A SURVEY Oh CRKDIT RISK MANAGEMENT PRACTICES BY COM MI- R< IAL BANKS IN KENYA

BY

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A MANAGEMEN I RESEARCH PROPOSAL SUBMIT! ED IN PARTIAL **FULFILLMENT OF** THE REQUIREMEN i s **FOR THE** DEGREE OF **MASTER** OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI

OCT OBER 2008

..KM**[81]*[1]-

DECLARATION

This research projcct is my original work and has not been presented lor a degree in any other university.

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This project has been submitted for examination with my approval as the university supervisor.

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ACKNOWLEDGEMENT

The succcssful completion of this work is a culmination of handwork, sacrifice and dedication not just on the part of the researcher hut on many other people, who in various ways gave me their support as i undertook the research and wrote this project I would have not made it this far without your support and encouragement.

1 would first extend my sincere and heartfelt gratitude to my parents: The Ngari's who encouraged me on every step during the course of my study. 1 o you I salute you and say thank you. The journey of this study would not have been easy w ithout your unwavering support.

I would also extend my gratitude to my lecturer, James Karanja, who guided me through the project and whose positive criticism made the final product of this research, a hcttcr product that would enrich the body of knowledge in this field.

To the other wonderful people; Mambo. colleagues at work and friends who in one way or the other helped me realise this goal, to you i say your efforts, assistance and encouragement was not in vain, thank you and may God bless your lives.

Finally but most important to i thank THE ALMIGHTY GOD. nothing is possible if it is not in your plans.

DEDICATION

To the Ngari family.

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ABSTRACT

Effective credit risk management has gained increased locus in the reccnt years, largely ilnc to the fact that inadequate credit risk policies are still the main source of serious problems within the hanking industry.

Managing credit risk thus remains an essential and challenging corporate function. I he chief goal of an effective credit risk management policy must be to maximize a banks risk adjusted rate of return by maintaining credit risk exposure within acceptable limits. Moreover, banks need to manage credit risk in the entire portfolio us well as the risk in individual credit or transactions.

The research seeks to determine the credit risk management practices among commercial banks in Kenya. The specific areas of research were geared towards identifying the sources of credit risk exposures in banks and identifying the measures and strategics that the banks in Kenya have adopted to monitor and mitigate against the credit risk exposures inherent in the operations of their business.

To facilitate the attainment of the objectives of this study, questionnaires were administered to the credit risk managers and credit managers of the respondent banks. I he response rate was thirty two (32%) per cent. Research findings were further presented and discussed using tables and bar graphs.

From the study, it was found that in most banks credit risk management was organized in units within the credit management department with persons responsible lor credit risk management reporting to the credit manager. Most banks did not have an autonomous credit risk management department. Qualitative loan assessment methods were found to be the most prevalent methods in making crcdit granting decisions while liquidity run on

the borrower, credit concentration and adverse trading by the borrower were the main sources of credit risk among the banks in Kenya In addition, most banks were found to use loan diversification, bank guarantees and bank covenants to mitigate against credit risk

The main challenges and limitations encountered during the research were lack of adequate time to follow up potential respondents, suspicion from some respondents over the confidentiality of data disclosed and the lack of adequate local literature and research materials on the subject of credit risk management.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Commercial banks are financial intermediaries. Financial intermediaries are firms that deal with the mobilization of funds from savers and the accumulation of the same in pools for disbursement to those requiring funds for investments. (Gordon ct al. 2002)

Banks exist because of their ability to transform financial claims (deposits) of savers efficiently into claims to borrowers; a bank's ability to evaluate information and control and monitor borrowers' allows n to translorm these **claims** at the lowest possible cost to all parties. Banks accept the crcdit nsk on these loans in exchange lor a fair return sufficient to cover the cost of funding to savers and the credit risk involved. (Comett and Saunders. 1999)

A banks asset aie grouped into four major categories; cash ;uid balances due from depository institutions, investment securities, loans and leases and other assets. Loans arc the major items on a banks balance sheet and generate the largest flow of revenue income. On average loans constitute between fifty and seventy per cent of a banks total assets. However, loans arc also the least liquid asset item and the major source of credit risk and liquidity risk for most banks (Cornell and Saunders. 1999)

landing represents the heart of banking industry. I.oans arc the dominant asset at most banks; they generate the largest share of operating income and represent the banks greatest exposure. (Omutundc, 2002)

I oan management is ihe crux of all bank management problems, while financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax crcdit standards lor borrowers and counterparties poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to deterioration in the credit standing of a banks counterparties. This experience is common in both in CHO and non G-10 countries (Basel consultative paper, 1909)

For most banks, loans arc the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a hank and banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans. (Robinson and Barry. 1987)

The crcdit risk lor banks consist of the amounts owed by borrowers on loans for both interest payments and loan principal repayments, and also for customer's debts and other transactions such as swaps, letters ol crcdit, perfonnance bonds or Ibrward rate agreements (FRA's). (Coyle. 2000)

Credit risk is most simply defined as the potential thai a bank borrower or counterparty will fail to meet its obligations in accordance with the agreed terms. The goal of credit risk management is to maximize a banks value by maintaining credit risk exposure within acceptable parameters. Banks evaluate transactions in the light of existing portfolio rather than only in tlx: light of the covariance risk with an overall market portfolio. (Fight, **2004)**

Credit risk is calculated on the basis of possible losses from the crcdit portfolio Potential losses in the credit business consist of the expected losses and Ihe unexpected losses.

p.xpectcd losses arc derived from ihc borrowers expected probability of default and ihc predicted exposure at default less the recovery rate while the unexpected losses result from deviations from the expected losses. (Basel consultative paper. 1999)

Credit risk arises because some bank borrowers may not be able to repay back their loans. Moreover many of these loans are made to borrowers whose risk is difficult to assess and whose performance is difficult to monitor. That is they are characterized by the asymmetric information of adverse selection and moral hazard Success in making these loans depends on a banks ability to produce information about these borrowers ;ind structure their loans appropriately. (Ritter ct al. 1996)

The likelihood of default is the central component and forms the foundation of the potential rationales for conducting risk management. Its most obvious manifestations are the cxpocted cost oflinanci.il distress tluit arc key argument for managing risks in a bank, particularly when viewed from cost benefit perspective, but also because it influences almost all other components of the business. Therefore value gains seem to be most profound when a bank tries to avoid costs of financial distress via risk management. (Schroeck. 2002)

The size of crcdit risk is the amount that could be lost if the risk were to be realized, and non-payment or late payment occurred I he maximum potential loss is the full amount of the debt in the event of non-payment by the customer. With a trade debt, non-payment would result in a loss of the full amount. A default on a bank loan would create a loss of the unpaid debt principal plus any over due. unpaid interest. (C'oyle. 2000)

Banks need to manage the credit risk inherent in the entire asset portfolio as well as the risk in individual credits or transactions. The effective management of credit risk is a

critical component of a comprehensive approach lo risk management and essential to the long ten[1'] success of any commercial bank. (Dodic ct al, 2005)

rhc Basel committee asserts that although specific credit risk management practices may **differ** among bunks depending on the nature of and the complexity of their credit activities a comprehensive credit risk management program should address the following areas

i). Establishing an appropriate credit risk management environment.

ii). Operating under a sound credit granting process.

Hi). Maintaining an appropriate credit administration, management and monitoring process,

iv). Ensuring adequate controls over credit risk.

These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, adequacy of provisions and reserves, and disclosure of credit risk.

1.2 PROBLEM STATEMENT

The fundamental objective ol bank management is to maximize shareholders wealth This goal is interpreted to mean maximization of the market value of a firms shares, wealth maximization in turn requires that managers evaluate the present value of cash Hows under uncertainty with larger, near term cash flows preferred when evaluated on a risk adjustment basis. In terms ol profit maximization it appears to suggest that managers simply invest in assets dial generate the highest gross yields and keep costs down. However, profit maximization dillers with wealth maximisation. To obtain higher yields, a bank must take on increased risk or lower operating cost. Wealth maximization requires

the manager to evaluate and balance the trade ofT between the opportunity for higher returns and the probability of not realizing those returns. (SchaclTcr. 2000)

For banks, good loans are the most profitable asset and as with any investment, extending loans to businesses or individuals involves taking risks to earn higher returns. The most prominent risk assumed is the credit risk (MacDonald and Koch. 2006). Globally, more than 50% of total risk clement m banks and financial institutions are credit risk alone.

Managing credit risk thus remains an essential and challenging banking function. The chief goal of an effective credit risk management policy must be to maximize a banks risk-adjusted rate of return by maintaining credit exposures within acceptable limits. (Lcpus, 2004)

For most people in commercial bunking, lending represents the heart of the industry. I .oans are the dominant asset at most banks; they generate the largest share of operating income, and represent the bunks greatest risk exposure. I'oor lending policies have led to financial fiascos resulting into the collapse of a number of banks due to had loans. Ranks need to identify, measure, monitor and control default risk and determine how to hold capital against these risks. (Edwards, 1997)

Since exposure to credit risk continues to be a major issue in contemporary financial management, credit managers need to adopt appropriate mitigation measures to curb the risk. Most of the credit problems reveal a basic weakness in credit granting and the monitoring process. These problems can be avoided by formation of an effective internal credit process. (Brealy and Myers, 1988)

A Kinks economic performance, and hence value, depends on the quality of services provided and the efficiency of its credit risk management. Additionally, credit risk

management is also perceived in praclicc lo be necessary and critically important to ensure the long term survival of bunks. (Schroeck, 2002)

It is on this premise tliat the study undertakes u critical analysis of credit risk faced by commercial banks and strategies for controlling and managing this risk that the banks have adopted. Bonks forms the driving force on which the economy thrives A banking crisis in the economy is a recipe for economic crises in a country whose adverse cffccts could bring the economy to its knees.

1.3 OBJECTIVES OF THE STUDY

The broad objective of the study is to determine the credit risk management practices among commercial banking institutions in Kenya. The specific objectives that arc to enable the broad objectives to Iv: achieved are:

i). To identify the sources of credit risk exposures among commercial banks in Kenya.

ii). To determine the measures and strategies that banking institutions in Kenya have adopted to monitor and mitigate against credit risk inherent in the operations of their business

1.4 JUSTIFICATION OF THE STUDY

fhe goal of credit risk management is to maintain a banks credit risk exposure within parameters set by the board of directors and senior management The establishment and enforcement of internal controls, operating limits and other practices will help ensure that credit risk exposure do not exceed levels acceptable to the individual bank. Such a system will enable bank management to monitor adherence to the established credit policies

I1\c findings of this research will be of importance lo the following people among others:

i) The management of commercial banking institutions in Kenya in the management of credit risk exposure inherent in their organizations. ITic study will among other things highlight the critical success factors that managers should take into consideration in the establishment and enforcement of credit risk controls in their organizations. The study will lurthcr present a framework for credit risk control which banks can benchmark against then practices.

li). Ihe management ot micro-finance institutions in Kenya who operate in a similar environment and whose findings of the research can be replicated in the management of credit risk exposure in their organizations.

iii) Borrower* who will benefit from insights on the information requirements that are used in the assessment their credit worthiness Tliese way borrowers will be able to assess their accessibility to credit and where need be re-align their asset portfolios to meet the requirements of the banks Borrowers will gain valuable knowledge on factors that inllucncc their accessibility to credit facilities.

iv). Scholars with an interest in the subject of study. The study will form a basis for conducting further research on the subject. The study will add to the body of knowledge lll the finance discipline.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 ROLE OF COMMERCIAL BANKS

Banks arc financial intermediaries. Financial intermediaries arc firms thai borrow from savers and lend to companies or individuals thai need resources for investments (Gorton **ct** al, 2002). Banks undertake the following roles:

2.1.1 Provision of Liquidity

Firms with economically desirable projects might want funds to finance these projects, but might not know where to go to find willing lenders. Similarly savers might have funds that they would be willing to invest for a suitable return, but might not know where to find firms which want to borrow and would offer such return. Banks are an obvious place to go, when a saver has funds to save or lend, and a borrower wants to obtain more funds. (Lepus, 2004)

Banks accept deposits and use these deposits to lend to individuals and organizations. Commercial banks accept small deposits from savers and accumulate them to enable lend large amounts according to the needs of borrowers. Consequently this eliminates the need i

for an individual to waste time and incur costs looking for each other. I his solves the problem of coinciding of the amount the lender has to lend and the amount the borrower needs to borrow (Cargill, 100])

| enders tend to want to ▷e able to realize their investment and get their money back at fairly short notice. Borrowers, on the other hand, tend to want loans for fixed terms with predictable repayment schedules Ranks provide maturity transformation, bccausc savers arc able to lend their money with the option to withdraw at short notice and yet borrowers are able to raise loans for a fixed term with a predictable repayment schedule. (Lcpus, **2004)**

Banks are able to obtain short term funds and lend these funds for long term projects. Banks collects deposits with short term maturity but use these deposits to give loans with long term maturity. A banks needs only to estimate its daily customer requirement and any thing above this can be lent out as long term loans.(Hempel and Simonson. I *>98)

2.1.3 Risk Transformation

When a lender provides kinds to a borrower he must accept a risk that the borrower will be unable to repay. Banks provide risk transformation when a saver puts money into a bank, his savings are secure provided that the bank is financially sound. 1'hc bank is able to bear the risks ol lending because of the wide portfolio investments it should have. (Lcpus. 2004)

2.2 CLASSIFICATION OF LOANS

Although commercial banks makes loans, the types of loans they make and the characteristics of these loans differ considerably. A commercial bank chooses its loan portfolio in light of its liability sources and customer needs. Loans can be classified

according to lhc l.vPe 0< 1,10 horrowcr> 4)l 'he loan proceeds, type of security or maturity- (Block and Hirt, 1992)

(lie following type of overview of loans is organized according to type of borrowers:

2.2.1 Commercial Loans

Commercial loans consist of commercial and industrial loans, loans to financial institutions and obligations (other than securities) to states. Commercial loans appear in many forms but typically finance short term uses such as a limn, working capital needs and construction expenses in which the borrower has obtained a commitment for long **temi** financing from another dealer, or long term uses such as new equipment purchases and plant expansions or other legitimate business purposes (Schaeffer, 2000)

Bunks bargaining strength is severely diminished when dealing with large corporate customers Large corporations iire able to disinter mediate, issue debts and equity directly in the capital markets: they typically maintain relationships with several banks and have significant expertise. This makes interest spreads and fees relatively small. (Mayo. 2004)

2.2.2 Consumer Loans

Consumer loans include those negotiated directly with individuals and for household, family and other personal expenditures and those obtained indirectly through the purchase of retail paper. Their usual purpose is to finance the purchase of durable goods, although many individuals borrow to finance education, medical care. ;uid other expenses. (Schaeffer, 2000)

Consumer loans arc more risky because banks are frequently asked to assume the credit risk of an individual whose cash flows require considerable analysis and oflcn backed with incomplete accounting. In general, an individual borrower's default risk is greater than a commercial customer's. Consumer loan rates are thus higher to compensate for the greater losses. (Fight. 2004)

2.3 MANAGEMENT OF CREDIT

The individual steps in the loan approval process and their implementation have a considerable impact on the risks involved with loan approval. The risk drivers in carrying out lending and rating process shape the loan decision process. The errors encountered in practice most often include substantive errors which comprise the erroneous assessment of loan exposure despite comprehensive and transparent presentation and procedural errors which may take the form of the procedural-structural design of the loan approval process or the wrong presentation of the loan exposure. (Mayo, 2004)

Due to the considerable differences in the nature of various borrowers and the assets to be financed .is well as the large number ol products and their complexity there cannot be a uniform process to assess credit risks. ITiercforc it is necessary to differentiate the loaning decision process (Block and llirt, 1992)

2.3.1 The Loaning Decision

The loan decision process depends on whether a loan is to an individual or to a business. Loan decisions for the two types of loans are substantially different, but there ure important similarities. For both types of lending, Loan decisions are based on character (the borrowers desire to repay the loan as promised), capacity (the customers ability to

repay the loan) and collateral (the assets that can be sold if the customer defaults and the collection efforts fail) (Yeagcr and Seitz. 1989)

Ilic loan decision involves risk and profitability. I he object is not to minimize default losses but to create the most value, which involves trade off between risk and profitability. (Ritterct al. 1996)

The fundamental objective of commercial and consumer lending is to make profitable loans with minimal risk Management should target specific industries or markets in which lending officers have expertise. The somewhat competing goals of loan volume and loan quality must be balanced with banks liquidity requirements, capital constraints and rate of return objectives (MacDonald and Koch. 2006)

A prime focus of the banks credit analysis should be an assessment of the customer's liquidity. There is no single item of information, such as a single financial ratio which shows whether a company or individual is a good credit risk or not. The analyst must assemble a variety ol information, both financial and non financial to make a well reasoned assessment of the risk involved in giving credit to a customer. (Bodic cl al, 2005)

Tlw sale extension of credit depends on complete and accurate information regarding every detail of Uie borrower's credit standing. A lending policy should define the financial statements requirements for business and individuals at various borrowing levels und should include appropriate guidelines for audited, non-audited, interim, cash flows and other statements (Kabiru. 2002)

Since exposure to credit risk continues to be the leading source of problems in banks worldwide, banks and their supervisors should be able to draw useful lessons from past

experiences. Banks should now have a keen awareness lo identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they arc adequately compensated for risks incurred (Basel consultative paper, 1999)

2.3.2 Elements of Loan Decisions

2.3.2.1 I he Loan Terms

Selection of the appropriate terms of the loon is a vital step in establishing the bank[1]' customer relationship, because this together with the credit limit decision determine not **only** the required rate of cash flow but also the volume of business (Bass, I9<)8)

A banks loan terms specify the repayment terms required of all its loan customers. The **loan** terms cover two things; the interest rate applicable and the loan period. The stipulations under which a bank extends loans to customers are called the loan terms **(Pandcy,** 1995)

2.3.2.2 Lines Of Credit

Banks while extending credit to customers may have different limits set by the bank on the amount of credit that will be extended (Archer, et al. 1983)

According to Coyle. 2000. the limit that the bank sets on the amount of credit to be extended reflects the following:

i). Character: the character of the borrower will be a prime factor in any lending decision. Banks are ollen willing lo lend on the assurance ot a particular person, management team or company name. The character ot the borrower can be judged through his past record and. or through a personal interview.

Ability: ability is in the context of whether the borrower has the ability to enter into a legal contract with the bank to borrow. This helps in the credit analysis to determine the creditworthiness of the borrower based on the legal capacity of the borrower that the bank can take action incase of default,

jjj). Means: means or capacity refers to the borrower technical, management and financial abilities in order to operate profitably and succeed in business or earn money to finance repayment

iv). Purpose: the purpose of granting credit must be clear and acceptable to the lender.

v). Amount of loan the amount of loan must be consistent with the purpose for which the money is required. It should not exceed the capacity of the customer to repay in lull and 011 time.

vi). Repayment the source of repayment must be known before any loan is granted. The ability to repay is vital and evidence of this ability ideally should be demonstrated by the borrower's cash flow projections for the future

vii). Insurance: insurance for borrowing refers to security. Security is often the reassurance of an alternative source of repayment incase the customers plan go WTong and the loan cannot be repaid faun the intended source.

2.3.2.3 Repay men t Policy

I he bank's repayment policy is the set of procedures for collccting loans advanced as they fall due. The effectiveness of the policy can be partly evaluated by looking at the level of default loan expenses. Default losses depend not only on the repayment policy but also on which the extension of credit was based (Gitman. 1997)

1 oa" collection efforts expend the bank's resources. Given the terms of the loirn established by the bank, varying degrees of intensity of collection efforts can be undertaken to induce borrowers to conform to the agreed upon terms. Generally the use **of less** strict loan terms will produce loans to customers who are less likely to pay on agreed terms and more likely to cause default losses Avoidance of default losses from **less** creditworthy customers will require a more extensive and expensive collection effort. (Archer. 1983)

2.3.2.4 Credit Standards

The bank's credit standards arc the minimum requirements for extending loan to a customer. Understanding the key variables that must be considered when a bank is contemplating relaxing or tightening its credit standards will give a general view of the kind of decisions involved (Gitinan, 1997)

Credit standards arc criteria to decide the types of borrowers to whom loan would be **advanced** (Pandey, **1995). I** he bank may have light credit standards where it extends loans only to the most reliable and financially strong borrowers; such standards will result to low default rates and less cost of administration. On the other Inuid less stringent standards will result to high default levels and high administration costs. 1 hus the choice **of** optimum credit standards involves trade off between incremental return and incremental costs.

A perfect set of credit standards would reject only those borrowers who ultimately would not repay their loans, or those who would pay them with such prolonged delay that the collection costs would be prohibitive. (Archer, ct al. 1983) unfortunately, banks can not **know** the future with certainty. With every borrower granted loan by the bank, the risk

exists that the loan will not be repaid I"he problem of the firm is to utilize objective facts and subjective information to predict the loan repayment behavior of the prospective borrower and rcducc the risk of non-payment to acceptable level.

2.3.3 Loan Assessment

According to Coyle. 2000. the purpose of loan assessment is to control the risk in loaning decisions. A loan assessment provides a basis about whether loan should ⊱e granted or not Continuing assessments can then help the crcdit manager to monitor the customers account.

Loan assessment can be obtained externally, from specialist agencies, or carricd out in-housc by a banks own staff (Coyle. 2000)

Each bank should develop, with the approval of its board, its own risk strategy or plan that establishes the objectives guiding the bank's loan granting activities and adopt necessary policies and procedures for conducting such activities. (Bagchi, 2006)

In order to assess the credit risk, it is necessary to take a close look at the borrower's economic and Icgul situation .is well as the relevant environment. Ihe quality of loan approval processes depends on Iran sparent and comprehensive presentation of risks when granting the loan on one hand and an adequate assessment of these risks on the other hand The level of efficiency of the loan approval process is an important element. (Fight, **2004)**

2,3.4 Methods of l.onn Assessment

2.3.4.1 Credit Rating

Banks use a company's credit rating in deciding what rate of interest to charge on new borrowing by a company and to set limits on the value of transactions with the company. A rating is a guide to the investment risk Tins is the probability that investors will rcceivc interest payments in full and on time and repayments of the principal as the loan matures (Coyle. 2000).

Credit ratings have gained widespread acceptance, outside investment analysis banks can look at credit rating lor the debt securities of a company and to decide whether to led to that company and if so al what interest rale. (Coyle, 2000)

According to Omoiunde. as many institutions define their internal rating process dilfcrently, it is fundamental that minimum standards are established for the approval of internal ratings, the hasic elements lor a robust credit risk management process include; credit culture, rating modcl(s), credit policy, people, risk review and credit forum.

2.3.4.2 Credit Scoring

Credit scoring is a method ol loan assessment that uses statistical lecluiiqucs. based perluips on financial ratio analysis, for measuring the likelihood or probability thai an applicant for u loan will pay or repay in full the and on lime (Coyle, 2000) A credit scoring system is based on identifying the key attributes of an applicant for loan, to which weightings or points can be applied to derive a credit score. A proper credit scoring system is one that is statistically sound, demonstrably reliable and regularly validated. It

should have a high level of predicative ability in distinguishing between applicants who will pay punctually and those who will not.

variety of factors influence a customer's credit worthiness. This makes credit investigation a difficult task A firm may use credit scoring to appraise credit applications when dealing with a large number of small customers. The firm based on past experience or empirical study, may identify both financial and non-financial attributes that measure credit standing of a customer (Pandy, 1995)

2.4 SOURCES OF CREDIT RISK

2.4.1 Over Trading By the Borrower

Over trading occur.", when a company is overextending its resources, and try ing to support too much business volume with little capital funding A typical symptom of overtrading is an increasing reliance on trade credit and a bank loan to support a rapid increase in stock level and unpaid debtors. A business that depends increasingly on short term credit, taking longer to pay suppliers and tax bills, and extending its loans eventually will suffer a cash flow crisis Unpaid creditors could demand immediate payment, or the bank could withdraw loan facilities (Coyle. 2000)

2.4.2 Adverse Trading by the Borrower

Companies with a high fixed cost base and that are operating in a market where sales volume is volatile, are potentially vulnerable and a high credit risk. Companies whose costs are largely fixed are vulnerable to any downturn in sales. If sales volume falls, income will be less, but costs will remain at much the same level. Profits and net cash flows therelbre would be lower (Coyle, 2000)

2.4.3 Liquidity Run On a Borrowers Business

Occasionally, for unexpected and unforeseeable reason, a company could suffer loss of an income source or a step-up in spending. An adverse occurrence or rumor can sharply reduce the sales volume of a company or the entry to the market by an unexpected competitor could adversely affect the sales and cash flows of a firm. Events such as these constraints a company's cash flows, even if the loss of income or higher spending is short-lived. Although a lending bank cannot predict a run on a company's liquidity, it can assess whether the company could have sufficient liquidity or access to extra funds to survive any setback to its cash flows (Coylc, 2000)

2.4.4 Credit Concentrations

The Basel committee asserts that concentrations arc probably the single most important source of credit problems Credit concentrations are viewed as any exposure where the potential losses are large relative to the banks capital, its total assets or. where adequate measures exist, the banks overall risk level. Concentrations would include concentrations of credit to single borrowers, counterparties, or a group of connected counterparties, scctors and industries or concentrations based on common or related risk factors.

The current nature of credit concentration problems, especially involving conventional credit concentrations, raises the issue of why banks allow concentrations to develop. First, in developing their business strategy, most banks face an inherent trade off between choosing to specialize in a few key areas with the goal of achieving a market leadership position and diversifying their income streams, especially in some volatile market segments. This trade-off has been exacerbated by intensified competition among banks and non-banks alike for traditional banking activities. Concentrations appear most

frequently to arise becausc banks identify "hot" and rapidly growing industries and use overly optimistic assumptions about an industries future prospect. Banks seem most susceptible to overlooking the dangers in such situations when tliey are focused on asset growth or market share. (Coyle. 2000)

2.4.5 Creative Accounting

Creative accounting is a term used to describe the use of corporate accounting that put a misleading gloss on a company's reported financial position. Profits can be made to seem larger, assets can seem more valuable, and liabilities sometimes can be hidden and kept off balance sheet. Creative accounting techniques include capitalizing interest costs within fixed assets costs ;uid capitalizing development costs as fixed assets instead of charging the costs against profits (Coyle, 2000)

According to Coyle, credit managers should be aware that many companies will lake advantage of opportunities of creative accounting if they exist and therefore credit managers should be able to identify signs that a company is using creative accounting.

By "creative accounting" companies have caused financial statements to be materially misleading by overstating revenues and assets, understating liabilities and giving disclosures that are misleading or that omit important information. Generally, fraudulent financial statements show financial performance and ratios that are belter than the company's own history. (Robertson and l.ouwers, 1999)

2.4.6 Excessive Capital Commitments by Borrower

Companies might take on excessive capital commitments and sign contracts for large-scale expenditures. If the company is unable to honor its commitments, it could be forced

into liquidation. I ending banks and suppliers of trade credits often arc unable to control a companies excessive spending, but can try to monitor it by looking at the most recently published accounts of a company for example where capital expenditures must be disclosed (Coylc, 2000)

2.4.7 Kaully Credit Analysis

A bank can make a bad lending decision, not because of an expected change in the borrowers circumstances, but because the borrower was a high risk from the on set. The original lending decision could lie flawed. There is always some risk of bad decisions on the basis of information available, but the frequency of bad loans can be contained by means of a structured approach to lending by trained stalT (Coylc. 2000)

Many credit problems reveal basic weaknesses in the credit granting and monitoring processes. While short comings in underwriting and management ol market related credit exposures represent important sources of losses at banks, many credit problems would be avoided or mitigated by a strong internal credit process (Basel consultative paper, 1999). Many banks find carrying out a thorough credit assessment a substantial challenge, l or traditional bank lending, competitive pressures and the growth of loan syndication teeliniqucs create time constraints that interfere with basic due diligence.

2.4.H Character of the Borrower

Character refers to the borrower's honesty and trust worthiness. An analyst mast assess the borrower's integrity and subsequent intent to repay. (Fight, 2004)

Occasionally, a borrower can dcccivc a lender, with the deliberate intention of creating a bad debt. Lenders need to be wary of this possibility and try to make judgment from objective information about the borrower's character (Coyle, 2000)

2.5 MODELS OF MEASURING CREDIT RISK

2.5.1 Altaian's Z- Score

F. I. Altman developed a z-scorc model for analyzing publicly traded manufacturing firms The indicator variable (Z) is an overall measure of the borrowers default risk classification. The variable (Z) depends on the values of various financial ratios of the borrower (X,) and the weighted importance of these ratios based on the observed experience of defaulting versus non-defaulting borrowers derived from a discriminate analysis model.

The Z-scorc technique lor forecasting corporate failure is well established because of its ability to measure both profitability and balance sheet strength simultaneously. It provides a very powerful index of financial performance. The model is developed by computing a sample of ratios front both insolvent and solvent companies. Then, by using a statistical technique known as multiple discriminate analyses, a solvency model is created by determining the particular ratios which best separate the two groups of companies, together with their coefficients. It is by integrating these dimensions.

appropriately weighted into n single performance measure lliat the resultant solvency model produces an accuratc and unbiased measure of corporate health,

AltmuTs Z-scorc model is given by:

$$7 = \mathbf{I}.2X, +1.\text{-}1X.+3.3X, +O.6X4+\mathbf{I}.OX5$$

Where: Xi= working capital/ total assets ratio

Xj=rctaincd earnings/ total assets ratio

Xi=earnings before interest and taxes/ total assets ratio

Xj market value ofequity/ l>ook value of long term ratio

X_5 sales/ total assets ratio

The higher the value of the Z-score the lower the borrower's default risk classification. According to Altman's credit scoring model, any firm with a Z-scorc less than 1.81 should be considered a high default risk.

2.5.2 The PAS -Score

This is simply a relative ranking of a company based on its Z-score in a particular year lll percentage terms on the scale I to 100 e.g. A PAS-scorc of 50 indicates that a company's performance in the year lll question is average. The Z-scorc tells one if a company is at risk or not while the PAS-score puts the historical trend and current performance lll perspective. I he power of this approach to solvency appraisal and performance analysis is derived from its ability to combine the key characteristics of both the profit and loss account and the balance sheet into a single performance rating, {kallberg and Parkinson. 1993)

2.5.3 K\1V Model

rhc model uses the option pricing model of a firm's equity price to extract implied asset volatility (risk) of a given firm (a), Using the implied value of risk for assets, the likely distribution of possible assets values of the firm relative to its current debt obligations can be calculated. I"hc expected default risk frequency reflects the probability that the market value of a lirms assets will fall below the promised repayments on debt liabilities in one year. If the value of the firm's assets falls below its debt liabilities, it tan be viewed as being economically insolvent. Simulations by KMV have shown that this model out performs the Z-score model. (Kallberg and Parkinson. 1993)

2.5.4 Monte Carlo Simulation

Monte Carlo simulation estimates derivatives credit exposure using a diffusion models to generate different future paths (j) for the markets variables (X,). The simulation can evolve many different portfolio " paths" based on these variables. Each complete history will result in an exposure profile lor each instrument which can be averaged over all paths to calculate the exposure profile. The expected exposure is simply the arithmetic mean of the calculated exposure at time (t) lor each path j.

t (exposure (l)) - l/N £ max |0.0 (X, (T))J

Where: 0 is the contract

N is the number of probable paths j

J, is the probable path I

T is any given time

X, is the market variables.

2.5.5 Pricing Credit Risk

Kallbcrg and Parkinson. 1991 assert that to formalize the relationship between the risk evaluation process and the return estimation of return in any one period setting there is a need to develop a model which assumes the following notation:

$$P - 1+R/1+K$$

Where: P is the probability that the debt obligation will be paid

K is the promised yield

R is required yield

The interpretation of this is thai a debt needs to have a I »R/I »K percent chance of repayment before it makes sense to extend the risky credit.

If/, is the present value |>ortion of debt that can be recovered upon default e.g. if debt is secured by a high quality collateral, then one would expect X to be nearly one. Using the same logic as above then:

$$X(1+K)(1-P)+P(1+K)=1\ 'R$$

The first term represents the value of debt obligation incase of default and the second term represents the value incase of no default, rewriting the expression

$$P = (I \bullet R) - X< 1\ K)M\ 1 - K\ XI - M$$

The above means that the debt only need ((1+R) - X (1+K)/ (I tKH1- X)) chance of payment before it makes sense to grant credit.

2.6.1 Migration Analysis

A method hy which banks measure loans concentration risk by tracking credit ratings of firms in particular sectors tor unusual declines Risk migration analysis is a probability based measurement concept for credit risk. The concept considers upgrades and downgrades in the credit quality of a subset or entire loan portfolio as well as the potential for significant financial stress and/ or loan default. Lending officers track the performance of various sectors in the economy and if the performance of the sector declines by a substantial amount than usual, the bank curtails or reduces lending to that sector. (Bagchi. 2004)

The concern of migration analysis is the economic conditions or environment within which the borrower's firm operates. Hence, data on the historical losses and past due loans will only be a good representation of the quality of loan portfolio if similar conditions exist in the future. Changes in general economic conditions and a firm's operating environment alter the cash flow available for debt service. (Mayo. 2004)

2.6.2 Concentration l imits

According to Lcpus, (200-1) the model requires that management to set some external limit on the maximum amount of loans that it will make to an individual borrower, industry or specific locale. The bank determines concentration limits on the proportion of the loan portfolio that can go to any single customer by assessing the borrower's current portfolio, its operating unit's business plans, its economic projections and its strategic plans. Typically, banks set concentration limits to reduce exposures to certain industries.

Concentration limit is given by:

Concentration limit maximum loss as a percentage of capital • 1/loss rate-

Where the loss rate is the experienced default rate.

2.6.3 Loan Portfolio Diversification

Loan portfolio diversification is the extent that a bank holds widely traded loans and securities as assets. A banks management can use portfolio diversification to measure and control the aggregate credit risk exposure The manager estimates the expected return s of each loan in the banks portfolio. The manager can then compute the expected return (Rp) on a portfolio of assets as:

Rp— /?,

And the variance of returns or risk of the portfolio ($f>^{:}_{p}$).

$$\delta_p^2 = \sum_{i=1}^{n} X_i^2 \delta_i^2 + \sum_{i=1}^{n} \sum_{j=1}^{n} X_i \quad X_j \delta_{ij}$$

Where R_p= the cxpected or mean return on the asset portfolio.

R, the mean return on the i^{lh} asset in portfolio.

Xrthe proportion of asset portfolio invested in the i^{lh} asset

5:~ the variance of returns on the i^{Ul} asset

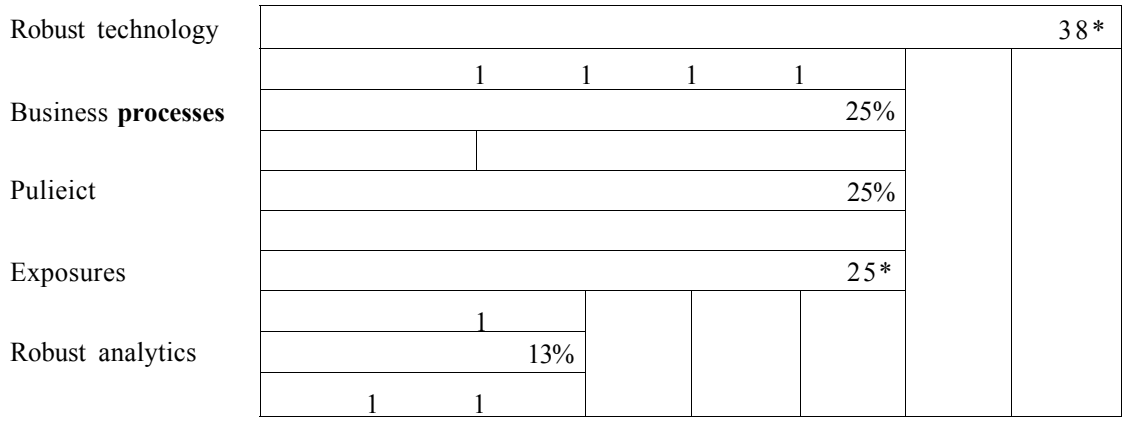
5,j~ the covariance of returns between i^{lh} and i'^{h} assets

The fundamental of the diversification model is that by taking advantage of its si>c. a bank can diversify considerable amounts of credit risk as long as the returns on the different assets are imperfectly correlated.

2.7 COMPONENTS OF CREDIT RISK MANAGEMENT

According to Lepus. (2004) effective credit risk management is a critical component of a hank overall risk management strategy and is essential to the long term success of any hanking organization Overall, the components of effective crcdit risk comprise active Board and senior management oversight, sufficient policies, procedures and limits; adequate risk measurement, monitoring and management information systems; and comprehensive internal controls.

In a survey by Lepus. (2004) of the industry participants on the key components of effective crcdit risk management, responses of eight banks interviewed were as follows:



A robust technology was thought to help banks identify measure, manage and validate counterparty risk, although it was thought to be of little value without effective credit risk policies and business processes in place. Technology was said to aid in active portfolio management and assessment and to facilitate management of information in an efficient and effective way. In addition a comprehensive and strategic vision was thought as vital as it sets guidelines for business, giving rise to effective credit risk management. These

guidelines includc a set of general principles thai apply to all credit risk situations as well as specific principles applicable to some countries and types of counterparties and'or transactions. Further the ability to measure, monitor and forecast potential credit risk exposures across the entire firm on both counterparty level und portfolio level ws critical Ffliciant and accurate credit analytics were also said to be vital as they enable risk managers in banks to make better and more informed decisions.

2.8 EMPIRICAL LITERATURE

A number of studies have looked at the credit risk management practices lll different parts of the world. Some of these studies carried out in Kenya and outside Kenya arc as follows:

2.8.1 Previous Studies Carried Out In Kenya

Mwirigi, (2006) in her survey approach examined the credit risk management tecluiiques adopted by microfinance institutions in Kenya. The study reveals that; a significant number i.e. 92 per cent of the respondents used credit management policies as a basis of objective credit risk appraisal. 67.5 per cent had distinct departments where credit activities are organised, 67.5 per cent involved their institutions in the development of credit risk management policies and that 87.5 per cent used prc-sct credit risk levels as a means of managing credit risk In conclusion she identifies credit risk as the most important risk with 80 per cent of the respondents ranking it as the most important among other risks faced by their institutions. She further concludes that despite of this credit risk management among these institutions was not well developed with most banks not adopting quantitative techniques to measure risk.

Yusuf. (2005) in a survey approach examined the operational risk management by commercial banks in Kenya. The study indicates that quantification of risks into various categories was not widely practiced by Kenyan commercial banks, the research findings indicate that only sixteen (16) out of the total twenty two (22) banks surveyed had segregated risks into various categories and that only a few of these banks used various models to quantify risks In addition the study notes that a Central Rank of Kenya survey of July 2005. published in the daily nation indicated that only seventeen (17) banks of the total banks registered in Kenya had set aside funds to cover against risk management activities and only ten (10) out of the seventeen (17) had submitted adequate and consistent risk monitoring reports. In conclusion the study undertakes that in Kenya banks do not necessarily make an anempt to predict the degree of occurrence of risks

Mathara, (2007) in a study of the response of National Bank of Kenya ltd. to the challenge of non-performing loans identifies the following factors to have led to high levels of non-performing loans in the bank; lack of adequate credit policy guidelines, poor credit risk management practices, use of qualitative methods of loans assessment and poor monitoring and evaluation systems. In conclusion the study indicates that the absence of a regularly updated credit policy and the inadequate monitoring of loans to have led to a rising portfolio of non-performing loans and the fuilure by the bank to notice the increasing default late of the borrowers Further the study concludes that the reliance of the bank on qualitative credit analysis methods that entailed such factors as character of the borrower, reputation of borrower and the historical financial capability of the borrower as opposed to the use of quantitative techniques that emphasized on the

borrower's projected cash flows nnd analysis of audited financial books of account to have contributed immensely to the non-performing loan portfolio.

2.8.2 Previous Studies Carried Outside Kenya

Arunkumar (2005) in a case study approach examined the risk management in commercial banks in India He observed that evaluation techniques like the Altman's '/-• score model. J.P. Morgan credit matrix and Zcta analysis were not in use in India, he further suggests that employees of Commercial banks in India were not given enough training to cnhance their conceptual understanding of credit risk and for improving their skills in handling the risk In addition the study suggests that the availability of comprehensive data for credit evaluation was far from satisfactory among commercial banks in India and that that the overall credit risk management performance of commercial banks in India as compared against the standard set out under the Basel Capital Accord was not satisfactory I lie study concludes that credit risk management practices among commercial hanks in India do not meet the standards set out under the New Basel Capital Accord and that there exist no marked differences between public sector banks and private sector banks as regards their credit risk management performance.

Anbar (2006) in his survey approach of the credit risk management in Turkish banking sector observes that; eighty five (85%) per cent of the twenty banks out of the forty eight banks registered in turkey as at January 2006 that responded had a credit risk management sub-unit under the risk management unit, eighty (80%) had a written credit risk policy and fifteen (15%) percent were in the process of developing a written credit risk policy, thirty five (35%) percentage used the expected loss, unexpected loss and the

value at risk quantitative measures of credit risk while thirty (30%) percent used the portfolio credit risk model' software to measure credit risk. In a addition the study reveals that ninety (90%) percent of the bunks used an internal credit rating and a credit scoring model in credit risk analysis and credit risk measurement and that fifty (50%) per cent, thirty five (35%) and live (5%) per cent of the banks used collateral method, credit limit and diversification credit nsk management tools in their credit risk management In conclusion the study observes that banks in turkey have considered risk management more important, but credit risk management was not at the desired level and there are some shortcomings and problems in credit risk management, lack of sufficient data about credit measurements inputs being one of these problems

Lepus (2004). in a survey of the best practices in strategic credit risk management in USA observes that: sixty three (63%) per cent of the eight banks interviewed employed Monte Carlo method of credit risk measurement while sixty three (63%) per cent, fifty (50%) and thirteen (13%) pei cent employed VaK. KMV and expected and unexpected models of measuring credit risk.

2.9 THt BANKING ACT CHAPTER 488. REGULATORY FRAMEWORK

2.9.1 Limits on Advances, Credits and Guarantees

i). An institution shall not in Kenya grant any person or permit to be outstanding any advance, credit facility or give any financial guarantee or incur any other liability on behalf of any person, so that the total value of the advances, credit facilities, financial guarantees and other liabilities in respect of that person at any time exceed

twenty five percent of its core capital other than with the exemptions approved by the central hank and the exemptions as per the Act.

ii). Institution shall not in Kenya grant or permit any advance or credit facility against the security of its own shares or any unsecured advances in respect to its employees or their associates, or any advances, loans or credit facilities which arc unsecured or partially secured to any of its officers or associates or any person of whom or of which its officeis has an interest as an agent director, manager or shareholders or to a person of whom or of which any of its officers is u guarantor.

iii). Grant or permit to be outstanding any advance, loan or credit facility to any of its directors or other person participating in the general management of the institution unless such advance, loan facility is approved by a full board of directors and is made in the normal cause of business and the institution has notified the central bank.

iv). Grant any advance or credit facility or give guarantee or incur any liability or enter into any contract or transaction or conduct its business or part thereof in a fraudulent or reckless manner or otherwise than in compliance with the provisions of this act.

2.9.2 Restrictions on Atlvanees for Purchase of Land

No institution, other than a mortgage finance company, shall make loans or advances for the purchase, or improvement or alteration of land, so that the aggregate amount of those loans or advances exceeds twenty five percent of the amount of its total deposit liabilities, or as per the exemptions as per the act (See cap. 488, subsection 14.)

2.10 PRINCIPLES FOR THE CREDIT RISK MANAGEMENT ISSUED BY THE BASEL COMMITTEE ON BANKING SUPERVISION

llic Basel committee on hanking supervision stipulates the following principles as necessary principles for monitoring and assessing credit risk, exposures in banking institutions.

i) Establishing an appropriate credit risk environment

The board of directors should have a responsibility for approving and periodically reviewing the credit risk strategy and significant credit risk policies of the bank The strategy should reflect the bans tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks.

Senior management should have the responsibility for implementing the credit risk strategy approved b> the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk.

Banks should identify and manage credit risk inherent in all its products and activities.

ii) Operating under a sound credit granting process

Banks must operate under sound, well defined credit granting criteria. These criteria should include a thorough understanding of the borrower or counterparty, as well as the purpose and structure of the credit, and its source of repayment.

Banks should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in a comparable and meaningful manner different types of exposures.

Banks should have a clearly established process in place for approving new credits as well as extension of existing credits.

iii) Maintaining an appropriate credit administration, measurement and monitoring process

Ranks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.

Banks must have in place a system for monitoring the condition of individual credits and develop and utilize internal risk rating systems in managing risk and have information systems and analytical techniques that enable the management to measure the credit risk inherent in all activities.

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

iv) Ensuring adequate controls over credit risk

Banks should establish a system of independent, ongoing credit review and the results of such reviews should ▷e communicated directly to the board of directors and senior management

Banks must ensure that the credit granting function is being properly managed and that credit exposures arc within levels consistent with prudential standards and internal limits. They should also have a system in place for managing problem crcdiLs and various workout situations.

v) The role of supcr\isor*

Supervisors should require that banks have an effective system in place to identify, measure, monitor and control credit risk as pan of an overall approach to risk

management. Supervisors should conduct an independent evaluation of a bank's strategics, policies, pracliccs and procedures related to the granting **of** credit and the ongoing management of the portfolio

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

I he research design adopted was the survey design. A questionnaire was administered in order to collect data.

3.2 POPULATION

The population comprises all commercial banks registered as per the regulations of the Banking Act chapter 488 and the Central Bank Act of Kenya chapter 491 as at May 31, 2008. Hie study was limited to these organizations due to their sound capital base and the extent of geographical area of operation that exposes them to dilTcrent types and levels of risk exposure

3.3 SAMPLE

I"he research focused on all commercial banks registered as per the regulations of the Banking Act chapter 488 and the Central Bank Act chapter 491 as at May 31. 2008 due to the readiliness in availability of data and information The study focused on banks of a good standing with the Central Bank of Kenya and thus the credibility in their operations. This discriminated against those commercial banks that were under the statutory management of the Central Bank of Kenya in the period of study of the research.

3.4 DATA COLLECTION

The data collection methods comprised the following.

i). Primary data: information on the credit and credit risk management practices by commercial banks was obtained by administering a questionnaire that solicited information relating to the operations of their credit risk departments or units and their mitigation measures to credit risk exposures inherent in their operations.

ii). Secondary data: data and information was extracted from the published reports of commercial banks which were readily available at the Central Bank of Kenya.

3.5 DATA ANALYSIS

Data was analyzed using descriptive statistics such a percentages and tabulations with the help of the SPSS package An analysis was also carried out on the credit risk management approaches of different banks. Factor analysis was used in order to rank factors considered in their order of importance. Comparative analysis was carried out to identify any differences in approaches used by the various commercial banks in Kenya.

CHAPTER FOUR

4.0 ANALYSIS OF'I'HE DATA, INTERRELATION AND DISCUSSION

4.1 RESPONSE RATE

Questionnaires were administered lu forty four (44) commercial banks in Kenya which were registered as per the regulations of lite Banking Act chapter 488 and the Central Bank Act of Kenya chapter 491 as at 31 May, 2008. Responses were received from fourteen (14) banks which represents a response rate of thirty two 02%) per cent The response was composed of eleven locally owned banks, two foreign owned banks and one other bank that was partially locally and foreign owned

4.2 PRACTIC ES OF CREDIT RISK MANAGEMENT

Tire key objective of this study was to identify the credit risk management practices among commercial banks in Kenya. Il»e factors in consideration were, the organisation of the credit risk management operations and the measures and strategies that the banking institutions in Kenya adopted to manage, monitor and mitigate against the credit risk that was inherent in the operations of their business. Additionally the research sought to identify the factors that were considered as the source of crcdit risk exposures among the commercial banks,

4.2.1 ORGANISATION OK CREDIT RISK MANAGEMENT

Overall, the components of effective credit risk management comprise an active Board of Directors and senior management oversight, sufficient policies, procedures and limits, adequate risk management, monitoring and internal controls.

In this regard, the research sought lo find out the organization of the credit risk management operations among hanking institutions in Kenya.

In response, ninety two point nine (92.9%) per cent of the banks had a formal credit risk management department or unit, with a partly seven point one (7.1%) per cent having no formal credit risk management department or uml. Among the banks with a formal credit risk management unit or department, the credit risk management was organized as a unit within the credit management department with fifty seven (57%) percent of the banks with formal credit risk management units having the person in charge of the credit risk management reporting to the credit manager and only fourteen point two (14.2%) per cent of the banks having an independent credit risk management department completely autonomous from the credit department with the person in charge of the department being a senior manager with the title of either the credit risk manager or director risk management. However, in overall the credit manager, director of risk and the credit risk managers who were the persons responsible for credit risk management in these banking institutions reported directly to the top management of their banks thus an indication of the importance of credit risk management in the banking institutions.

4.2.2 CREDIT RISK MANAGEMENT POLICIES

Eighty five point seven (85.7%) per cent of the respondent banks had a formal credit risk management manual that set the policies and guidelines in credit risk management. Ihc

manual was drafted with a high involvement of the Board of Directors and senior management of these organisations and a fairly low involvement of the other employees and third parties as represented in the table below:

Table 4.1 Level of involvement in drafting the credit risk manual

Person involved	Score	**Maximum Score**	**Percentage Seore**	**Mean**	**Rank**
Board of directors	62	70	88%	4.4	1
Senior management	59	70	84%	4.2	2
Other employees	45	70	64%	3.2	3
Ilurd parties	34	70	48%	2.4	4

I he above table summarizes the response of commercial banks in terms of the level of involvement in the formulation of the credit risk manual with the level of involvement graded as "highly involved" (5), "involved" (4). "fairly involved" (3), "least involved" (2). and "not involved" (1) Since the total number of respondents was fourteen (14). and the maximum score was five (5). the maximum score attainable is seventy (70). From the above table the involvement of the Board of Directors and senior management were highly rated with a mean score greater than four implying that they were highly involved in the formulation of the credit risk management manual compared to the other employees and third parties with a mean score of three point two (3.2) and two point four (2.4) respectively thus being ranked as fairly involved and least involved in the formulation of the credit risk management policies.

In response to the review ot credit risk management policies a majority of the banks representing sixty four point three (64.3%) percent of the respondent banks reviewed their policies annually while twenty one point four (21.4%) per cent of the banks reviewed the credit risk manual on a quarterly basis with the remaining fourteen point three (14.3%) per cent reviewing their policies on a need basis

4.3 MANAGEMENT OF CREDIT RISK

Tire research also sought to find out the loan assessment methods and techniques, factors considered in granting credit, persons responsible for credit risk assessment and factors considered as the major sources of credit risk within the banking industry in Kenya.

In response, fifty seven point one (S7.1%) per cent of the banks were found to use qualitative loan assessment methods as compared to twenty eight point six (28.6%) and fourteen point three (14. >%) percent of the banks that used either quantitative techniques or a combination of both qualitative and quantitative techniques respectively to assess loans for purposes of making the decision to grant loans to borrowers or not. Internal credit ratings and credit scoring loan techniques were the most prevalent methods among the banks that used quantitative techniques of loan assessment with forty two point eight (42.8%) per cent and thirty five point seven (35.7%) per cent of the banks using credit scoring and internal credit rating loan assessment techniques respectively to make credit granting decisions while a partly twenty one point five (21.5%) of the banks used credit ratings and other bank specific techniques.

In response to the factors considered in the decision to grant credit the following factors were rated as follows:

I able 4.2 Factors, considered in making credit decisions

Factor	score	Muximu in score	Perccntag cscore	Mean	Rank
Character of the borrower	68	70	97%	4.8	3
Capital	69	70	99%	4.9	2
Capacity to pay	70	70	100%	5.0	1
Conditions	54	70	77%	3.8	5
Collateral	57	70	81%	4.1	4

The tabic summarizes the ranking of the factors considered in the decision to grant credit. The capacity to repay the loan was identified as the most critical clement in the decision to grant credit with a score of one hundred (100%) per cent and a mean of five (5) out of five (5), this implies that all the respondent banks rated the factor as highly important. Other factors that were ranked as highly important are capital or the financial soundness of the borrower with a score of ninety nine (99%) per cent and a mean of four point nine (4.9) mid the character of the borrower with a score of ninety seven (97%) per cent and u mean ol lour point eight (4.8). Collateral was rated as important with a score of eighty one (81%) per cent and a mean of four point one (4.1) while bunk conditions were rated as fairly important with a score of seventy seven (77%) per cent and a mean of three point one (3.1). 1 he ranking of these factors indicates their importance in mitigating against bad loans thus contributing to the optimal management of credit risk in the banking institutions.

Overall the factors considered in granting credit were rated as follows:

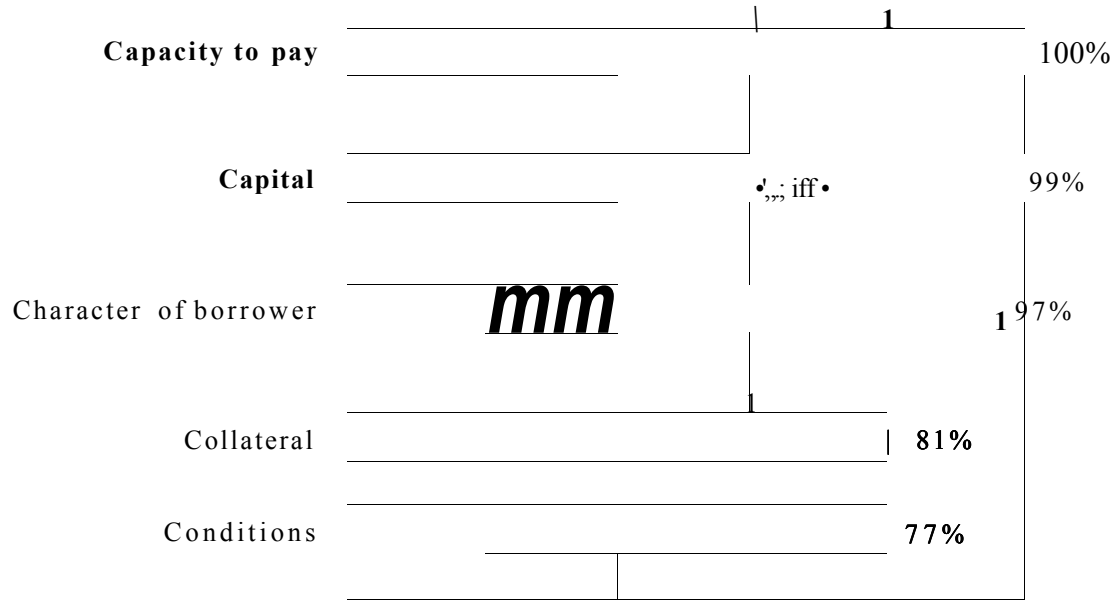


Figure 4.1 Factors conidcrcd in granting credit

In response to the factors that were considered as sources of credit risk in commercial banks the following responses were observed:

Fable 4.3 Sources of crcdit risk

Source of credit risk	Score	Maximum score	Percentage score	Mean	Rank
Creative accounting	56	70	80%	4.0	7
Credit concentration	64	70	91%	4.6	2
Excessive capital commitments by borrower	60	70	86%	4.3	4
Faulty crcdit analysis	58	70	83%	4.1	6
Adverse trading by borrower	62	70	89%	4.4	3
l iquidity run on borrower	66	70	94%	4.7	1
Over trading by borrower	60	70	86%	4.3	4

From the table, liquidity run on a borrowers trading was considered by ninety four (94%) per cent as the main source ofcredit risk among the commcrcial banks in Kenya Credit concentration and adverse trading by the borrower were also ranked as highly important with a score ofninety one (91%) per cent and eighty nine (89%) per cent respectively. Other factors, namely. over trading by the borrower and excessive capital commitments by the borrower were ranked as important considerations as sources ofcredit risk with a score of eighty six (86%) per cent Faulty credit analysis and creative accounting were considered fairly important as sources of credit risk with a score of eighty three (83%) percent and eighty (80%) percent respectively.

Overall the sources of credit risk were ranked as follows:

Figure 4.2 sources of credit risk

In response to monitoring of the credit risk levels, scenario analysis was ranked the most common technique with forty two point eight (48.2%) per cent ofthe respondent banks using the method to monitor the credit risk levels in their organisations compared to twenty one point four (21.4%) per cent und seven point one (7.1%) per cent of the banks

using value at risk (VAR) and the Alimans Z-Score methods to monitor the credit risk levels in their organisations respectively. Monte-Carlo simulation method was not common with hanks lll Kenya with only seven point one (7.1%) per cent of the banks using the method. The remaining respondent hanks representing twenty one point six (21.6%) per cent used internally developed methods to measure and monitor credit risk levels.

In response to credit risk ceiling levels, ninety two point nine (92.9%) per cent of the banks had credit risk ceiling levels of which forty one point seven (41.7%) per cent monitored the levels on a monthly basis, twenty five (25%) per cent on quarterly basis and fourteen point three (14 3%) on an annual basis respectively.

In response to the credit risk management techniques the following techniques were ranked as follows:

Table 4.4 credit risk management techniques

Risk management technique	Score	Maximum score	Percentage score	Mean	Rank
Ix>an diversification	61	70	87%	4.4	1
Concentration limits	57	70	81%	4.1	4
Bank covenants	58	70	83%	4.1	3
Guarantees	60	70	86%	4.3	2
Credit insurance	53	70	76%	3.8	5
Migration analysis	47	70	67%	3.4	7

From the above table, loan diversification was the most common credit risk management technique with eighty seven (87%) per cent of the respondent banks using the tcchniquc. In addition, guarantees and bank covenants were also widely used with eighty six (86%) per cent and eighty three (8 *%) per cent of the respondent banks using the techniques to manage the credit risk levels in their organisations respectively.

In overall the above credit nsk management techniques were ranked as follows:

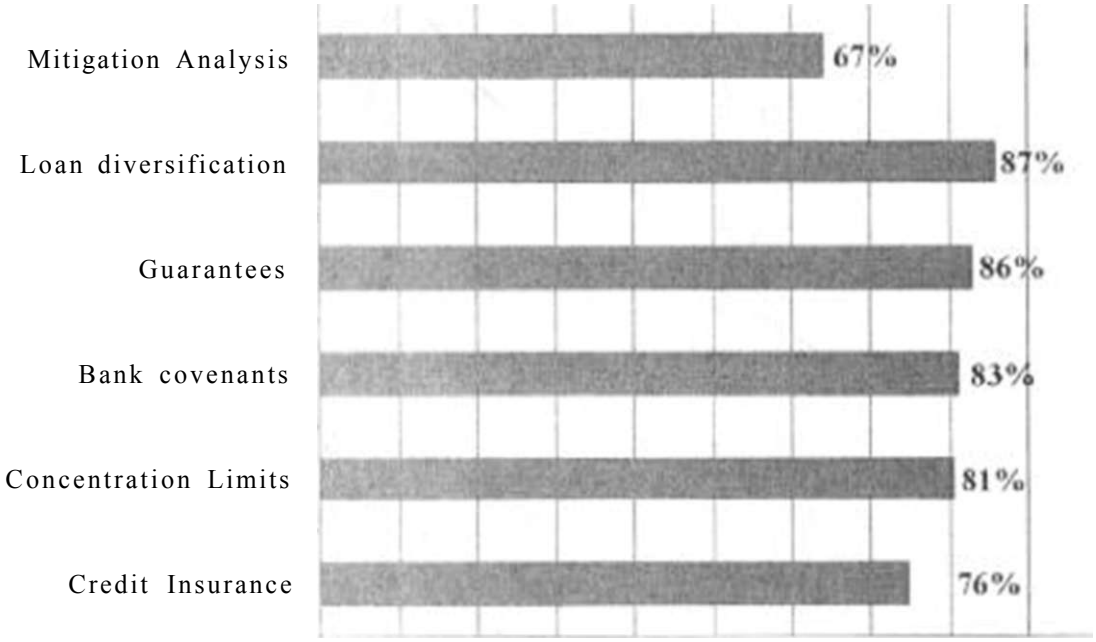


figure 4.3 credit risk management techniques

CHAPTER FIVE

5.0 SUMMARY AND CONCLUSIONS, LIMITATIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 SUMMARY OF FINDINGS

I he research findings have identified the credit risk management practices among commercial hanks in Kenya. I he findings have further identified the extent of use of the various methods and techniques of loan assessment, credit risk evaluation, management and monitoring in Kenya.

5.1.1 ORGANISATION OF CKKDIT RISK MANAGEMENT

Credit risk management operations in Kenya were generally organized as units within the credit management department. I (owever, the hoard of directors and senior management within these organisations were highly involved in the formulation and management of credit risk management policies. In addition most banks had a formal credit risk management manual which implies that credit risk management was considered as an important factor in the management of the banking institutions in Kenya.

5.1.2 Management of credit risk

The most important factor considered in granting loans was the capacity to pay. Banks needed the assurance that amounts granted as loans and the interest accruing on these loans would be paid. Other factors considered as important were the Financial soundness

of the borrower (capital) and the character of the borrower. These factors focus on the borrowers' ability and the willingness to repay the loan

Other factors that were given a lair consideration in the decision to grant loans are collateral and the conditions by the bank.

In regard to the sources of credit risk, the liquidity run on the borrower was considered the most critical source of credit risk. Other factors that were also considered as major sources of crcdit risk were credit concentration and adverse trading by the borrower. Excessive capital commitments by the borrower and over trading by the borrower were also considered as fairly important factors as sources of crcdit risk among the banking institutions in Kenya.

In mitigating against credit nsk, loan diversification was the most common method among banks in Kenya. Other methods that were also prevalent are guarantees and bank covenants. Concentration limits and credit insurance was also fairly used in some banks.

5.2 Conclusions

Best practice in credit risk management should demonstrate centralization, standardization, timeliness, activc portfolio management and efficient tools for managing exposures. By constantly enhancing existing tools and methods, banks arc able to work towards achieving best practices. Furthermore consistent, accurate and reliable data is required in order to achieve best practice in credit risk management.

Centralization of credit risk management, autonomous credit risk management departments and effective ciedit measurement, monitoring and management tools are therefore the key factors whose proper implementation would assist a bank attain the desired mitigation against credit risk inherent in the banking sector.

5.3 Limitations of the study

5.3.1 Suspicion

Some of the respondents were suspicions about the study and declined to fill the questionnaires despite promising to do so. I hesc respondents feared that the confidentially ofcertain information about their banks may be exposed to competitors and other parties. I his fear was in spite of the respondents not being required to necessarily disclose the identities of their banks. In addition, each questionnaire was attached with an assurance letter to the respondents that their responses would be treated with ultimate confidentiality and solely for academic purposes.

5.3.2 Time

I he time available lor the study was limited especially on the time available for data collection. Given more time, additional efforts would have been made to pursue those potential respondents who never filled the questionnaires.

5.3.3 Cost

Constant follow-ups were made to ensure that the respondents filled the questionnaire. This made the study more expensive than planned for.

5.3.4 l.ack of adequate local literature material

Researches on the subject of credit risk management practices in the banking industry were few and little literature on the international arena was also available on the subject, in addition much of the literature obtained related to the developed economies whose circumstances may be different from that ofa developing market like Kenya.

5.3.5 Personal versus company views

It was difficult to verify if the information obtained through the questionnaires represented the true proceedings in the respective banks or a manipulation of information to represent what the respondent felt as representing the ideal practices that should be put in place.

5.4 Recommendations

5.4.1 Enhance availability of literature review material

I he University of Nairobi should take a concerted effort to enrich the literature available in the library through, lor example, acquisition of latest journals in finance, economics, periodicals and books on the subiect of finance. I his will greatly assist future researches in finance and related disciplines.

5.4.2 Sensitization to companies and the public on the importance of research

A concerted effort should be made by universities, the government, the private sector and other interested parties to sensitize employers, companies mid the general public on the importance of research and the need to co-operate with researchers and assist in building a body of knowledge. This would largely increase response rate and accuracy of research findings.

5.4.3 Research sponsorship

Due to the ever increasing cost of conducting research, universities should consider allocating or increasing the funds allocated tu research students. This would enable more extensive research to be conducted and thus arrive at more conclusive findings.

5.5 Suggestions for further research

The research focused on commercial hanks as a subset of the financial instimtions in Kenya Based on this the following are the recommended areas for further research:

i). A study can be conducted on the credit risk management practices among micro finance institutions in Kenya.

ii). A study can be conducted on credit risk management practices on the financial sector in Kenya as a whole.

iii). A study can be conducted in the Fast African region which is faced by almost similar conditions willi those lacing banking institutions in Kenya.

iv). A study can ⊳e conducted on the relationship between the credit risk management practices and the profitability levels among the commercial banks in Kenya.

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LETTER TO THE RESPONDENT

Dear sir/madam.

RF.: RESEARCH PROJECT

I am a post-graduate student at the faculty of commerce. University of Nairobi. In fulfillment of the requirement for the award of the degree of masters of business administration (MBA) 1 am currently undertaking a research project on A SURVEY 01 THE CREDIT RISK MANAGEMENT PRACTICES AMONG COMMERCIAL BANKS IN KENYA. I request you for your assistance by filling the questionnaire attached to the best of your ability.

I he information provided will be used solely for academic purpose and at no instance will the name of your bank be named in the report. The information will be treated in absolute confidence.

Yours faithfully

Evans M. Ngare

MBA student

0722265897

Supervising lecturer,

James karanja.

Lecturer, department of accounting. UON.

QUESTIONNAIRE

SUCTION 1: General Information

a) Name of the bank (optional)

b) Which of the following most accurately describes your bank?

Locally owned I 1 foreign owned I I

Other (spccify)

c) How many branches docs your bank have within Kenya?

I - 10 I I II - SO I I Over 50 I I

SECI ION 2: Organisation of Credit Risk Munagcmcnl.

a) i) Docs your bank have a formal credit risk management department/ unit?

No I I. Yes I I

ii) If yes. what is the title of the person in charge of credit risk management?

b) Who does the person responsible for credit risk management report to?

c) Docs your bank have a formal credit risk management manual?

No I I Yes I I

d) What is the level of involvement of the following persons in formulating credit risk policies?

	Not Involved	Least Involved	Fairly Involved	Involved	Highly-Involved
Board of Directors	●	●	●	●	●
Senior Managcmen	●	●	●	●	●
Other Employees	●	●	●	●	●
ITtird Parties	●	●	●	●	●

Others (specify)

c) How oflcn (regularly) does your bank review credit risk policies?

Monthly I I Quarterly I I Semi-annually I I

Annually 1 1 Others (specify)

SUCTION 3: Management of Credit Risk

a) What is the level in relative percentage (%) terms of the following assets in your bank compared to the total bank assets?

Non-current loans | J Current maturing loans (J Investment securities |)

b) What is the level of loaning in relative percentage (%) temis ot the follow ing type of loans?

Commercial Loans | | Consumer Loans | J

c) Who is responsible lor credit risk in y our bank?

Credit Risk analyst Credit Analyst d J

Credit risk Manager I I Credit Committee I I

Branch Manager f 1 Other (specify)

d) i) Which of the following most accurately describes your loan assessment methods?

Qualitative I 1 Quantitative I I

ii) If quantitative, which of the following methods arc used for loan assessment?

Credit Ratings I I Credit Scoring I I internal credit ratings I I

Others (specify)

e) How docs your bank rate (consider) the following factors in the decision to grant credit?

	Not Important 1	Least Important 2	Fairly Important 3	Important 4	Highly Important 5
Character of borrower	●	●	n	●	n
Capital (I'inancial soundness)	●	●	●	●	●
Capacity to pay	●	●	●	●	●
Conditions	●	●	●	●	●
Collateral	●	●	●	●	●

I) How does your hank rate ihc following sources ol crcdit risk?

	Not Important 1	Least Important 2	Fairly Important 3	Important 4	Highly Important 5
Creative accounting	●	●	●	●	●
Credit concentration					
Kxccssivc capital Commitments by Borrower	●	●	●	●	●
Faulty credit analysis	●	●	●	●	●
Adverse trading by Borrower					
l iquidity run on a Borrower trading	●	●	●	●	●
Overtrading by **Borrower**					

g) How docs your bank measure the level of credit risk of their loans?

KMV model	•	Altman* Z-score	CD
Monte-carlo Simulation	I I	The Pas score	I 1
Scenario Analysis (use of historical data)	j-—j	Pricing credit risk	I 1
Value at risk (VAR) analysis	••	Other (specify)	

h) What is the level in relative percentage (%) terms the historical loss rate in your bank?

I) i) Docs your bank have set targets for credit risk ceiling levels?

No I I Yes I 1

ii) If yes. how often (regularly) does the monitoring of the credit risk levels take placc?

Weekly • Bi-weekly • Monthly •

Quarterly! I Scmi-annuallyl I Annually [ZJ

Other (specify)

j) What is the extent of use by your bank, ol the following credit management techniques?

	Not used 1	2	Least used	Fairly used 3	Used 4	Highly used 5
I.oan diversification	D		D	•	•	•
Concentration limits	n		•	•	•	•
Hank covenants	▪		▪	▪	▪	▪
(iuarantccs	▪		▪	▪	▪	▪
Credit insurance	▪		▪	▪	▪	▪
Migration analysis	▪		▪	▪	▪	▪
Credit insurance	▪		▪	▪	▪	▪

Thank you for faking lime to answer litis questionnaire

APPENDIX 3

LIST OF BANKS.

African Banking Corporation Lid.

Akiha Bank Ltd

Bank of Baroda (K) Ltd

Bank of India Ltd

Barclays Bank of Kenya Ltd

Charter I louse Bank Ltd

Chase Bank Ltd

Citi Bank. N. A

City Finance Bank Ltd

Commercial Bank of Africa Ltd

Community Bank ltd

Consolidated Bank of Kenya Ltd

Cooperative Bank of Kenya Ltd

Credit Agricole Indosucz

Credit Bank Ltd

Delphi's Bank Ltd

Development Bank of Kenya I td

Diamond Trust Bank Kenya Limited

Dubai Bank Ltd

Fquatotial Commercial Bank Ltd

Equity Bank Ltd

family Bank Ltd

Fidelity Commercial Bank Ltd

Finn Bank Ltd

First American Bank of Kenya I .ltd

Giro Commercial Bank I td

Guardian Bank Ltd

Gulf African Bank ltd

llabib Ag Zurich

Habib Bank Lid

Imperial Bank Ltd

Industrial Development Bank Ltd

Investments and Mortages Bank Ltd

Kenya Commercial Bank Ltd

K-Rep Bank Ltd

Middle Hast Bank of Kenya Ltd

National Bank of Kenya I id

National Industrial Crcdit Bank Ltd

Paramount-Universal Bank Ltd

Prime Bank Ltd

Sourthern Crcdit Banking Corporation Ltd

Stanbic Bank Kenya I .td

Standard Chcrtcrcd Bank I td

Transnational Bank Ltd

Victoria! Commercial Bank Ltd