimum capital requirement. Bank deposits are fully insured at a zero premium. The two-layer capital requirement framework proposed in the consultative paper is approximated as follows. Unsophisticated banks have to comply with a simple minimum ratio between capital and total assets – the standardized approach. For sophisticated banks, the capital requirements reflect the bank’s portfolio allocation between high-risk and low-risk borrowers – the IRB approach. Using this modeling framework, the introduction of the two-layer approach for credit risk may lead sophisticated banks to decrease risk-taking, but induce unsophisticated banks to increase risk-taking (Herring, and Szegö, 1995). The intuition for this result is that unsophisticated banks enjoy a competitive advantage in the high-risk segment, where they have to hold less capital than the sophisticated bank, while they suffers a competitive disadvantage in the low-risk segment, where they have to hold more capital than their sophisticated competitors. Another finding is that sophisticated banks' preference for the IRB approach is positively related to competition intensity and to the degree of risk-differentiation of the IRB capital requirement (Herring, and Szegö, 1995).

2.1.2 The Loanable Fund Model

This is a dynamic and optimizing model of bank operation that integrates insights of production theory, financial intermediation and portfolio theories. The unified model clarifies the
relationship between the risk of asset portfolios and a bank’s output of services. Portfolio risk determines the rate of return on loans and banks’ borrowed funds and, in turn, the discount rate used to derive the present value of future profits, part of which are generated by bank services. But the quantity of service output is affected by risk only to the extent that portfolios of different risk require different amounts of information processing. In addition, the model shows that Loanable funds are merely an intermediate input that passes through banks, whereas true bank value added is only the services facilitating the provision of funds. The model further establishes separability between the use of funds and the production functions of value added in a bank’s overall optimization problem (Fixler and Zieschang, 1998).

Partitioning total interest income according to the model develops a new measure of bank value added. Its principal innovation is to impute the value of the implicitly priced services as the residual net interest income after subtracting the required risk premium on loans. Measure of bank output is also shown to remain valid even when banks can only partially resolve the asymmetric information problems concerning borrowers. The new measure differs conceptually from the two existing output measures in its ability to distinguish the transfer of funds from the production of services and to account coherently for risk in the measurement of bank value added. It calls into question the results of previous empirical studies of bank production technology, all of which use one form or another of the BV-based measure of bank output. In particular, the new output measure should improve the estimates of bank productivity and the degree of returns to scale, as well as estimates of the impact of the latest merger wave on banks’ operating efficiency (Fixler and Zieschang, 1998). It can also help to estimate the markup of price over marginal cost in the pricing of bank products, which is crucial to antitrust analysis of
bank mergers. For instance, when loan interest rates contain both the rate of return to funds and
the compensation to bank services, assessments of markup must control for the risk of a bank’s
loan portfolio (Fixler and Zieschang, 1998).

In short, by resolving the fundamental question of how to measure bank output, this model
contributes to a large literature on bank production. Moreover, this model can resolve some long-
time conceptual debates in the bank production literature, particularly the one regarding the role
of deposits. It demonstrates that deposit funds are “materials,” inputs in the generation of new
loans, but the transaction services associated with deposits are part of bank output. It also
provides a theoretical basis for measuring bank output by identifying the value-added
components of a bank’s gross output. Furthermore, it supplies one plausible explanation for the
observation that large-denomination loans often carry relatively low interest rates. Most
importantly, it involves the very same sets of issues - funds, risk, and information problems - that
are also present in most other banking functions, the consistent framework developed in the
model can be readily applied to analyze new banking activities, such as securitization and the
outsourcing of mortgage underwriting (Triplett, 1998).

Using the framework the output can be identified in each activity but also explain why these new
banking functions came into being and spread. The underlying economic force is exactly the
fundamental separability between intermediation services and Loanable funds, and the continual
progress of information technology has made this separability increasingly desirable. The model
can also be applied to study non-bank financial banks, such as finance companies. Last but not
least, the model’s framework can easily be extended to study the implications of capital market
imperfections - such as asymmetric information between banks and market investors - for the relationship between bank value added and the supply of Loanable funds, and, in turn, the measure of bank output (Triplett, 1998).

2.1.3 Portfolio Theory

Modern portfolio theory (MPT) or simply portfolio theory was introduced by Harry Markowitz with his paper "Portfolio Selection," which appeared in the 1952 Journal of Finance. Prior to Markowitz's work, investors focused on assessing the risks and rewards of individual securities in constructing their portfolios. Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then construct a portfolio from these. Detailing mathematics of diversification, he proposed that investors focus on selecting portfolios based on their overall risk-reward characteristics instead of merely compiling portfolios from securities that each individually have attractive risk-reward characteristics. In a nutshell, investors should select portfolios not individual securities (Markowitz, 1999).

If single-period returns for various securities are treated as random variables, then they can be assigned with expected values, standard deviations and correlations. Based on these, expected return and volatility of any portfolio can be calculated and constructed with those securities. Volatility and expected return can be treated as proxies for risk and reward. Out of the entire universe of possible portfolios, certain ones will optimally balance risk and reward. These comprise what Markowitz called an efficient frontier of portfolios. An investor should select a portfolio that lies on the efficient frontier (Markowitz, 1999).
Tobin (1958) expanded on Markowitz's work by adding a risk-free asset to the analysis. This made it possible to leverage or de-leverage portfolios on the efficient frontier. These lead to the notions of a super-efficient portfolio and the capital market line. Through leverage, portfolios on the capital market line are able to outperform portfolio on the efficient frontier. Sharpe (1964) formalized the capital asset pricing model (CAPM). This makes strong assumptions that lead to interesting conclusions. Not only does the market portfolio sit on the efficient frontier, but it is actually Tobin's super-efficient portfolio. According to CAPM, all investors should hold the market portfolio, leveraged or de-leveraged with positions in the risk-free asset. CAPM also introduced beta and relates an asset's expected return to its beta.

Portfolio theory provides a broad context for understanding the interactions of systematic risk and reward. It has profoundly shaped how institutional portfolios are managed, and motivated the use of passive investment management techniques. One of the major concepts that most investors should be aware of is the relationship between the risk and the return of a financial asset. It is common knowledge that there is a positive relationship between the risk and the expected return of a financial asset. In other words, when the risk of an asset increases, so does its expected return. What this means is that if an investor is taking on more risk, he/she is expected to be compensated for doing so with a higher return. Similarly, if the investor wants to boost the expected return of the investment, he/she needs to be prepared to take on more risk (Henderson, 2011).

The classifications of risky and risk-free assets are based on relative terms and not on absolute terms. It is important to note that no financial asset can be completely risk-free. The rate of return of a risk-free asset is generally known as the risk-free rate. This is an important return for
most investors because it is often used as a benchmark to measure the return of the other financial assets. The risk-free rate represents the lowest level of return an investor expects to receive (Henderson, 2011).

2.1.4 Credit Risk Models

The classical definition of risk was provided by Knight (1994) as the situation in which the decision maker has the advantages of knowledge of the problem structure, understanding of the complete range of possible outcomes and ability to objectively assess the likelihood of each outcome occurring. At its simplest level, Knight (1994) saw risk as a form of measurable as opposed to un-measurable uncertainty. Other than industry characteristics (IC) and organizational strategy (S), Risk (R) partly determines an organization’s performance (P).

Mathematically expressed,

\[ P = f(IC, S, R) \]

Further, risk is essentially an endogenous variable because strategic managers tend to assume, both explicitly and implicitly, that it is a variable that can be managed. The nature of risk is itself primarily dependent on the industry characteristics and the strategy pursued (Bettis, 2009).

Bowman (2000) also supports this view of risk as essentially endogenous variable and argues that a well-devised strategy could simultaneously reduce risk and increase returns. Overall, the theme of the argument on risk reduction is mainly related to the ability of the organization to reduce the variability of the returns generated.

The simplified model of risk presented by Bettis (2009) is:

\[ R = f(IC, S) \]

Where,
R - Risk
IC - Industry characteristics
S - Strategy developed.

Industry characteristics include factors such as concentration level in the market, and size of the barriers to entry. Within the organization, he selected research and development, and capital investment as the primary measures of the characteristics of an industry. The various types of strategy were differentiated on the extent to which any new product or market area was selected to the organization’s existing or market areas. Bowman (2000), like Bettis (2009), recognized that corporate strategy is a means of altering both risk and returns.

Taback (1991) takes the practical view that, before a crisis occurs, there is usually a warning period during which a proactive management team can recognize the signals and events that increase the likelihood to disaster. During this period, the organization can accomplish the most at the least cost. Even if it cannot prevent the disaster, knowing it is coming makes the company better prepared. This means that crises do not simply happen. They arise out of the context of the business. Thus, some sense of defensive mechanism at a strategic level is sensible in order to allow the organization make a reasonably well coordinated effort in responding to the emergency at the time of maximum turmoil (Taback, 1991).

The first category of credit risk models are the ones based on the original framework developed by Merton (1974) using the principles of option pricing (Black and Scholes, 1973). In such a framework, the default process of a company is driven by the value of the company’s assets and the risk of a firm’s default is therefore explicitly linked to the variability of the firm’s asset value.
The basic intuition behind the Merton model is relatively simple: default occurs when the value of a firm’s assets (the market value of the firm) is lower than that of its liabilities. The payment to the debt-holders at the maturity of the debt is therefore the smaller of two quantities: the face value of the debt or the market value of the firm’s assets. Assuming that the company’s debt is entirely represented by a zero-coupon bond, if the value of the firm at maturity is greater than the face value of the bond, then the bondholder gets back the face value of the bond. However, if the value of the firm is less than the face value of the bond, the shareholders get nothing and the bondholder gets back the market value of the firm. The payoff at maturity to the bondholder is therefore equivalent to the face value of the bond minus a put option on the value of the firm, with a strike price equal to the face value of the bond and a maturity equal to the maturity of the bond. Following this basic intuition, Merton derived an explicit formula for risky bonds which can be used both to estimate the probability of default of a firm and to estimate the yield differential between a risky bond and a default-free bond.

In addition to Merton (1974), first generation structural-form models include Black and Cox (1976), Geske (1977), and Vasicek (1984). Each of these models tries to refine the original Merton framework by removing one or more of the unrealistic assumptions. Black and Cox (1976) introduce the possibility of more complex capital structures, with subordinated debt; Geske (1977) introduces interest-paying debt; Vasicek (1984) introduces the distinction between short and long term liabilities. Under these models, all the relevant credit risk elements, including default and recovery at default, are a function of the structural characteristics of the firm: asset levels, asset volatility (business risk) and leverage (financial risk). The rate of return is therefore an endogenous variable, as the creditors’ payoff is a function of the residual value of
the defaulted company’s assets. More precisely, under Merton’s theoretical framework, default probability and rate of return tend to be inversely related.

Although the line of research that followed the Merton approach has proven very useful in addressing the qualitatively important aspects of pricing credit risks, it has been less successful in practical applications. This lack of success has been attributed to different reasons. First, under Merton’s model the firm defaults only at maturity of the debt, a scenario that is at odds with reality. Second, for the model to be used in valuing default-risky debts of a firm with more than one class of debt in its capital structure (complex capital structures), the priority/seniority structures of various debts have to be specified. Also, this framework assumes that the absolute-priority rules are actually adhered to upon default in that debts are paid off in the order of their seniority. However, empirical evidence, such as in Franks and Torous (1994), indicates that the absolute-priority rules are often violated.

Moreover, the use of a lognormal distribution in the basic Merton model tends to overstate recovery rates in the event of default. In response to such difficulties, an alternative approach has been developed which still adopts the original Merton framework as far as the default process is concerned but, at the same time, removes one of the unrealistic assumptions of the Merton model; namely, that default can occur only at maturity of the debt when the firm’s assets are no longer sufficient to cover debt obligations. Instead, it is assumed that default may occur anytime between the issuance and maturity of the debt and that default is triggered when the value of the firm’s assets reaches a lower threshold level. It argues that the correlation between default risk and the interest rate has a significant effect on the properties of the credit spread. This approach
simplifies the first class of models by both independently specifying the cash flows to risky debt in the event of bankruptcy and simplifying the bankruptcy process (Bowman, 2000).

Duffie and Lando (2000) argue that despite improvements with respect to the original Merton’s framework, second generation structural-form models still suffer from three main drawbacks, which represent the main reasons behind their relatively poor empirical performance. First, they still require estimates for the parameters of the firm’s asset value, which is non-observable. Indeed, the current market value of a firm is not easily observable. Second, structural-form models cannot incorporate credit-rating changes that occur quite frequently for default-risky corporate debts. Most corporate bonds undergo credit downgrades before they actually default. As a consequence, any credit risk model should take into account the uncertainty associated with credit rating changes as well as the uncertainty concerning default. Finally, most structural-form models assume that the value of the firm is continuous in time. As a result, the time of default can be predicted just before it happens and hence, there are no sudden surprises (Duffie and Lando, 2000).

The attempt to overcome the shortcomings of structural-form models gave rise to reduced-form models. Unlike structural-form models, reduced-form models do not condition default on the value of the firm, and parameters related to the firm’s value need not be estimated to implement them. In addition to that, reduced-form models introduce separate explicit assumptions on the dynamic of both probability of default and rate of return (Duffie and Lando, 2000). These variables are modeled independently from the structural features of the firm, its asset volatility and leverage. Generally speaking, reduced-form models assume an exogenous rate of return that
is independent from the probability of default and take as basics the behavior of default-free interest rates as well as a stochastic process for default intensity. At each instant, there is some probability that a firm defaults on its obligations. Both this probability and the rate of return in the event of default may vary stochastically through time. Those stochastic processes determine the price of credit risk. Although these processes are not formally linked to the firm’s asset value, there is presumably some underlying relation (Duffie and Lando, 2000).

2.1.5 Credit Risk Management

All human actions entail some risks. Some are risk seekers or accepters by temperament while others are risk avoiders. There is even evidence that removal of some risks will cause persons purposely to subject themselves to a new one, suggesting that they seek some kind of undefined risk balance in their lives. Risk is an elusive element in most decisions, largely because it is so hard to pin down. Also, there will always be risks associated with mitigation strategy developments and maintenance (Jappelli, 2006).

Risk Management (RM) includes several related actions involving risk: planning, assessment (identification and analysis), handling, and monitoring. Risk planning is a process of developing and documenting the strategy and methods for identifying and tracking risk issues, developing risk handling plans, performing continuous risk analysis to know how risks have changed, and assigning adequate resources. A risk management plan includes information on stakeholders, planning processes, project tools, and metrics, and it states the standards and objectives for RM on a project (Duffie and Lando, 2000).
While much of the information in a risk plan can be developed generally for all projects in an organization, each specific project has at least some unique risk elements. A RM plan usually starts from summarizing approaches of RM, listing the methodologies and processes that was used, and defining the roles of the people involved. It may also include information, such as definitions and standards for using with RM tools, the frequency and agenda for periodic risk reviews, formats to be used for required inputs and RM reports, and requirements for status collection and other tracking items. In addition, each project may determine specific trigger events and thresholds for metrics associated with project risks and the budgets for risk analysis, contingency planning, and risk monitoring (Roszbach and Jacobson, 1998).

Risk assessment is a process that involves identifying and analyzing program areas and critical technical process risks to increase the possibility of meeting cost, performance, and schedule objectives. Risk identification is the process of examining the program areas and critical technical processes to identify and document the associated risks. Risk analysis is the process of examining identified risk issues to refine the description of the risk, isolate the cause, and determine the effects. Risk handling is the process that identifies, evaluates, selects, and implements options in order to set risk at acceptable, levels given program constraints and objectives. This includes the specifics on what should be done, when it should be accomplished, who is responsible, and associated cost and schedule. Risk handling options include assumption, avoidance, control (also known as mitigation), and transfer. The most desirable handling option is selected, and a specific approach is then developed for this option (Roszbach and Jacobson, 1998).
Risk monitoring is the process that systematically tracks and evaluates the performance of risk handling actions throughout the acquisition process and provides inputs to updating risk handling strategies, as appropriate. RM is never just about looking forward. Heeding the lessons learned on projects of all types, even some very distant examples can help avoid problems on new projects (Duffie and Lando, 2000).

The risks contained in the bank's principal activities, that is, those involving its own balance sheet and its basic business of lending and borrowing, are not all borne by the bank itself. In many instances, the institution will eliminate or mitigate the risks associated with a transaction by proper business practices, while in others, it will shift the risk to other parties through a combination of pricing and product design. The banking industry recognizes that an institution need not engage in business in a manner that unnecessarily imposes risk upon it; nor should it absorb risk that can be efficiently transferred to other participants. Rather, it should only manage risks at the firm level that are more efficiently managed there than by the market itself or by their owners in their own portfolios. It should accept only those risks that are uniquely a part of the bank's array of services.

According to Oldfield and Santomero (2007), risks facing all financial banks can be segmented into three separable types, from a management perspective. These are: risks that can be eliminated or avoided by simple business practices, risks that can be transferred to other participants, and, risks that must be actively managed at the firm level. In the first of these cases, the practice of risk avoidance involves actions to reduce the chances of idiosyncratic losses from standard banking activity by eliminating risks that are superfluous to the institution's business
purpose. Common risk avoidance practices here include at least three types of actions. The standardization of process, contracts and procedures to prevent inefficient or incorrect financial decisions is the first of these. The construction of portfolios that benefit from diversification across borrowers and that reduce the effects of any one loss experience is another. Finally, the implementation of incentive-compatible contracts with the institution's management to require that employees be held accountable is the third. In each case the goal is to rid the firm of risks that are not essential to the financial service provided, or to absorb only an optimal quantity of a particular kind of risk (Oldfield and Santomero, 2007).

There are also some risks that can be eliminated, or at least substantially reduced through the technique of risk transfer. Markets exist for many of the risks borne by the banking firm. Interest rate risk can be transferred by interest rate products such as swaps or other derivatives. Borrowing terms can be altered to effect a change in their duration. Finally, the bank can buy or sell financial claims to diversify or concentrate the risks that result in from servicing its client base. To the extent that the financial risks of the assets created by the firm are understood by the market, these assets can be sold at their fair value (Roszbach and Jacobson, 1998).

Unless the institution has a comparative advantage in managing the attendant risk and/or a desire for the embedded risk they contain, there is no reason for the bank to absorb such risks, rather than transfer them. However, there are two classes of assets or activities where the risk inherent in the activity must and should be absorbed at the bank level. In these cases, good reasons exist for using firm resources to manage bank level risk. The first of these includes financial assets or activities where the nature of the embedded risk may be complex and difficult to communicate to third parties. This is the case when the bank holds complex and proprietary assets that have thin,
if not non-existent, secondary markets. Communication in such cases may be more difficult or expensive than hedging the underlying risk (Saunders and Schumacher, 2000). Moreover, revealing information about the customer may give competitors an undue advantage. The second case include proprietary positions that are accepted because of their risks, and their expected return. Here, risk positions that are central to the bank’s business purpose are absorbed because they are the raison d'etre of the firm. Credit risk inherent in the lending activity is a clear case in point, as is market risk for the trading desk of banks active in certain markets. In all such circumstances, risk is absorbed and needs to be monitored and managed efficiently by the institution. Only then will the firm systematically achieve its financial performance goal (Gelos, 2006).

2.2 Empirical Literature

Research on the determinants of bank profitability has focused on both the returns on bank assets and equity, and net interest rate margins. It has traditionally explored the impact on bank performance of bank-specific factors, such as risk, market power, and regulatory costs. More recently, research has focused on the impact of macroeconomic factors on bank performance. Using accounting decompositions, as well as panel regressions, Al-Haschimi (2010) studies the determinants of bank net interest rate margins in 10 Sub-Sahara Africa (SSA) countries. He finds that credit risk and operating inefficiencies (which signal market power) explain most of the variation in net interest margins across the region. Macroeconomic risk has only limited effects on net interest margins in the study.
Using bank level data for 80 countries in the 1944–95 periods, Demirgüç-Kunt and Huizinga (1998) analyze how bank characteristics and the overall banking environment affect both interest rate margins and bank returns. Results suggest that macroeconomic and regulatory conditions have a pronounced impact on margins and profitability. Lower market concentration ratios lead to lower margins and profits, while the effect of foreign ownership varies between industrialized and developing countries. In particular, foreign banks have higher margins and profits compared to domestic banks in developing countries, while the opposite holds in developed countries. These differences are explained by the different approaches adopted by the different banks with varying ownership structures.

Gelos (2006) studies the determinants of bank interest margins in Latin America using bank and country level data. He finds that spreads are large because of relatively high interest rates (which in the study is a proxy for high macroeconomic risk, including from inflation), less efficient banks, and higher reserve requirements. In a study of United States banks for the period 1989–93, Angbazo (2007) finds that net interest margins reflect primarily credit and macroeconomic risk premia. In addition, there is evidence that net interest margins are positively related to core capital, non-interest bearing reserves, and management quality, but negatively related to liquidity risk.

Saunders and Schumacher (2000) apply the model of Ho and Saunders (1981) to analyze the determinants of interest margins in six countries of the European Union and the US during the period 1944–95. They find that macroeconomic volatility and regulations have a significant impact on bank interest rate margins. Their results also suggest an important trade-off between
ensuring bank solvency, as defined by high capital to asset ratios, and lowering the cost of financial services to consumers, as measured by low interest rate margins.

Athanasoglou, et al. (2006) study the profitability behavior of the south eastern European banking industry over the period 1998–02. The empirical results suggest that the enhancement of bank profitability in those countries requires new standards in risk management and operating efficiency, which, according to the evidence presented in the paper, crucially affect profits. A key result is that the effect of market concentration is positive, while the picture regarding macroeconomic variables is mixed. Athanasoglou, et al. (2006) apply a dynamic panel data model to study the performance of banks over the period 1985–2001, and find some profit persistence, a result that signals that the market structure is not perfectly competitive. The results also show that the profitability of banks is shaped by bank-specific factors and macroeconomic control variables, which are not under the direct control of bank management. Industry structure does not seem to significantly affect profitability.

More recently, a number of studies have emphasized the relation between macroeconomic variables and bank risk. Saunders and Allen (2004) survey the literature on pro-cyclicality in operational, credit, and market risk exposures. Such cyclical effects mainly result from systematic risk emanating from common macroeconomic influences or from interdependencies across firms as financial markets and banks consolidate internationally. They may ultimately exacerbate business cycle fluctuations due to adverse effects on bank lending capacity. Using equity returns data over the period 1973–2003, Allen and Bali (2004) examine the catastrophic risk of financial banks. Results suggest evidence of pro-cyclicality in both catastrophic and
operational risk measurements, implying that macroeconomic, systematic, and environmental factors play a considerable role in determining the risk and returns of financial banks.

2.3 Conceptual Framework

The study will focus on the functional relationships between four independent variables (risk transfer, risk acceptance/retention, risk avoidance and risk reduction) vis-à-vis loan performance as shown in fig. 1.1.

Figure 1: Conceptual Framework

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| Credit Risk Mitigation | Risk Transfer | • Insurance contract  
• Judicial- transfer  
• Contractual- transfer  
• Collateral - securities |
|                    | Risk Avoidance | • Loans Approval limits  
• Types of loans Lending limits  
• Lending sectorisation  
• Interest rate charged |
|                    | Risk Retention | • Value under insurance  
• Interest in suspense  
• Risk retention policy  
• Guidelines on risk retention  
• Financial ratios |
|                    | Risk Reduction | • Loan provision  
• Types of loan products.  
• Lending limits  
• Escalation limits  
• Existence of reduction policy |
When risks have been identified and assessed, all techniques to manage the risk so as to enhance loan performance fall into one or more of these four major categories: Avoidance (elimination), Reduction (mitigation), Retention (acceptance and budgeting) and Transference (outsource or insure). The ideal use of these strategies may not be possible and some of them may involve trade-offs that are not acceptable to the organization or person making the risk management decisions.

2.3.1 Risk Transfer

Insurance is one type of risk transfer that uses contracts. Other times it may involve contract language that transfers a risk to another party without the payment of an insurance premium. On the other hand, taking offsetting positions in derivatives is typically how firms use hedging to financially manage risk. Some ways of managing risk fall into multiple categories. Risk retention pools are technically retaining the risk for the group, but spreading it over the whole group involves transfer among individual members of the group. This is different from traditional insurance, in that no premium is exchanged between members of the group up front, but instead losses are assessed to all members of the group.

2.3.2 Risk avoidance

This technique includes not performing an activity that could carry risk. An example would be not floating a credit product in order not to take on the liability that comes with it. Avoidance may seem the answer to all risks, but avoiding risks also means losing out on the potential gain that accepting (retaining) the risk may have allowed. Not entering a business to avoid the risk of loss also avoids the possibility of earning profits.
2.3.3 Risk Retention

Involves accepting the loss when it occurs. True self insurance falls in this category. Risk retention is a viable strategy for small risks where the cost of insuring against the risk would be greater over time than the total losses sustained. All risks that are not avoided or transferred are retained by default. This includes risks that are so large or catastrophic that they either cannot be insured against or the premiums would be infeasible. Also any amounts of potential loss (risk) over the amount insured is retained risk. This may also be acceptable if the chance of a very large loss is small or if the cost to insure for greater coverage amounts is so great it would hinder the goals of the organization too much.

2.3.4 Risk Reduction

This involves tools that reduce the severity and frequency of the loss or the likelihood of the loss from occurring. Outsourcing could be an example of risk reduction if the outsourcer can demonstrate higher capability at managing or reducing risks. In this case companies outsource only some of their departmental needs.
CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter entails the research design, target population, sampling. Data collection instruments and procedures

3.1 Research Design

The research adopted descriptive research design for the purpose of accessing the study’s general intent. This design involves a set of methods and procedures that describe the intended variables using statistical logic. It is the mainstay of research because it generally allows the researcher to make comprehensive inferences about the investigated variables in the target populations (Burns et al, 2000).

3.2 Target Population

The study’s target population constituted a total of 44 respondents tasked with credit risk management in the 44 commercial banks currently operating in Kenya. This population size was developed from key unit of analysis in the three peer groups which are risk and compliance personnel. The peer groups were used as a basis for stratification in order to facilitate a cross-sectional generalization of the findings. Each of the selected units in the peer groups provided one individual to give information intended for the study. Table 3.1 shows the sub-strata’s proportions in relation to the entire target population.

The Central Bank of Kenya (CBK) categorizes commercial banks in peer groups based on their market share index. Market share index is the composite of net assets, deposits, capital, number of loan accounts and number of deposit accounts.

31
Those banks with more than 5% market share index are categorized as Large Peer Group and there are 6 of such banks in Kenya. Medium Peer Group constitutes banks with between 1% and 5% market share index where there are 15 banks under this peer group while Small Peer Group are those with less than 1% market share index where there are 23 banks under this tier (CBK, Bank Supervision annual report, 2011).

Table 2: Target Population

<table>
<thead>
<tr>
<th>Bank Category</th>
<th>No. of Banks</th>
<th>Population Size</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Peer Group (Market share index over 5 %)</td>
<td>6</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Medium Peer Group (Market share between 1 – 5%)</td>
<td>15</td>
<td>15</td>
<td>34</td>
</tr>
<tr>
<td>Small Peer Group (Market share index less than 1 %)</td>
<td>23</td>
<td>23</td>
<td>52</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

(Source: CBK, 2011)

3.3 Sample and Sampling Technique

The researcher used purposive sampling to select the Risk compliance officers in the 44 commercial banks currently operating in Kenya. The researcher carried out census to the 44 commercial banks. According to Casley & Kumar (1944) purposive sampling relies on the judgment of the researcher when it comes to selecting the units.
Table 3: Sampling Design

<table>
<thead>
<tr>
<th>Bank Category</th>
<th>Population Size</th>
<th>Sampling Ratio</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Peer Group</td>
<td>6</td>
<td>1.0</td>
<td>6</td>
</tr>
<tr>
<td>Medium Peer Group</td>
<td>15</td>
<td>1.0</td>
<td>15</td>
</tr>
<tr>
<td>Small Peer Group</td>
<td>23</td>
<td>0.5</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>1.0</td>
<td>44</td>
</tr>
</tbody>
</table>

(Source: Researcher, 2012)

3.3 Data Collection Procedure

The study opted for both primary and secondary forms of data. The secondary data was collected from the documentations obtainable from the banks. To ascertain the primary data from various respondents, the researcher preferred the use of self administered questionnaires. Casley & Kumar (1944) argue that well standardized and tested questionnaires are most effective elements of a structured survey. Keeping the central objective of study in mind, the researcher adopted both open-ended and closed question items that are sufficient to yield only relevant information. The open-ended questions served the purpose of allowing respondents to give explicit details on issues the researcher’s knowledge is limited, while the closed-ended items was designed in such a way that they clarify on the type of information or responses sought. A clear set of alternatives after every question was meant to limit irrelevance so that coding and analysis are easily accomplished.

Prior to making the commitment of time, work, and money to the actual data collection process in this research study, the researcher first attempted to rehearse the methods and check validity of the instruments to be adopted. In particular, questionnaire drafts were issued to a randomly designed set of respondents on which basis final item-refinement was effected by incorporating
emerging content dimensions. Such pilot study offers an opportunity for the researcher to master technical skills and first-hand experience in administering research instruments (Rosenberg et al, 2003). The pilot result was expected to be supportive to the decisions of proceeding with the investigation.

3.4 Data Analysis and Interpretation

The researcher examined the collected data to make inferences through a series of operations involving editing to eliminate inconsistencies, classification on the basis of similarity and subsequent tabulation to relate variables. Subsequently, the refined data was analyzed using descriptive statistics involving percentages and mean scores to determine varying degrees of response-concentration regarding credit risk mitigation. Standards deviations to measure response-disparity particularly for the Likert-scale question items were adopted. Descriptive statistics was invaluable in describing the sample data in such away as to portray the typical respondent and to reveal the general pattern of responses. In addition, regression analysis was used to determine relationship between the study’s quantifiable variables. These statistics was generated with aid of the computer software, Statistical Package for Social Sciences (SPSS). Further, the researcher ensured that resulting summaries from the findings was present data in a consolidated and meaningful framework, and thus, the analysis focused on accuracy and reliability in relation to the study’s pre-designed objectives. Finally, for the purpose of communicative effectiveness to ultimate users, findings were presented using both tabular and graphical representations (histogram, bars and pie charts).
CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.0 Introduction

This chapter describes the data findings, analysis and discussion from the questionnaires that were received from the respondents. 6 questionnaires were given to respondents in Large Peer Group, 15 questionnaires to Medium Peer Group and 23 questionnaires to Small Peer Group. The questionnaires were returned back as 4 in Large Peer Group which is 10%, 12 respondent in Medium Peer Group which is 32% and 22 in Small Peer Group which was 58% of the total respondents consecutively.

4.1 Analysis of the response from the questionnaires

4.1.1 Respondents bank category

The analysis of the respondent bank category was done to enable and ensure reliable response from the research questions and ensure reliable and relevant data was collected from the entire banks. The results were:

Table 4: Bank Category of the Respondents

<table>
<thead>
<tr>
<th>Bank category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Peer Group</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Medium Peer Group</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Small Peer Group</td>
<td>22</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
10% of the respondents were in Large Peer Group, 32% of the respondents were in Medium Peer Group and 58% of the respondents were in Small Peer Group. The analysis indicated that higher percentage of the respondents were in Small Peer Group and Medium Peer Group. This implied that most banks have a market share index of less than 5% with the exemption of the Large Peer Group which were four.

4.1.2 Length of service for the respondents.

The researcher wanted to know the duration that the respondents had worked in their respective position so to ensure accurate and more reliable information.

Table 5: Duration of the respondents in the current position

<table>
<thead>
<tr>
<th>Time duration</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 years</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>2-4 years</td>
<td>17</td>
<td>45</td>
</tr>
<tr>
<td>4-6 years</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>6-8 years</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>8-10 years</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

16% of the respondents indicated that they were in position for less than 2 years. 45% of the respondents indicated that they were in the position for duration of 2-4 years. 21% of the respondents indicated that they were in position for duration of 4-6 years. 13% of the respondents indicated that they were in position for duration of 6-8 years. 2% of the respondents
indicated that they were in position for duration of 8-10 years. 3% of the respondents indicated that they were in positive for a period of more than 10 years.

The analysis indicated that a higher percentage of the respondents had been in their position for duration of two to six years. This affirmed to the researcher that the information from the respondents was highly reliable as they had enough experience in the profession. With this they were more likely to have familiarized themselves with the challenges and strategies laid to enhance the loan performance and at the same time mitigate the risks related with offered credit facilities.

4.2 The overall risk management process

This question sought to find out the overall risk management processes that were being in implemented in the banks.

Figure 2: The overall management risk process

- everchanging and easy to sustain
- easy to implement and cheap
- everchanging and hard to understand

Source (Researcher 2012)

48% of the respondents indicated that the risk management process that were implemented in their banks were ever-changing and easy to sustain. 35% of the respondents felt that the risk
management process implemented in their banks were easy to implement and cheap. 17% of the respondents felt that the risk management process implemented in their banks were ever changing and hard to understand.

The analysis indicated that the banks in Nairobi used ever-changing, easy to sustain and to implement processes in their risk management. The analysis showed that the processes used were cheap to the bank hence the banks were not likely to have a financial constraints when it come to risk management so to enhance their loan performance.

However few of the respondents felt that the risk management processes that their banks implemented was ever changing and hard to understand. This way they felt there were other better techniques that could be used in the risk management that were less expensive, easy to sustain and to implement. This way the banks could easily be able to hedge more risks that the bank could be exposed to in their loan performance.

4.3 Forms of credit risks dealt within the jurisdiction

The researcher wanted to find out the type of risks that banks dealt with in the jurisdiction.

**Table 6: Forms of credit risks in banks**

<table>
<thead>
<tr>
<th>Forms of credit risk</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute default</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>Irregular repayment</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Difficult repayment</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>Interest rate variation</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
23% of the respondents indicated that they dealt with absolute default form of credit risk. 32% of the respondents indicated that they dealt with mostly in irregular repayment by the borrowers. 29% of the respondents indicated that they dealt with credit risk where there was difficult in repayment of the loans hence subjecting them to credit risk. 16% of the respondents indicated that they suffered credit risk out of the interest rate vacation in the market.

The analysis indicated that higher percentage of the credit risk usually dealt with in banks is the irregular payments by the borrowers whereby the credit is not paid as per the agreed systematic installment agreed on in the lending of credit facilities.

The results of the analysis also showed that a high percentage of the banks also experience credit risks whereby the borrower experience difficulty in repayment which could be as a result of the increased standard of living which subjects the borrower to higher cost of living leading to financial constraints that cause them to have difficulty in repayment. This way the value of money of the lender tend to decrease in value if the payments are delayed hence the credit risk.

Other respondents indicated that their banks experienced absolute default form of credit risks. This is where the borrower completely failed to repay the loan or repays some and at a point in time he or she is unable to repay the loan. This exposes the bank to high credit risk where they lose the principal and the interest at the same time.

Few of the respondents indicated that their banks experienced credit risk as a result of the interests’ rate variation. This is whereby due to inflation or deflation the interest rates of loans
fluctuate generally in the financial market when the interest rates decreased then the expected returns on loan repayment through the interest tend to decrease hence the credit risk.

4.4 Strategies for mitigating existing credit risk.

Table 7: Preferred strategies in mitigating existing credit risks

<table>
<thead>
<tr>
<th>Mitigating techniques</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk transfer</td>
<td>16</td>
<td>39</td>
</tr>
<tr>
<td>Risk avoidance</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Risk retention</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Risk reduction</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

39% of the respondent indicated that they used the risk transfer method to hedge the financial risk that they were exposed to. 37% of the respondents indicated that they used the risk reduction method to hedge financial risk. 17% of the respondents indicated that they used risk retention method of hedging the financial risks. 7% of the respondents indicated that they used the risk avoidance method to hedge the financial risk.

According to analysis it showed that most banks used the risk transfer technique of hedging their financial risk whereby the banks transfer the risk e.g. to the insurance i.e. acquiring insurance coverage where the risk is shifted from one party to another.
Analysis also indicated that a reasonable percentage of banks also use risk reduction technique as a method of hedging them against higher credit risk. This whereby the banks/lenders try to reduce the risks by avoiding fair lending problem in various products and various stages of the lending process and also develop an action plan customized for their institution that include positive steps to eliminate fair lending risks. These banks also seek to identify and eliminate the risk factors that examiners look for during each fair lending examination.

From the analysis a number of respondents indicated that they used risk retention as a technique of mitigating the credit risk they could be associated with. This is where the banks/lender decide to retain some risk or where it’s a method of self insurance where by the organization retains a reserve fund for the purpose of offsetting unexpected financial claims. There is though a strategy that was considered for small risks where the cost of insuring against the risk would be greater overtime than the total losses sustained.

A small percentages of respondents indicated that their banks once in a time could use risk avoidance technique where the firm completely did not take any risks i.e. it makes a decision not to enter into a new way of working because of the inherent risks there would introduce. This cause them to be less active in lending unsecured credit e.g. mortgages for fear of higher risks. This could be more dependent of the repayment capability of the borrowers which could result in to non- performing loans that could lead the banks into a deficit.
4.5 Risk Transfer

4.5.1 Banks sensitivity in mitigating anticipated credit risks

This research sought to find out how sensitive the banks are in trying to mitigate themselves against credit risks.

Table 8: Banks sensitivity in mitigating anticipated credit risks

<table>
<thead>
<tr>
<th>Opinion of the respondents</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>33</td>
<td>87</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

4.5.1 (b): If yes how would you rate the efficiency of the transfer?

Table 9: Efficiency of transfer rating

<table>
<thead>
<tr>
<th>Efficiency rate</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Average</td>
<td>32</td>
<td>84</td>
</tr>
<tr>
<td>Low</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
From the analysis of 4.5.1 (a) the higher number of the respondents indicated that their banks insured themselves against credit risks the highly took on risks transfer. A smaller number though indicated that the banks did not insure themselves every time against the anticipated credit. This showed that these banks could have been using after techniques of mitigating the credit risk e.g. risk avoidance or risk retention.

The analysis though show that the risk manager is a technique that is work more efficiently being the fact that most banks find it easy to use a hedge for their credit risk.

The analysis on the 4.5.1 (b) where the respondents who were supportive of the risk transfer were involved the higher number of the respondents indicated that the risks transfer was averagely efficient in mitigating their credit risk.

Some respondents also felt that the risk transfer was highly efficient on mitigating their credit indicating that they would highly utilize the technique in hedging their financial risk

Some respondents though felt that the risk transfer though highly utilized and used in mitigating credit risk it was not efficient enough. They felt that if the technique was used together with another technique of risk reduction or risk retention then the banks were likely to highly evade the credit risks.
4.5.2 Extent of various credit transfer techniques

Table 10: Extent of various credit transfer techniques

<table>
<thead>
<tr>
<th>Risk transfer techniques</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guarantor</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Credit derivatives</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>Bank guarantee</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Debt collectors</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Sale of loans</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

29% of the respondents indicated that they transferred their risk through credit derivatives whereby it’s a bilateral contract between the buyer and seller under which the seller sells protection against credit risk of the reference entity where parties will select which credit events apply to a loan sector e.g. bankruptcy, failure to pay. 26% of the respondents indicated that the banks transfer the credit risk through guarantor’s technique whereby the loans in case of default or other financial crisis. This way the credit risk is transferred to the guarantors. The analysis showed that 18% of the respondents indicated that the banks used bank guarantee as a means of transfer technique. 16% indicated that debt collector’s technique is used as a risk transfer technique. While 11% indicated that sale of loans is also used as a risk transfer technique.
1.5.3 Forms of insurance covers purchased by the banks against credit risks

This sought to find out the forms of insurance covers that the banks purchase against the credit defaults and those that are yet to be well utilized.

Table 11: Forms of insurance covers against credit defaults

<table>
<thead>
<tr>
<th>Insurance covers</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death and disability insurance</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td>Collateral insurance</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Creditor insurance</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Consequential loss insurance</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

99% of the respondents indicated that death and disability insurance cover was purchased by the bank. 37% of the respondents indicate that banks purchased collateral insurance. 13% of the banks purchased creditor insurance cover. 11% of the bank purchased consequential loss insurance cover.

The analysis indicates that the banks face more credit risk from death and disability hence high purchase of death and disability insurance.

Bank averagely purchase collateral insurance where the property held as collateral for loans made by lending institutions are insured incase of they are destroyed. upon signing loan agreements the borrower typically agree to purchased and maintain insurance that must include comprehensive an collusion coverage and first, the lending institution as the lien holder. The
banks therefore purchase CPI in order to manage their risk of loss by transferring the risk to an insurance company. If the collateral is damaged beyond repair, CPI insurance pays off the loan.

Few of the respondents indicated that they buy consequential loss insurance which pays for consequences of material damage or loss hence enabling the banks to recover gross profit due to the reduction in turnover and reasonable additional expenditure incurred in minimizing the loss. Fewer banks buy creditor insurance as this is commonly catering for groups and not for individual. It pays for invoice or receivables but remain unpaid as a result of protracted defaults or insolvency.

4.5.4 **Mechanisms adopted to seek loan guarantors assistance in loan repayment.**

This sought to define what mechanism the banks use so to ensure that loan guarantors assist the repayment continuity.

<table>
<thead>
<tr>
<th>Mechanism adopted</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forceful retentions of the relations</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>Use of personal relations to contact defer</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>Prosecution of guarantors</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Using them to give necessary information</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source (Researcher 2012)*
42% of the respondents indicated that the banks used useful retention of the account balance mechanism on guarantors to ensure continuity of repayment. 29% of the respondents indicated that their banks used personal relations to contact defaulters and ensure proper and continued repayment of loans granted. 16% of the respondents indicated that their banks used the guarantors to give the necessary information on the defaulters that would help the bank trace the defaulters and get information that would assist them regain the defaulted loans and ensured that the loan is repaid accordingly. A small number of the respondents indicated that they prosecuted the guarantors making them to ensure repayment of loans defaulted by the borrowers. Majority of the respondents from the banks used the forceful retention of the account balances whereby the accounts of the guarantors are checked and their balances used to clear the defaulted loans.

4.5.5 Are all advanced credit collateralized.

This sought to understand how the banks ensured collateralization of the advances they gave to their borrowed so as to ensure that the credit risks are mitigated.

Figure 3: Is all the advanced credit collateralized

![Figure 3: Is all the advanced credit collateralized](image)

Source (Researcher 2012)
Majority of the respondents indicated that their banks highly collaborated their advances to ensure reduced risk of capital loaned out. A small number of respondents indicated that their banks were not highly collateralizing their advances.

From the analysis the researcher made an observation that majority of the banks were highly sensitive to credit risk and they are highly trying to mitigate their credit risk so their loan performance can be enhanced and ensure that they got their interest returns as targeted due to the reduced risk on loss.

4.5.5 (b) Criteria used to ensure collaterals value are maintained

This sought to find out how the banks ensured that the collateral values against the advances granted maintained till the completion of repayment.

Table criteria used to ensure that collateral values are maintained till completion.

<table>
<thead>
<tr>
<th>Criteria of the repayment used</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic valuation</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Consideration of the location of collateral</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Ensuring minimum legal or process requirement are met</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Type of facility the collateral is pledged to support</td>
<td>17</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
4.6 Risk Avoidance

4.6.1 Measures used to avoid defaults on unsecured credit

This sought to find out how the banks avoided defaults whereby they gave advances that were not collateralized.

### Table 14: Measures used to avoid defaults on unsecured credit

<table>
<thead>
<tr>
<th>Measures taken</th>
<th>frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer commitment</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Engaging in MOUs</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Credit rating</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Use of debt collectors</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>Totals</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source (Researcher 2012)*

From the analysis employer commitment is highly used method of avoiding defaults whereby the banks lenders undertook a thorough review of its lending policies after successful and loans recovery policies are implemented.

Use of debt collectors is also a means highly uses as indicated by the analysis the bank/tenders use debt collectors whose main task is to ensure that the loans are accordingly repaid and within the lending period this facilitate collection of debt reducing the loss a bank could occur from the defaults.
From analysis the banks whose demands credit are not collateralized then they also use memorandum of understanding where they have a document that express mutual accord on a lending contract between the parties.

4.6.2 Factors considered in determining borrower qualification

In this the researcher sought to find out the factors that banks put into consideration in determining the repayment capability of the borrower which helps them determine who is qualified for the credit.

Table 15: Factors considered in determining borrower qualification

<table>
<thead>
<tr>
<th>Factors determining qualification of credit facilities</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repayment capacity</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>CBK guidelines</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Loan category limits</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Borrowers history</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Sufficiency of collateral</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Responsibility of industry to economic variation</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
From the analysis various factors were considered in determining the inability of a borrower to accessing a credit facility. The analysis showed that some factors like sufficiently of collateral repayment capacity CBK guidelines were of high determined to issuing of loans. This indicated that the banks highly give loans on basis of collateral security which should be equal in valuation to the credit facility granted. This way the banks are not likely to have bad debts out of defaults of loans or less returns on interest on loans.

From the analysis the central bank places limits on insurance of loans by banks by having policies governing them. The credit lending policies which enable the banks share its debtors in
terms of those capable of paying but unwilling and those incapable from the analysis the banks look at the borrower’s history to determine his/her capability to repay a loan. This is where the bank consistently monitors the profile of its customers and paying attention to its date to avoid the possibility of any loans going bad.

The analysis show that the banks at times look at the responsiveness of industry to economic variation where they observe how stable the industry is in dealing with the financial crisis in the market. This determines its rehabilitee in meeting its debt repayment despite any financial crisis in the market.

4.6.3 Ratio of loan application to approvals

This was aimed at identifying the amount of loans that are approved in comparison with those applied for

Figure 5: Ratio of loan application to approvals

![Bar chart showing ratio of loan application to approvals](chart.png)

Source (Researcher 2012)
The analysis indicated that banks don’t approve all the loans application made to them for credit facilities. Most respondents indicated that a ratio of 0.5 to 0.6 is approved meaning 50% to 60% of loan applications are approved and 40% not approved.

50% of the respondents indicated that 70 to 0% of the respondents indicated that 90% to 100% loans application are approved leaving out few loan applications unapproved.

40% of the respondents indicated that 30% to 40% of the loan applied is approved.

20% of the respondents indicated that 10% to 20% of the loan applied is approved.

This analysis indicated that there were variations in between application and approval among different banks.

4.6.4 Variation between application and approval

This research sought to find out the reason why there was table variation between application and approvals in banks.

<table>
<thead>
<tr>
<th>Reason for variation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of repayment ability</td>
<td>12</td>
<td>31</td>
</tr>
<tr>
<td>Consideration of risk factors</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Insufficient value of collateral</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Borrowers history</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
37% of the respondents indicated that insufficient value of collateral caused the disapproval of some loan application. This is where the applicants did not have a collateral equal in value with the loan applied for. This why the loan advanced to them i.e. which is equal to the collateral owned. This helps the bank from incurring losses in case of default by liquidating the collateral which refunds the amount of money unpaid for.

31% of the respondents indicated that the determinant was on the repayment capability may be from the view of the borrowers current account banks statement in which the amount repayable in each installment is not met by the balanced present in the statement at the particular time.

16% of the respondents indicated that consideration of risk was a factor that limited the borrower from acquiring a loan from the analysis was not of high consideration as the banks have adopted some risk mitigation strategies causing them not to be a main factor of determining the credit advancing where high risk are expected in comparison with the borrower then in those cases the bank prefer not to prove the loan application.

The borrower history is also a factor considered by banks though not highly. The bank look at the history of borrowers where incase the borrower has a history of default then they are likely not to approve the loans.
4.6.5: Factors determining the highest amount to lend

Table 17: Factors determining the highest amount to lend

<table>
<thead>
<tr>
<th>Determining factors</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repayment ability</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Duration for repayment</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Age of individual</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Source of income</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

37% of the respondents that the amount to lend to customers was determined by their repayment ability. 34% of the respondents indicated that the source of income by the borrowers determined the highest amount to lend to them. 16% of the respondents also indicated that the duration for repayment was a determinant of the amount to be granted.

Majority of the respondents indicated that repayment ability being the determinant meaning this is highly used factor to determine the highest amount a borrower could be lend. This way the bank look at the historical earnings from the business for sale, a profit or sale statement from the borrowers business or transaction that gives him income and also determine the cash flow projections for the next three years (assumed loan receipt) which well determine the applicant repayment ability. Simply the bank looks at the ability of the lender to cover interest and principal repayment out of cash flows.
An average number of banks use source of income as a determinant of the highest amount to be lend to the borrower. The banks always look at the borrowers’ incomes to determine if he/she has a reliable source of income that ensures their ability to repay their loan mount.

From the analysis duration for the repayment is used to determine the amount to be granted to the borrower. In this the loans amount are determined by the duration of repayment different products have different repayment time and this causes the difference in amount to be granted.

The analysis indicate the banks are highly in granting housing loans, look at the age of the individual as a determinant of loan to be granted. The age hence play a major role in determining the earnings potential of an individual incase a property is co-owned, the co-owner can not be a minor.

Also the co-owner cannot be above a certain age limit. The age limit also affects the tenure of home loan.

The retirement age is set to retire at 60 yrs then maximum loan tenure available was 15years. The analysis also indicate that some banks have an age limit and mostly to a limit of 75 years hence a limit of loan to be granted.
### 4.6.6 Relaxing the percentage of security to widen the credit bracket

Table 18: Relaxing the percentage of security to widen the credit bracket

<table>
<thead>
<tr>
<th>Opinion of respondents</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
<td>89</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

89% of the respondents indicated that the banks do relax the percentage of security to accommodate more customers in bigger credit bracket.

11% indicated that the banks don’t relax the percentage.

**Figure 6: Relaxing the percentage of security**

Source (Researcher 2012)
The analysis showed that most banks normally relax the percentage of security so to accommodate more customers and more so in bigger credit brackets.

The respondents for the relaxing of the percentage of security stated that the banks did this though they were faced by some credit risk due the flexibility. Some of the risks that bank faced were the default risk whereby a borrowers account were not meeting the repayment requirements as per the loan agreement hence loosing return on the loans and more so for the amount of loans not fully secured as a result of relaxing the amount of security.

Other banks face collateral risk whereby amount of collateral placed for the certain loan don’t meet the value of the loan hence a likelihood of collateral risk.

For the respondents whose banks did not relax their percentage loans, they stated that this was determined by the credit policies which did not allow for this provision. The banks relaxing the security also faced the risk when residual loan balances upon realization of the security where the security doesn’t fully compensate the residual loan balance.
4.7 Risk Retention

4.7.1 Risk Retention policy

This aim of finding out how much banks are retaining the risk and the main features in the policy that determine the retention levels in cases where the banks have a risk retention pay.

**Figure 7: Risk Retention policy**

![Chart showing yes and no responses]

Source (Researcher 2012)

Majority of the respondents indicated that their banks were guided by a risk retention policy. 8% of the respondents indicated that their banks did not have the retention policies.

From the analysis it was concluded that most of the banks use risk retention as a risk mitigating strategies to help them have a great loan performance. The retention policy help the banks control the type of risks that they retain the respondents indicated that the policy was governed by some features.
Table 19: Features in the policy that determine the retention level

<table>
<thead>
<tr>
<th>Features in the policy</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value under insurance</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Interest on suspense</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Sectoral risk ranking</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Risk mitigation propensity</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Sensitization</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

21% of the respondents indicated that the value under insurance governed the retention policy. 24% of the respondents were governed interest on suspense. 26% of the respondents to indicate that retention policy were controlled by risk mitigating propensity. 16% said the retention level was determined by sectoral risk ranking. 13% indicates that the retention level was determined by the securitization.

From the analysis interest on suspense highly determined the retention level of the bank whereby the banks recognized the interests in suspense as the amount of interest which is pended from the date when any particular account is considered as not recovered.

Securitization is averagely applied by banks to retain the risk where it is known to reduce the risks of bankruptcy where a borrower may go bankrupt and thereby obtain lower interest rates from the potential lender. It is used by banks as a structured finance process that distribute risk.
by aggregating debt instruments in a pool then issues nerd scurries backed by the pool. This way the banks are not subjected to great loss of return from retaining the risk.

Risk mitigation propensity is determined of retaining risk. This is commonly used and easy to use to determine the retention level is the risk mitigation propensity is high then the banks opt to retain the risk and when the risk mitigating propensity is low then the bank decides to curb risk.

The analysis indicates that the banks offer to retain the risk determined by value under insurance at an average level

4.7.2 Internal mechanism that influence the risk retention ability

This aimed at finding out the internal mechanisms that influence the risk retention ability.

<table>
<thead>
<tr>
<th>Internal mechanism</th>
<th>No. of respondent</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss financing</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Charging of default</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Provision for bad debts</td>
<td>18</td>
<td>47</td>
</tr>
<tr>
<td>Loan loss reserves</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

47% of the respondents indicated that the mechanism that influenced the risk retention was frowsier for bad debts which the bank makes towards having retained the risk. 24% of the respondents indicated that charging of default on operating cost was a mechanism that influenced
risk retention. 16% of the respondents indicated that loss financing was mechanism that determined the retention ability of the banks.

From the analysis where was the observation that provision for bad debts determined highly the ability of the banks to retain the risks. This shows that the funds available or allocated for making provisions for bad debts determine the amount of risk that a bank could retain much risk.

The analysis show that loan loss reserve averagely determine the risk retention ability where lenders are set as a size reserves for a non accrued loan in which interest and principal payment are no longer collected. The amount f this loan loss reserve determined the amount of risk retention that the bank may be in a positive to effect.

When the loss financing cost gets high then banks tend to retain less risk and vice versa.

For banks to retain high risk then it’s needed that they increase their capital to be in a position to cater for the losses.

4.7.3 Deposit ratio and decision to manage risk

The aim of the researcher was to determine how deposits in the bank determined the loan performance and same time helping manage risk associated with loans.
Table 21: Loan to deposits ratio and its effect in managing risk

<table>
<thead>
<tr>
<th>Opinion of respondent</th>
<th>frequency</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37</td>
<td>97</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

Majority of the respondents indicated that loan to deposit ratio highly affected the decision to manage risk. The analyses indicated that the risk mitigating strategies adopted by banks are highly determined by the loan to deposit ratio. Where they compare the loan they lend and amount of deposits in the bank.

The respondents indicated that they applied some techniques to ensure that the risks and also loan to deposit ratio are maintained at a required level. The results were as follows:

4.7.4 Techniques used to maintain loan to deposit ratio

Table 22: Techniques used to maintain loan to deposit ratio

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop lending</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Increase recovery</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>Increase interest rates</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Growing deposits</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Source (Researcher 2012)
37% of the respondents used the growing of deposits as the technique for maintaining loan to deposit ratios. 34% of the respondents indicated that they used increase of recovery as a method of maintaining loan to deposit ratio.

Few of the respondents indicated that they used the techniques of stopping to lend and others increasing of the interest rates.

Majority of the banks seemed to be using the techniques of growing the deposits i.e. the deposits that either don’t bear interest don’t reprise in tandem with market rates or reprise more favorably than market rate at time of reprising. Generally, core deposit inflow have a positive on the banks interest rate risk profile and bottom-line profitability by enhancing margins, on interest income and potentially the banks to compete for and retain loan customers.

Average numbers of the respondents use the increase of recovery in maintaining the loan to deposit ratio at the required level. The banks develop debt recovery techniques e.g. use of debt collectors, provision of grace period and also assessing and reporting the progress of the loan repayment so to meet the loan to deposit ratio. Other banks increase the interest rates especially when the loans are more than the deposits. This help discourage frequent borrowing i.e. limit the borrowing rate. This help balance the loan to deposit level.

Various banks stop lending when the loan to deposit is at a certain level. This way the banks prefer not taking the risk i.e. risks avoidance due to the risk of insuring high risk of less return on loans granted. This happens periodically when the banks stop lending some products which could have been highly loaned out to limit the risk of non-performing loans.
4.7.5 Amount of credit risk accepted by bank

This aimed at establishing the amount of credit risks that the banks approximately accepted. The results were;

**Figure 8: Credit risk acceptance**

![Bar chart showing credit risk acceptance by peer groups.](chart)

<table>
<thead>
<tr>
<th>Peer Group</th>
<th>Credit Risk Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large peer group</td>
<td>40%</td>
</tr>
<tr>
<td>Medium peer group</td>
<td>20%</td>
</tr>
<tr>
<td>Small peer group</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Source (Researcher 2012)**

The respondents in large peer group indicated that the banks allowed up to 40% of credit risk. The respondent in medium peer group indicated that they allowed up to 20% of credit risk. Small peer group respondents indicated that they allowed up to 10% credit risk.

The respondents indicated that the amount of credit risks was highly based on the type of facility and duration and also that the appraisals based on CAMPARI since lending is mainly on character basis.

Based on the response the banks allowed the respective risks dependant on their asset base in tier 1 the banks have a higher asset base compared with tier 2 and 3 have lesser asset base.
The banks in tier 3 need to increase their asset base e.g. by merging which will help increase the asset base hence be able to allow credit risk.

With banks allowing higher credit risk then the banks are likely to have higher return as it is that the higher the risk the higher the return hence better loan performances.

The banks don’t seem to be having enough or fully effective risk mitigating strategies especially in tier 3 this way the banks fear taking the risk since they have not fully hedged the same.

With more sufficient risk mitigating strategies then its likely that the banks was willing to take higher risk which will eventually increase their overall loan performance.

4.8 Risk Reduction

4.8.1 Type of loan products

This was used to help find out the type of loan products that banks gave to the customers.

<table>
<thead>
<tr>
<th>Type of product</th>
<th>No. of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development loan</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>Asset financing loan</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Overdrafts</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Business loans</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source (Researcher 2012)

The analysis indicated that; 34% of the respondent indicated that the banks offered development loans, 24% offered asset financing loans, 21% offered overdrafts, and 21% offered business loans. The analyses indicate that development loans are highly advanced to the borrowers. This is the loan which takes long before a member clears it. This way the rate of applying is less
compared to other short term loans hence most customers prefer it due to its sufficient time of repayment that won’t subject them to much strain.

The banks also prefer it as the interest return is also more being that the repayment period is longer of which it generate more interest on loans.

Business loans are averagely advanced to the customer. These are loans granted to business so to enhance their business performances. Overdrafts are also averagely granted. This is where the customer withdraws more than is account balance to an agreed amount which he repays with an interest. Asset financing loans are also granted to the customers in an average rate.

4.8.2 How the percentage of non-performing loans inform in decision making

This aimed at establishing how the percentage of non - performing loans alerts the making of decisions on avoiding a class of customers.

Figure 9: How the percentage of non-performing loans inform in decision making

[Graph showing 98% positive alerts and 2% less help]

Source (Researcher 2012)

The highest number of respondents indicated that the percentage of non-performing loans help informing the decision on avoiding a class of customers.
The respondents indicated that if the NP loans are high on some certain category, this makes the banks feel that the best way to mitigate is to renew the cycle of that facility, assess the challenges and work towards risk mitigation which may include enforcement of recovery and going slow on lending that class of customers.

Few responds indicated that the non-performing loan technique was not highly used by the banks.

This way if the banks highly use the technique of analyzing the performing loans then they was in a position to analyze what loans category are better highly granted compared to others. Categories of loans that have less NPL then are better maximized since the bank will have mitigated risk of loss of return on interest and the principal.

The loans with high NPL then are better less granted to reduce amount of non-performing loans.

### 4.8.3 Banks diversification strategy in reducing potential credit risks

This sought to find out how well the banks are implemented the diversification strategies in reducing potential credit risks.

<table>
<thead>
<tr>
<th>Evaluations</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>good</td>
<td>21</td>
<td>56</td>
</tr>
<tr>
<td>average</td>
<td>12</td>
<td>31</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source (Researcher 2012)*
From the analysis it was concluded that the most banks were performing good in their diversification strategy in reducing potential credit risks this was enhanced by the response on the fact that most banks performed good, averages and some indicated that the banks were performing remarkably.

Some respondents indicated that the diversification strategy by banks has highly helped reduced the level of NPLs in their banks hence a remarkable return on the interest on loans as most loans are repaid accordingly and if not the risk is well mitigated. This has therefore enhanced the loan performance of banks.

The analyses on performance of banks indicate that the banks have worked and are working towards risk mitigation by use of the best strategies of curbing the credit risks.

4.8.4 The autonomy of branches to advance loans to their customers

This research seeks to describe the autonomy of banks to advance loans to their members i.e. whether they are fully autonomous or there are some restrictions.

**Figure 10: The autonomy of branches to advance loans to their customers**

![Graph showing autonomy of branches to advance loans](image)

Source (Researcher 2012)
98% of the respondents indicated that their branches were not fully autonomous in advancing loans to their customers.

2% of the respondents indicated that their banks were fully autonomous in advancing loans to their customers.

From the analysis it was concluded that issuing of advances by the banks in determined by various factors that limit it from issuing loans with high flexibility. This could be determined by factors like risk, the type of loan, repayment capability among others. Indicating that the bank should seek more risk mitigating strategies.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter aims at presenting conclusions of findings that resulted from the research. It also gives suggested recommendations that will enable banks to enhance their loan performance through efficient use of the credit risk management strategies.

5.1 Summary of findings

The research of the study aimed at investigating the credit risk mitigation strategies adopted by the commercial banks in Nairobi to improve on the loan performance. The objective of the research was to analyze the impact of the techniques foreseen in the Basel Agreement II for mitigating the risk of default on bank loans.

The findings of the research were that by means of appropriate risk mitigation measures, the residual risk on any potentially eligible asset can be equated and brought down to the level consistent with the risk tolerance of the banks.

The analysis found out that eligibility decisions were based on an economic cost benefit analysis. There was the finding that loan operations and advances were highly based on adequate collateral to help reduce credit risk.

The analysis showed that all banks at some level banks give uncollateralized loans. Though this is done by some banks others don’t e.g. Central Bank as their function and area of expertise is to implement monetary policy to achieve price stability, not to be credit risk managers.
It was found out that assets have a different risk characteristic which implies that different risk mitigation measures are needed to deal with different types of risk. The banks were seen to be highly hedging their risks in various ways. These are: risk transfer, risk retention, risk reduction and risk avoidance.

The risk mitigation measures differed in cost and most were considered to be costly since they had to be differentiated across asset types, the costs of these measures also differed. The same applied to handling costs for different assets types hence some types of collateral tended to be costly consequently.

The majority of financial institutions and banks losses stem from outright default due to inability of customers to meet obligations in relation to lending, trading, settlement and financial transactions.

It was found out that banks face losses as a result of a fall in financial value of their assets due to actual or perceived deterioration in asset credit quality during recession or crisis.

The research found out that the banks had policies and strategies that governed the loan lending. Though this existed most of the banks didn’t seem to efficiently implement the same. The banks also assumed some of the economic factors which could affect their loan performance. The banks also concentrated highly on collateral as the main security for loans which at times made the banks assume other strategies of preventing risk.
5.2 Conclusions

Summing up considerations on credit risk, it is conclusive that this kind of risk is one of the fundamental kinds of banking risks. And following this train of thought, many assumptions are rife that if credit activity of a bank is the core of contemporary banking, the risk related to it significantly influences profits or losses of the bank. Further, defining the effect of the credit risk on banking activity, there is agreement that it is the most important kind of risk within bank activities. Similarly to the whole banking risk, also for credit risk the factors influencing it are of complex character as well as multidimensional character of operating.

In reality, a bank can only adjust for risks through a variety of conventional mechanisms and strategies, but still there are no certainties. Hence, risk managers are constantly obliged to consolidate reliable risk profiles and refined mitigating processes suiting every rate of change within the environment. The other challenge is of understanding the potential risks associated with new credit products in a given business line which is heightened when firms attempt to see how those risks intersect with the risks from its other business lines. Thus, a firm may be hedging its risks or enhancing diversification by offering new products but at the same time adding to risks it already has. Furthermore, an institution has to pay attention to the behavior and performance of its risk mitigation, whose appropriateness and applicability may also vary with changes in the market. The bottom line for today’s banking institutions, particularly the largest and most complex ones, is that they must continue to monitor very carefully the embedded risks of their credit products and services, pay close attention to subtle changes in business practices that could affect the risks related to a given product, and fully understand how the risks in all their business lines intersect and combine to affect the risk profile of the consolidated entity.
5.3 Recommendations

The following were the recommendation First, Adopt risk based supervision (RBS): Effective supervision is hinged on whether the efforts are targeted at the risk areas. To this end financial market regulation need to adopt RBS to ensure that most of their efforts are directed at high risk areas. RBS will ensure that potential shocks are addressed before they threaten stability.

Secondly, Adopt the Delivery versus payment mechanisms (DVP): This will help reduce cash flows from most banks to receiving banks until allocation is completed. Investors who are able to source bank guarantees should be encouraged.

Third, Enhance the BSA (Banking Supervision Application): This is the surveillance system which enables online submission of returns by banks as well as analysis of returns as they are received. This systems ensures timely submissions and analysis and by extension decision making based on the compliance status. This was enhanced by adopting advanced ICT infrastructures.

Fourth, have a sound analysis of risk in involved credit decisions; This will help avoid harms to banks profitability. On one hand bank profits are directly related to the amount of loans granted but on other, tighter credit standard are needed to prevent losses and lower credit risks. Banks need to weigh and balance options in order not to impair its overall propensity.

Fifth, Enhance use of Basel committee capital adequacy guidelines: The guidelines aim to encourage global banking suspension to promote sound practices for managing credit risk, i.e. establishing appropriate credit risk environment, operating under sound credit granting process,
maintaining on appropriate credit administration, measurement and monitoring process and ensuring adequate controls over credit risk.

Sixth, Consideration of the conditions that collateral must meet: The lending bank must have clear rights over the collateral and must be able to liquidate or take legal possession of it in a timely manner in the event of default, insolvency or bankruptcy or otherwise defined credit event set, out in the transaction document of the borrower even if the guarantor is not in default. All the minimum requirements set out need to be met. This will reduce the credit risk in case where the collateral could end up not being sufficient enough to cater for loan granted.

Seventh, engage in business in a manner that unnecessarily imposes risk upon it: Notwithstanding the fact that banks are in the business of taking risk, it should be recognized that they need not engage in business in a manner that unnecessarily imposes risk upon it, nor should they absorb risk that can be transferred to other participants. Rather, banks should accept those risks that are uniquely part of the array of bank services.

Eighth, Credit monitoring: After the loan is approved and drawn down allowed the loan should be continuously watched over. These include keeping track of borrower’s compliance with credit terms, identifying early signs of irregularity, conducting periodic valuation of collateral and monitoring timely repayments.

Ninth, Banks should not over rely on collateral /covenant: Although the importance of collaterals held against loan is beyond any doubt, yet these should be considered as a buffer providing
protection in case of default, primary focus should be on obliges debt servicing ability and reputation in the market.

5.4 Suggested areas for Further Research

The field of Risk management is wide and further research is recommended especially on implementation and effects on risk based practices and policies towards reducing the credit portfolio at risk (PAR) in order to insulate the banks against advance loan performance.
REFERENCES


77


APPENDIX I

INTRODUCTION LETTER

Dear Respondent,

RE: REQUEST FOR RESEARCH DATA

I am a postgraduate student at Kenyatta University pursuing a course leading to a degree of Masters in Business Administration (MBA) - Finance. In a partial fulfillment of the requirements of the stated course, I am conducting a Research Project to investigate the **Credit Risk Mitigation strategies adopted by commercial banks in Kenya.**

To achieve this, your organization is one of those selected to participate in this study. I therefore kindly request you to fill the attached questionnaire to generate data required for this study. This information was used purely for academic purpose and your name and that of your organization will not be mentioned anywhere in the report. Findings of the study, shall upon request, be availed to you. Your assistance and cooperation was highly appreciated.

Yours truly

GWEYI, MOSES OCHIENG
Researcher/ Student
Kenyatta University
QUESTIONNAIRE

Dear Respondent

This questionnaire is designed to assist in the collection of data regarding credit risk mitigation strategies and influence on banks’ loan performance in Kenya. Kindly, complete it with accuracy to facilitate relevant generalizations. The information that you provide will only be used for the purpose of this study.

All the question items are either open-ended or closed ended. You are requested to select appropriate options or fill as you independently consider necessary.

1. Respondent’s bank category:
   - Large Peer Group [ ]
   - Medium Peer Group [ ]
   - Small Peer Group [ ]

2. For how long have you worked in the current position?
   - Less than 2 years [ ]
   - 2 - 4 years [ ]
   - 4 - 6 years [ ]
   - 6 - 8 years [ ]
   - 8 - 10 years [ ]
   - More than 10 years [ ]

3. How would you describe the overall risk management process implemented by your bank?
   - Complex to implement and costly [ ]
   - Easy to implement and cheap [ ]
   - Ever changing and hard to understand [ ]
   - Ever changing and easy to sustain [ ]

4. What forms of credit risk do you usually deal with in your jurisdiction?
   - Absolute default [ ]
   - Irregular repayment [ ]
   - Difficult in repayment [ ]
   - Interest rate variation [ ]
Legal interventions [ ]
Any other (specify): ……………………………………………………………………………………………

5. Kindly, indicate the extent to which you prefer the following strategies in mitigating the existing credit risks. (1-no use, 2-low use, 3-moderate use, 4-high use, 5-extremely high use)

<table>
<thead>
<tr>
<th>Risk mitigation technique</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk transfer</td>
<td>[ ] [ ] [ ] [ ] [ ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk avoidance</td>
<td>[ ] [ ] [ ] [ ] [ ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk retention</td>
<td>[ ] [ ] [ ] [ ] [ ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk reduction</td>
<td>[ ] [ ] [ ] [ ] [ ]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Do you every time insure your bank against anticipated credit risks?
Yes [ ] No [ ]

If Yes, how would you rate the efficiency of the transfer?
High [ ]
Average [ ]
Low [ ]

If No, what other options do you consider in transferring credit risks?
…………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………

7. In what ways do you involve the judicial transfers in managing your credit risks?
Arraignment in court in case of default [ ]
Confistigation of property [ ]
Threats to sue [ ]
Any other (specify): ……………………………………………………………………………………………

8. What mechanisms do you adopt to ensure that loan guarantors assist in repayment continuity?
Forceful retention of their account balances [ ]
Use of personal relations to contact defaulters [ ]
Prosecution of guarantors [ ]
Using them to give necessary information [ ]
9. Are all your advanced credits collateralized?
   Yes [ ]  No [ ]
   If Yes, what criteria do you use to ensure that collaterals’ values are maintained till completion of repayment?

10. If No, what measures do you use to avoid defaults?
    Employer commitment [ ]
    Engaging in MOUs [ ]
    Credit rating [ ]

11. What main factors do you consider before disqualifying a group of potential customers from accessing credit?

12. Kindly give the type of credits you advance to the following groups of customers:
    Permanent employed ..............................................................
    Employed on contract ............................................................
    Casual employees .................................................................
    Self-employed .................................................................

13. What factors determine the highest amount of money that you can lend to one customer/group?
    Repayment ability [ ]
    Duration for repayment [ ]
    Age of individual [ ]
    Source of income [ ]
    Any other (Specify): ............................................................

14. Do you usually relax the percentage of security to accommodate more customers in bigger credit brackets?
    No [ ]  Yes [ ]
    If No, what reasons hinder this possibility?
If Yes, what risks accompany such flexibility?

15. Do you usually vary interest rates charged on different groups of customers?
   Yes [ ]   No [ ]
   If Yes, how does this assist to manage risks?

16. Does the loan-to-deposit ratio affect your decision to manage risks in any way?
   Yes [ ]   No [ ]
   Kindly, state how if Yes

17. Is your bank’s strategy guided by a well understood retention policy?
   Yes [ ]   No [ ]
   If Yes, how would you rate how well the policy has served the overall intent of the bank?
   High [ ]
   Average [ ]
   Low [ ]

18. How would describe the bank’s diversification strategy in reducing potential credit risks?
   Very good [ ]
   Good [ ]
   Average [ ]
   Poor [ ]
   Very poor [ ]
### BANKING SECTOR MARKET SIZE INDEX

#### Large Peer Group > 5%

<table>
<thead>
<tr>
<th>Bank</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya Commercial Bank Ltd</td>
<td>14.52%</td>
</tr>
<tr>
<td>Equity Bank Ltd</td>
<td>9.98%</td>
</tr>
<tr>
<td>Barclays Bank of Kenya Ltd</td>
<td>8.90%</td>
</tr>
<tr>
<td>Co-operative Bank of Kenya Ltd</td>
<td>8.41%</td>
</tr>
<tr>
<td>Standard Chartered Bank (K) Ltd</td>
<td>7.74%</td>
</tr>
<tr>
<td>CFC Stanbic Bank Ltd</td>
<td>5.10%</td>
</tr>
</tbody>
</table>

**Sub-Total** 54.64%

#### Medium Peer Group > 1% & < 5%

<table>
<thead>
<tr>
<th>Bank</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I&amp;M Bank Ltd</td>
<td>4.09%</td>
</tr>
<tr>
<td>Commercial Bank of Africa Ltd</td>
<td>3.98%</td>
</tr>
<tr>
<td>Citibank N.A.</td>
<td>3.96%</td>
</tr>
<tr>
<td>Diamond Trust Bank (K) Ltd</td>
<td>3.77%</td>
</tr>
<tr>
<td>NIC Bank Ltd</td>
<td>3.70%</td>
</tr>
<tr>
<td>National Bank of Kenya Ltd</td>
<td>3.59%</td>
</tr>
<tr>
<td>Bank of Baroda (K) Ltd</td>
<td>1.83%</td>
</tr>
<tr>
<td>Bank of Africa Kenya Ltd</td>
<td>1.70%</td>
</tr>
<tr>
<td>Prime Bank Ltd</td>
<td>1.64%</td>
</tr>
<tr>
<td>Chase Bank (K) Ltd.</td>
<td>1.49%</td>
</tr>
<tr>
<td>Housing Fin. Co. of Kenya Ltd.</td>
<td>1.48%</td>
</tr>
<tr>
<td>Family Bank Ltd</td>
<td>1.34%</td>
</tr>
<tr>
<td>Imperial Bank Ltd</td>
<td>1.27%</td>
</tr>
<tr>
<td>Bank of India</td>
<td>1.17%</td>
</tr>
<tr>
<td>Ecobank Kenya Ltd</td>
<td>1.02%</td>
</tr>
</tbody>
</table>

**Sub-Total** 54.04%

#### Small Peer Group <1%

<table>
<thead>
<tr>
<th>Bank</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fina Bank Ltd</td>
<td>0.69%</td>
</tr>
<tr>
<td>Consolidated Bank of Kenya Ltd</td>
<td>0.68%</td>
</tr>
<tr>
<td>African Banking Corporation Ltd</td>
<td>0.63%</td>
</tr>
<tr>
<td>Gulf African Bank Ltd</td>
<td>0.60%</td>
</tr>
<tr>
<td>Giro Commercial Bank Ltd</td>
<td>0.60%</td>
</tr>
<tr>
<td>Equatorial Commercial Bank Ltd</td>
<td>0.57%</td>
</tr>
<tr>
<td>Fidelity Commercial Bank Ltd</td>
<td>0.50%</td>
</tr>
<tr>
<td>K-Rep Bank Ltd</td>
<td>0.47%</td>
</tr>
<tr>
<td>Development Bank of Kenya Ltd</td>
<td>0.46%</td>
</tr>
<tr>
<td>Trans-National Bank Ltd</td>
<td>0.44%</td>
</tr>
<tr>
<td>Habib Bank A.G Zurich</td>
<td>0.44%</td>
</tr>
<tr>
<td>Guardian Bank Ltd</td>
<td>0.44%</td>
</tr>
<tr>
<td>First Community Bank Ltd</td>
<td>0.41%</td>
</tr>
<tr>
<td>Victoria Commercial Bank Ltd</td>
<td>0.40%</td>
</tr>
<tr>
<td>Habib Bank Ltd</td>
<td>0.32%</td>
</tr>
<tr>
<td>Oriental Commercial Bank Ltd</td>
<td>0.31%</td>
</tr>
<tr>
<td>Credit Bank Ltd</td>
<td>0.28%</td>
</tr>
<tr>
<td>Paramount Universal Bank Ltd</td>
<td>0.28%</td>
</tr>
<tr>
<td>Middle East Bank (K) Ltd</td>
<td>0.26%</td>
</tr>
<tr>
<td>Jamii Bora Bank Ltd</td>
<td>0.24%</td>
</tr>
<tr>
<td>UBA Kenya Bank Ltd</td>
<td>0.16%</td>
</tr>
<tr>
<td>Dubai Bank Kenya Ltd</td>
<td>0.15%</td>
</tr>
<tr>
<td>Charterhouse Bank Ltd</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

**Sub-Total** 9.32%

**Grand-total** 100.00%

Source: Banking Supervision annual report, 2011