

**CREDIT RISK MANAGEMENT MODELS BY COMMERCIAL BANKS IN  
NAIROBI KENYA**

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## DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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## ABSTRACT

Credit risk management models include the systems, procedures and control which a company has in place to ensure the efficient collection of customer payments and minimize the risk of non-payment. The high level of non-performing loans is a challenge to many commercial banks in Kenya, which is evidence that commercial banks are faced by a big risk of their credit. Commercial banks are vital institutional framework for national development because they contribute about 50 percent of the Gross Domestic Product. Lending in commercial banks is the main source of making profit hence need for efficient credit risk management practices within the industry.

With the objective of determining the credit risk management in the Kenya Commercial banks the study will establish the best strategies to adopt and how they are applied in assessing and evaluating credit risk to minimize non performing loans. It will also obtain information on problems of credit management in Kenya

The research used a descriptive survey of the commercial banks in Kenya with a population of 48 commercial banks that were registered by CBK in 2007. Primary data was collected using a questionnaire from senior managers who have been in the industry for at least five years. The data was analyzed data and presented in frequencies and percentages, which was represented in tables, bar charts and pie charts.

The study concluded that most banks are foreign and they have a credit policy that is reviewed frequently. Although the credit management is technical and consumes a lot of time the employees are trained regularly and manual used to create awareness. Different measures or models are employed in credit risk management like the quantitative method to checks the client's ability to repay the loan as well as credit worthiness, terms of payment and interest to be charged, consequences in case of default, customers character, deposit and collateral.

The researcher recommends that credit risk management should be implemented in the Kenyan commercial banks as its useful in helping reduce the risk that is involved while lending to the customers This policies associated with the credit risk management have been very helpful in recovering what might not be recovered through the collateral securities or high rates hence minimizing the possibilities of a bank to fail.

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## CHAPTER ONE: INTRODUCTION

### 1.0 Background

#### 1.1.1 Risk

Risk is exposure to change or the probability that some future events will occur making the expected and actual outcomes to differ.

**Credit risk** is the oldest form in the financial markets. If credit can be defined as “nothing but the expectation of a sum of money within some limited time”, then credit risk is the chance that this expectation will not be met. (Sinkey, 2000). Lawson (1999) defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Every financial institution bears a degree of risk when it lends to business and consumers and will experience some losses when certain borrowers fail to repay their loans as agreed.

**Credit risk management** includes the systems, procedures and control which a company has in place to ensure the efficient collection of customer payments and minimize the risk of non-payment. According to Dondo, (2003), asserts that for most people in commercial banking, lending represents the heart of the industry. Loans are the dominant assets at most banks, generate the largest share of operating income, and represent the bank’s greatest risk exposure.

Loan officers are among the most visible bank employees and a banks’ loan strategies will often have a dramatic impact on how fast a community grows and what type of businesses develop. A loan is a form of debt, which is given to a customer by the Bank. There are many types of loans including corporate loans and Business loans. Corporate loans are given to Corporate customers which are registered as legal entities as per the provisions of the Companies Act, while business loans are given for business purposes where the business could be running as partnership or as sole proprietorship. In both of

these loans the primary source of repayment is the business for which the amount is borrowed (Basel Committee. 1999).

Banks have a number of conditions and procedures, which need to be met and followed before one can obtain a loan. When you apply for a personal loan the first thing you are asked to do is fill out forms that elicit a great deal of information about your personal finances (Mishkin 2004) You are asked about your salary, your bank accounts and other assets and your outstanding loans, your record of loan, credit card and charge account repayments. The lender uses this information to evaluate how good credit risks you are by calculating your credit score. The loan officer whose job is to decide whether you should be given the loan or not might even make a judgment based on you demeanor or appearance especially in the developed countries.

The main aim of these conditions and procedures is firstly to understand the borrower's character. The borrower's character will usually be researched and checked by the lender if the later is not acquainted with the borrower. Character refers to the borrower's honesty, integrity, reputation, trustworthiness and judgment. Character is in a sense synonymous with credit. Credit, which is defined as the ability to borrow money, is a valuable asset for the borrower. In fact, borrowing money can be thought of as exchanging the borrower's credit for the lender's money. A dishonest and untruthful individual or business with the reputation of lack of integrity in business dealings and sluggishness in loan repayments or meeting other financial obligations is not creditworthy. Such a borrower with unfit character would have difficulties obtaining a loan from the lender. A lender will also evaluate the applicant's judgment or decision-making ability (Kabiru, 2002).

Secondly the conditions and procedures are also aimed at assessing the borrower's capacity to repay the loan obligations. Banks will therefore require the borrower to complete a lot of paperwork that provides information regarding the borrower's commitments and cash inflows. This is seen to cause not only delays in communicating a decision to the borrower but is also seen to be asking for too much detail almost

bordering on infringing on the borrower's privacy. This is mainly because the borrower does not appreciate the need for the information (Kabiru, 2002),).

Mishkin,(2004) argued that banks processes and procedures are seen to be more or less time consuming and more transparent leading to faster decisions. However it has not been empirically proven that this could be a factor affecting growth of the personal loans sector within the Banking sector. This factor shall therefore be investigated in this proposal.

Though collateral is not a primary requirement for assessment of credit worthiness, it has long played a central role in the lending function of banks in the formal sector. It is a well-established and sound mechanism for providing the lender with a form of guarantee that the borrower will not default on repayment of the loan and the interest it accrues. By offering collateral, the borrower risks the seizure and sale of his or her property in case of failure to repay the loan. This is in itself an incentive for the borrower to respect repayment obligations, which reduces the lender's risk, thereby increasing the borrower's chances of obtaining the loan. Thus, the availability of collateral plays a major role in influencing banks' decision to lend (Mishkin, 2004)).

The availability of collateral also influences the amount that a bank is willing to lend and the interest rates at which it might lend. When the borrower can offer the lender collateral for a loan, private creditors offer larger loans, at lower interest rates, payable over longer periods of time. In many instances, compared to a debtor who cannot offer good collateral, one with such collateral can anticipate receiving six to eight times more loan, taking two to ten times longer for repayment, and paying interest rates (Metropol, 2002).

However, most of the salaried borrowers whom the personal loans sector has been targeting have no collateral to offer which becomes difficult for them to have better bargaining power. The introduction of personal loans, which do not require collateral, heralded a new era and elicited a lot of interest to the personal loans. Conditions have largely been unchanged and collateral are still not a requirement for the personal loan but

the performance in terms of growth appears to be on the decline. We shall investigate if this collateral has a material effect on the appetite to borrow (Saunders, 2002).

Commercial banks extend credit to different types of borrowers for many different purposes. For most customers' bank credit is the primary source of available debt financing. For banks good loans are the most profitable assets. As with any investment, extending loans to businesses and individuals involves taking risk to earn high returns. Returns come in the form of loans interest, fee income and investment income from new deposits. Banks also use loans to cross sell other fee generating services. The most prominent assumed risk in credit risk, many factors can lead to loan defaults. An entire industry such as energy, agriculture or real estate, can decline because of general economic events. Firm specific problems may arise from changing technology, labour strikers, shift in consumer preferences, or bad managements, individual borrowers find that their ability to repay closely follows the business cycle as personal income risk and falls. Loans as a group therefore exhibit the highest charge offs among bank assets, so banks regularly set aside substantial reserves against anticipated losses.

According to the Aron (2008) financial institutions are preparing for a possible surge in loan defaults as high inflation, rising interest rates and the economic slowdown eat directly into consumers' budgets, a leading banker has warned. Banks are also expected to start recording falling levels of savings as a consequence of inflation, putting the brakes on the funds available for further lending and investment. Double digit inflation figures witnessed in the past six months had resulted in low levels of economic activity and could soon spell doom for the financial sector if not stopped. It became clear that a number of banks are working on measures to cushion their operations from the impending rise in loan defaults. Barclays Bank, for instance, has started a plan in which instead of waiting for customers to remit monthly loan repayment installments, it is working with employers to deduct the amounts at the pay roll point (Aron, 2008)).

Aron (2008) asserts that the level of loan defaults is expected to rise past the average in the coming months due to recent adjustments by a number of banks of the base lending rates. The adjustments were effected early August began with Commercial Bank of

Africa's upward change of the base lending rates by 1.5 per cent from 14 per cent to 15.5 per cent on August 1. Ordinarily, an economy that is characterized by interest rates that are lower than the inflation rate results in a drop in savings rate as savers retreat from locking up funds that will be worth less, rather than more, in the future. Without increased savings, the banking sector's capacity to lend more will soon thin out marking a slowdown in growth for a sector that remains Kenya's most vibrant yet (Aron , 2008).

### **1.1.2 Banks in Kenya**

The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK), governs the Banking industry in Kenya. The banking sector was liberalised in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance's docket, is responsible for formulating and implementing monetary strategies and fostering the liquidity, solvency and proper functioning of the financial system. The CBK publishes information on Kenya's commercial banks and non-banking financial institutions, interest rates and other publications and guidelines. The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banks' interests and also addresses issues affecting its members (CBK, 2007).

Commercial bank in Kenya took root in Kenya at the turn of the 20<sup>th</sup> century with the partitioning of Africa by the European Imperial powers. The first bank to establish operation was National Bank of India which started a branch in Mombasa in 1896. by 1972, there were a total of 12 Commercial Banks operating in the Kenya- market. As at December 2007, the Banking sector comprised of 53 financial institutions with 47 commercial banks, 3 non-bank financial institutions (NBFIS), 2 mortgage finance companies and 2 building societies (Central Bank Annual Report,2004).

Commercial banks play a crucial role in an economy. Their traditional role is financial intermediation involving mobilization of deposits from surplus units in the economy and lending to the deficit units to finance their productive investments. By lending to manufacturers, farmers, distributors and traders, banks play a crucial role in the economic development of the country (Metropol, 2002). Government recognize these roles and try

to accelerate development in desired direction by influencing allocation of loanable funds through minimum lending to specific sectors guidelines.

As profit seekers commercial banks are inclined to formulate policies that aim at diversifying their portfolio and thus guaranteeing some minimum rate of return. To achieve the objective of profit maximization, banks make decisions to invest excess Cash in varying securities involving not only the amount to invest but also the types of security in which to invest. If commercial banks choose to invest in loan and advances, there is risk of default associated with these investments. Such investments potentially have negative consequences for bank earnings because some of the loans and advances to customers may end up as bad or doubtful debts. This risk may or may not be covered by the collateral securities or high rates.

The key issues affecting the banking industry in Kenya are: changes in the regulatory framework, where liberalization exists but the market still continues to be restrictive; declining interest rates margins due to customer pressure, leading to mergers and reorganizations; increase in demand for non-traditional services including the automation of a large number of services and move towards emphasis on the customer rather than the product; introduction of non-traditional players, who now offer financial services products for example M-pesa introduced by Safaricom leading to high competition.

## **1.2 Statement of the problem**

Granting credit to customers is an important activity for any lending institution, thus the importance of credit risk management models in these institutions. Lenders must therefore ensure a thorough credit risk assessment to forestall default.

The high level of non-performing loans is a challenge to many commercial banks in Kenya, which is evidence that commercial banks are faced by a big risk of their credit. Therefore credit risk management models are important for commercial banks as this, to a large extent, minimizes the possibilities of a bank failure. In particular, applying

appropriate credit risk management and evaluation techniques should proactively manage credit risks.

Commercial banks are vital institutional framework for national development. In all, commercial banks contribute about 50 percent of the Gross Domestic Product. Lending in commercial banks is the main source of making profit hence need for efficient credit risk management practices within the industry. The main cause for a commercial bank to collapse is high non-performing loans portfolio (CBK, 2005).

Weak credit risk management is a primary cause of many banks failures (McMenamin, 2000)

Hempel et al (2000) carried out a study of national banks that failed in the mid 1980 in the USA and found out that the consistent element in the failures was the inadequacy of the bank's management systems for controlling loan quality

Weak credit risk management models are a primary cause of many business (particularly small business) failures Mc Menamin (1999). Hempel et. al (1994) carried out a study of national banks that failed in the mid 1980s in the U.S.A and found out that the consistent element in the failures was the inadequacy of the bank's management system for controlling loan quality.

Research done in this area are Wanjiru (2000) who undertook a study to determine factors that influence productivity of credit officers in micro finance institutions, Rukwaro (2000) studied credit rationing by micro finance institutions and its influence on the operations of small and micro enterprises and indeed concluded that rationing impacts negatively on operations of micro and small enterprises, Kitaka (2001) who studied the use of financial performance indicators by micro finance institutions in Kenya and Mokogi (2003) who established the economic implications of lending of micro finance institutions on MSEs.

While the studies carried out so far have attempted to look at the reasons of non-performing loans in commercial banks, they do not address the strategies to be adopted to minimize loan defaulters in the industry. Hence, this study therefore aims at answering the following question what are the strategies adopted to minimize loan defaulters in Kenyan banks.

### **1.3 Objective of the study**

The objective of the study is to determine credit risk management models in the Kenya Commercial banks.

### **1.4 Importance of the study**

The study will establish the best strategies to adopt and how they are applied in assessing and evaluating credit risk to minimize non performing loans.

- 1) The study will also obtain information on problems of credit management in Kenya and the strategies that need to be put in place to solve these problems and the experience of similar organizations in the other parts of the world in solving these problems. The government is formulating policies that relate to the regulatory environment of the country as far as credit referencing is concerned. As the sector grows, the government has to come up with policies that address the various challenges within the sector, so as to reduce any resultant chaos and to facilitate faster growth with minimum drawbacks. The area of microfinance is still suffering from a dearth of information.
- 2) Research in the various component of the sector will help to unearth hitherto unknown information that will go along way in facilitating further understanding of the banks.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Credit risk

Credit risk is the oldest form in the financial markets. If credit can be defined as “nothing but the expectation of a sum of money within some limited time”, then credit risk is the chance that this expectation will not be met. (Sinkey, 2000).

Lawson (1999) defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Every financial institution bears a degree of risk when it lends to business and consumers and will experience some losses when certain borrowers fail to repay their loans as agreed.

#### 2.1.1 Credit risk management

Credit risk management includes the systems, procedures and control which a company has in place to ensure the efficient collection of customer payments and minimize the risk of non-payment.

**Credit Policy;** The management of accounts receivable essentially begins with the decision whether or not to grant credit to a customer, and if so how much and on what terms. It is consequently, the logical starting point for the examination of credit policy. The term credit policy is used to include all the company’s systems and include credit selection, credit standards, credit terms and collection policy (Arnold, 2003).

#### 2.2 Policies to Limit or Reduce the Credit Risk

**Large Exposures:** Modern prudential regulations usually- stipulate that a bank should not make investment grants, give large loans or extend other credit facilities to any individual entity or related group of entities in excess of an amount that represents a prescribed percentage of the bank’s capital and reserves. Most countries impose a single customer exposure limit of between 10-25% of capital funds (Greuning and Bratanovic, 1999).

**Related Party Lending:** Lending to connected parties is a dangerous form of credit risk exposure. Related parties create a relationship with the ability to exert control over or

influence a bank's policies and decision-making especially concerning credit decisions. Limits should be established for lending to related parties Detweiler (2004)

**Over Exposure to Geographical Areas or Economic Sectors:** It is dangerous to concentrate on granting credit to a single sector of the economy or to a narrow geographical region. This makes a bank vulnerable to a weakness in a particular industry or region and poses a risk that it will suffer from simultaneous failures among several clients for similar reasons. It is often difficult to assess the exposure to various sectors of the economy, as most banks reporting systems do not produce such information (Hampel et. al, 1994).

**Renegotiated Debt:** Detweiler (2004) these are loans that have been restructured to provide a reduction of either interest or principal payments because of the borrowers deteriorated financial position. Restructuring may involve a transfer from the borrower to the bank of real estate, receivables, or other assets to third parties for satisfaction of the loan or the addition of a new debtor to the original borrower. Sinkey, 1992 notes that bank policies should also ensure that such items are properly handled from an accounting and control standpoint.

**Asset Classification:** All assets for which a bank is taking risk should be classified, including loans and advances, accounts receivables, investments, equity participation, and contingent liabilities. Banks determine asset classifications themselves but follow standards that are normally set by regulatory authorities (Gardner et. al, 2000).

**Loans Loss Provisioning Policy:** Asset classification provides a basis for determining an adequate level of provisions for possible loan losses. Policies on loan-loss provisioning range from mandated to discretionary, depending on the banking system. In many countries, in particular those with fragile economies regulators have established mandatory levels of provisions that are related to asset classification (Basel Committee. 1999).

Measurement of Credit Risk: A Cooperative manager needs to measure the probability of borrowing default. Economists, bankers and analysts have employed many different models to assess the default risk on loans and bonds. These vary from relatively qualitative to the highly quantitative. These models are not mutually exclusive in that a bank manager may use more than one method to reach a credit pricing or loan quantity rationing decision (Gardner. et.al 2000).

### **2.3 Causes of non-performing loans**

Lending decision made in the past by lending institutions put a lot of emphasis on security than other similar important consideration .There are instances in the past when it was easier to get a loan from a financial institution as long as the borrower has security to be charged than the ability to service the loan. Cash flow projections, viability of the projects, character of the borrowers, previous loans completion and ability to repay were not considered as important. This way, a number of lending institutions ended up with many non-performing loans due too incomplete, poor and unprofessional credit risk assessment and evaluation, particularly using all the 6 C's of credit appraisal model.

This will arise when loans are not subjected to normal objective credit assessment before disbursement. This may include extending credit to businesses they own or with which they are affiliated, to personal friends and relatives among others. On the part of borrowers, this will arise when the borrowed funds are not put to the use for which the money was borrowed, but rather, the funds are diverted to other personal use such as on medication, food and school fees. This arises when update of customer information and borrowers circumstances not done frequently as a result of the lending institutions employees' inability to be close to their customers.

The required statutory notices to defaulters which are usually three in number, take seven months. Although lending institutions give sufficient notices to sell securities, costly and inefficient delays are occasioned by court injunctions given usually on the day of sale, stopping the realization (Hempel,et al,1994). This arises when a client will

borrow funds with no intention to repay, possibly because they are well connected politically and may feel protected.

#### **2.4 Strategies Adopted in managing risk**

Awarding credit is a journey, the success of which depends on the methodology applied to evaluate and award the credit. This journey starts from the application for credit and ends at the time the loan from the credit process is fully repaid. Like any human journey, the credit management process has got smooth paths, impediments and detours before the destination is reached. Therefore, credit needs to be effectively controlled for it to succeed eventually. Credit control can rightly be said to start when the client walks into the office. If during the discussion with the client, the credit manager agrees to grant credit, the lender has embarked on a journey called credit control and the nature of the journey will be influenced by the quality of the decision (Clarke et al, 1999).

Credit control strategies are therefore the general guideline governing the process of giving credit to the firm's customers. The strategies set rules on who should get what credit and when and why. In addition the strategies define the repayment arrangements, necessary collaterals and chattels as an obligation by the borrower. The method of assessment and evaluation of risk for each prospective applicant are part of a credit control strategies (Thygerson, 1995). There is need for effective credit control strategies at all times to manage credit risk in order to ensure a fairly healthy credit management program, with minimal expensive bad debts and minimized credit risk.

Bulterworths (1990) asserts that effective risk management, from the viewpoint of financial institutions, is the key to the future success in lending institutions and therefore, these institutions should focus on professional management of risk. The successful financial institutions are, and will increasingly be those that develop focused strategies, lower their overhead ratio, ingeniously exploit their advantages and know how to calculate their risks.

Therefore, there is need for effective credit control strategies to manage credit risk. Hence, in order to ensure a fairly healthy credit management program, with minimal

expensive bad debts, and minimized credit risk, a company strives to establish an effective credit control and lending strategies. Lending institutions have employed many different models to assess the default risk on loans. These vary from the relatively qualitative to the highly quantitative models.

### **2.3.1 Six C's Credit Appraisal Technique**

#### **2.3.1 Six C's Credit Appraisal Technique**

According to Abedi (2000) lending institutions use the 6 C's credit appraisal technique to evaluate a customer as a potential borrower. The 6 C's model helps the lending institutions to decrease the risk of default, as they get to know their customer. According to Abedi (2000), the 6 C's are as follows:

**Character:** This is the maturity, honesty, trustworthiness, integrity, discipline, reliability and dependability of a customer. Good character is no doubt the most important quality of a client. A person of good character will pay his or her debt whether it is secured or not. Such a person will disclose all the facts of his deal because his intentions are to seek guidance and help from the organization (Mc Menamin, 1999).

**Capacity:** This refers to the client's ability to service his or her debt fully. Even if one has good intentions but has no funds, he or she will not be able to repay all the loan installments plus interest on time. This capacity can only be well measured through enquiring on the source of client's income and subtracting all the commitments (Saunders, 2002). The credit officer may observe and analyze various ratios and trends in the audited financial statements. For venture capital, a common feature for micro and small enterprises, capacity is based on projections and hence the integrity and proper modeling of such financial projections is quite crucial (Mc Menamin, 1999).

**Condition:** According to Greuning and Bratanovic (1999) the decision to grant credit to a customer could be influenced by current economic and business conditions generally or by specific business conditions relating to the applicant or the lending firm itself. For instance, if the credit applicant is a small business and there is an economic recession in the country, the risk of small business failure in such circumstances is considerably

increased. Alternatively, if the lending firm itself is finding sales for some of its products slow, it may take a more relaxed view to granting credit to a potential customer.

**Collateral:** This is a security given to secure the loan, in terms of non-encumbered assets. A lender considers the ratio of the value of the collateral, against the amount of the loan. This is the most talked about but it is the least important especially in lending to micro and small enterprises. In addition some collateral are difficult to dispose off to recover the loan and in some industries, there are lots of differences that make it hard to dispose off collateral (Saunders, 2002).

**Contribution/Capital:** This is the client's commitment to the project at hand. Is he willing and able to make a contribution? If a client is having difficulty raising the deposit, he is likely to be unable to repay his installments regularly. Is the client willing to contribute his time to the management of the projects or assets? Absentee management has been the main cause of failure of many projects in micro and small enterprises sector.

**Common Sense:** This is the natural ability to make good judgment and behave in a practical and sensible way. It refers to being prudent and reasonable in analyzing, presenting, using and interpreting financial data and other related business information. In addition, common sense is the reasonableness of the financial information provided to support the case for financing a project as an indication of the ability of the project to pay itself.

### **2.3.2 Credit Selection/Screening**

According to Balduino (2000), this is the process of selecting the customers who will be granted credit and determining their individual credit limits. It is the initial stage in the operation of an effective credit management system. Usually, a set of criteria or checklists will be available to perform the initial credit screening. The process of credit selection and analysis is essentially an exercise in risk assessment that is, in assessing the probability of customer non-payment.

Sound credit selection procedures help to reduce customer default risk by eliminating unsuitable applicants at the outset, thus avoiding the costly process of chasing slow payments and incurring bad debts later. The old adage “prevention is better than cure” is appropriate here (Mc Menamin, 1999)

The basis, of sound credit risk management is the identification of the existing and potential risks inherent in lending activities. Measures to counteract these risks normally comprise clearly defined policies of the institutions credit risk philosophy and the parameters within which credit is to be controlled. According to Basel Committee, (1999) the three major policies pertaining to credit risk management includes: policies aimed to limit or reduce credit risk, policies of asset classification and policies of loss provisioning.

### **2.3.3 Qualitative Models**

The financial institution manager can assemble information from private sources such as credit and deposit files and/or purchase such information from external sources such as credit rating agencies. The amount of information assembled varies with the size of the potential debt exposure and the cost of collection. Thygerson (1995), identifies two major classifications of factors that enter in to the credit decision. These are:

**Borrower Specific Factors.** These are those idiosyncratic to the individual borrower and include; the borrower’s reputation, leverage or borrowers capital structure, volatility of earnings and collateral Detweiler (2004)

**Market Specific Factors** that have an impact on all borrowers at the time of the credit decision. These factors include; the business cycle and the level of interest rates Detweiler (2004)

### **2.3.4 Credit Scoring Model**

This is a credit analysis technique used extensively by banks, credit card companies, finance companies and other financial institutions involved in making consumer credit decisions. The company identifies a range of key financial and other variables and each is

given a relative weighting or ranking. For instance, home ownership, salary/income range, bank reference and other credit references are normally identified as four of a range of key evaluation variables Grover (2002). The customer completes a detailed application form, which is assessed by a member of the credit selection staff. Based on the application points score (possibly out of 100) for each variable which is in turn assigned a relative weighting as shown in the table below:

	<b>Credit scoring</b>	<b>Points score</b>	<b>Weighting</b>	<b>Weighted score</b>
1.	Home ownership	90	0.20	<b>18</b>
2.	Salary/income range	75	0.20	<b>15</b>
3.	Bank reference	80	0.15	<b>12</b>
4.	Credit reference	60	0.15	<b>9</b>
5.	-	-	-	-
6.	-	-	-	-
			<b>1.00</b>	

Source: Financial management: an introduction by Jim Mc Meanmin (1999)

The decision whether to extend credit will on single figure- the total weighted score with at least a minimum total weight score (e.g. 70), having to be attained before any credit will be extended. Usually, predetermined range of scores will have been set (e.g. 70-75, 76-80 and 81-85) and this will dictate the credit terms and conditions offered. The higher the range the customer weighted score, the more favorable the credit arrangements Grover (2002).

### **2.3.5 Default Risk Model**

This is a typical credit analysis performed by banks which focuses on determining the underlying relationship between a borrower's characteristics (both financial and non



financial) and the expected probability of default, D. We conceptualize this relationship as follows:

$$D = d \{I(c), CF, NW, G\}$$

Where

I stands for information quality i.e. timelines and accuracy.

C for character (you cannot do business with bad people)

CF for the level and stability of cash flow

NW for real net- worth and

G for guarantees

As each of these factors deteriorates, borrower expected probability of default increase and vice versa. It is important to note that customer's risk cannot be considered in isolation, its contribution to portfolio risk is important as well (Sirikey 1992).

### **2.3.6 Credit Reference Bureau's**

According to Thomas et al (2002), financial institutions extend credit facilities to borrowers either for business or personal purposes. To facilitate these institutions to make assessments and decisions on credit applications, the financial institutions would require up-to-date and accurate information on their prospective borrowers. Therefore, the information in the credit report could assist the financial institutions to make informed decisions on credit applications.

Credit Reference Bureaus (CRBs) provide timely and accurate information on borrowers' debt profile and repayment history. Experience has revealed that when financial institutions compete with each other for customers, multiple borrowing and over-indebtedness increases loan default unless the financial institutions have access to databases that capture relevant aspects of clients' borrowing behaviour. The CRBs contribute significantly to reduction in the costs of screening loan applications by enabling the lender to sort out prospective borrowers who have defaulted with other

lenders. A CRB therefore, improves lenders' ability to predict default (Thomas et al, 2002)

Reduced default rates as borrowers seek to protect their "reputation collateral" by meeting their obligations in a timely manner. With the presence of a CRB, there is strong motivation for clients to repay their loans. Credit reports that include both positive and negative information help build "reputation collateral" in much the same way as a pledge of physical collateral, which may improve credit access for the poorest borrowers. In the long run, a bigger credit market and lower default rates lead to lower interest rates, improved profitability and increased competitiveness (Thomas et al, 2002).

Thomas et al (2002) asserts that more and more unbanked consumers will be eligible for financial services. Recent research based on information from several countries across the globe (Singapore, Iraq, China, Romania, Vietnam, Cambodia, Brazil, Hong Kong etc.) show that the existence of credit registries is associated with increased lending volume, growth of consumer lending, improved access to financing and a more stable banking sector.

### **2.3.7 Newer Models of Credit Risk Measurement and Pricing**

The newer group of credit risk models uses financial theory and more widely available financial market data to make inferences about default probabilities on debt and loan instruments. These models are most relevant in evaluating lending to larger borrowers in the corporate sector. These include; Risk Adjusted Return on Capital (RAROC), the term structure of credit risk approach, mortality rate approach, option models, credit metrics and credit risk + model (Grover, 2002).

## **2.5 Commercial Banks in Kenya**

The primary role of Commercial banks in Kenya is to lend money and take money from depositors. (Kenya Banking Act (2001) Performance in the banking sector is therefore mainly measured on the degree to which money has been lent out, as this will ensure the Bank earns interest income. In the economic survey of 2005, economic growth was to a larger extent by commercial banks most of which were funded by borrowings.

There have been many loan products offered by local banks in Kenya mainly for business and individual loans. However there emerged another distinct sector targeting one aspect, which was seen as a deterrent to borrowing. This is the requirement for borrowers to provide collateral to the Bank. According to Mishkin 2004 collateral is property promised to the lender as compensation if the borrower defaults on a loan, the lender can sell collateral and use the proceeds to make up for its losses.

Therefore when banks introduced the unsecured personal loans there was phenomenal growth as those who had been restricted from borrowing due to lack of collateral were able to borrow. However this fact notwithstanding, there has been a general downward trend in the growth of the personal loans sector within the banking industry in Kenya.

Ansoff (1990) emphasises that organisations will only achieve success if they align their strategy to the dictates of the external environment. We shall therefore focus our objectives on both the external factors and internal factors. Internal factors will relate to procedures, processes and requirements whilst external processes will consider activities of banks.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Research Design**

The research used a descriptive survey of the commercial banks in Kenya. Churchill (1991) agrees that this is an appropriate form of study, especially when the objective of the research is to gain insights into ideas, which is applicable in this case and whenever the population is small.

### **3.2 Population of the Study**

The population of interest consisted of all commercial Banks in Kenya which are 48 in number as registered by CBK in 2007. Since the population is small the study endeavors to include the entire population in the study.

### **3.3 Data Collection Method**

The study used primary data, which was collected using a questionnaire containing both structured and unstructured questions (see appendix II). The basic data collection method was through the “drop and pick later” technique. This is an approach that was successively used by Abdullahi (2000). Responses were sought from senior managers who have been in the industry for at least five years. These were credit officers. The length of time in the organization is important in that it ensures that the respondents are well versed with their organizations and the changes in the industry.

### **3.4 Data Analysis**

Once the responses are received, the questionnaires were edited for completeness and consistency before processing. Data was largely measured on the likert scale. The analyzed data was presented in frequencies and percentages, which was represented in tables, bar charts and pie charts, where applicable.

# CHAPTER FOUR: DATA FINDINGS, ANALYSIS ND INTERPRETATION

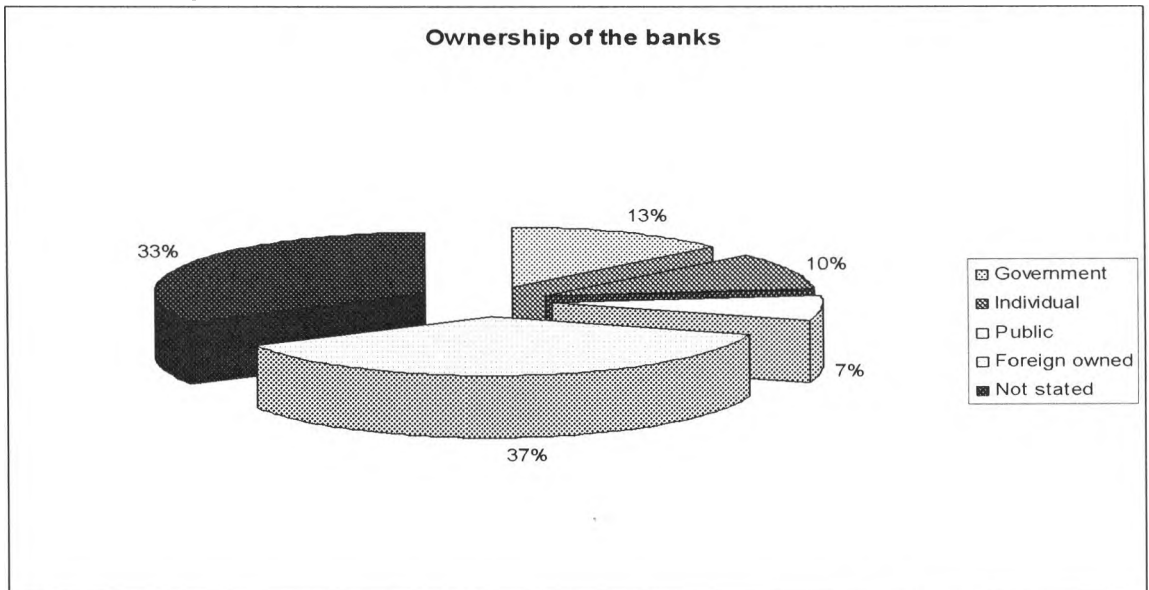
## 4.1 Introduction

This chapter discusses the research findings, analysis and interpretation. The study aimed at determine credit risk management in the Kenya Commercial banks. The study in specific focused on 48 commercial banks in Kenya registered by CBK in 2007. The researcher took a sample of 48 respondents mainly the head of finance or the Credit officers in the commercial banks whereby 30 of them responded to the questionaيرة constituting 62.5% response rate. Data analysis was done through Statistical Package for Social Scientists (SPSS). Frequencies, percentages and Likert Scales were used to display the results which were presented in tables, pie charts as well as bar graphs

## 4.2 Findings from Demographic Data

This section dealt with the background information about the company. This information helped the researcher to understand well the respondents' background in regard to the organization and therefore making them judge whether they choose the right sample for the research. A total of 30 commercial banks were sampled which included Consolidated bank, Barclays bank, National bank, Equity bank and others.

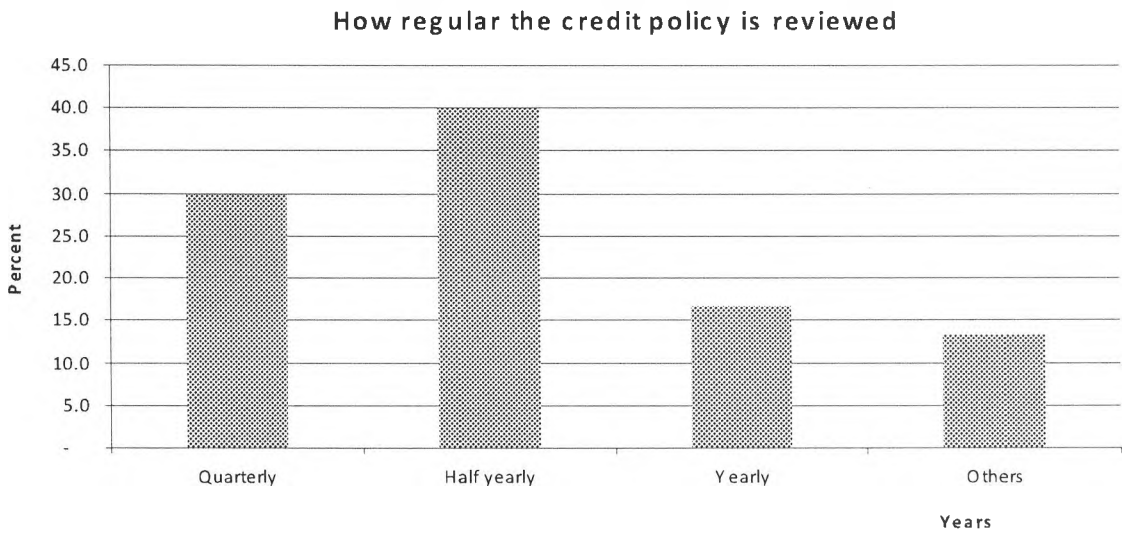
**Figure 4. 1: Bank ownership**



The commercial banks which were sampled for the purpose of the study, 37% were owned by foreigners, 33% of the respondents did not state the ownership of the commercial banks in which they worked in, 13% were government owned, 10% of the respondents said the banks in which they worked in they were owned by individuals while only 7% who said that the banks were publicly owned. The majority are owned by foreigners who could be due to the fact that most banks are foreign owned.

### 4.3 Credit Appraisal

**Figure 4. 2: How regular the credit policy is reviewed**



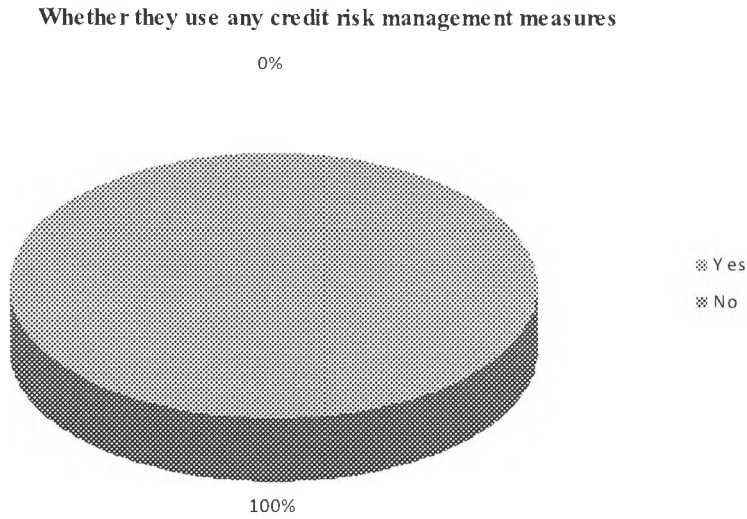
The graph above shows the number of times the banks credit policy is reviewed. 40% of the respondents said that it's reviewed twice in a year, 30% said that they review it quarterly in a year, 16.7% said that they review it once in a year while 13.3% said that they review often as there is no fixed frequency.

**Table 4. 1: Ways through which the commercial banks make employee aware**

	Hardly considered	Least considered	Neutral	At times Considered	Mostly	Mean	Std. Dev.
Regular meeting	3	5	5	7	10	3.5	1.4
Regular training	1	2	6	10	11	3.9	1.1
Supervision one to one basis	4	4	6	7	9	3.4	1.4
Credit manual	3	1	6	9	11	3.8	1.2

The table above shows different ways through which the commercial banks makes employee aware of credit risk management. A Five point Likert scale was used to interpret the respondent's extent. Accorded to scale those factors which were hardly considered were awarded 1 while those which were mostly considered were awarded 5. Within the continuum are 2 for least considered, 3 for neutral and 4 for at times considered. Mean and standard deviation were used to analyze the data. According to the researcher those factors with a mean close to 3.0 were hardly considered on while those with a mean close to 4.0 were mostly considered. On the same note the higher the standard deviation the higher the level of disagreement or dispersion among the respondents. In regard to this, the factor that they make the employees aware of credit risk management by regular training was mostly considered with a mean of 3.9, the factor that they use credit manual was considered at times with a mean of 3.8, the factor that they meet regularly was least considered with a mean of 3.5 while the factor that there is supervision one to one basis was hardly considered with a mean of 3.4. The majority said that they create awareness by regular training which might be due to the fact that the credit risk management is technical and time consuming.

**Figure 4. 3: Whether the banks use any management measures**



The chart above shows the results on whether the commercial banks use any credit risk measures. The respondents all agreed to it which might be due to the risk involved in the lending business.

**Table 4. 2: The credit risk management measures used**

	Frequency	Percentage
Credit scoring model	12	40.0
Reference bureau	7	23.3
Risk management	5	16.7
Credit rationing	2	6.7
Annual financial reports	4	13.3
<b>Total</b>	<b>30</b>	<b>100.0</b>

The researcher wanted to know the credit risk management measures used. 40% said that they credit scoring model, 23.3% said that they use reference bureau, 16.7% said that they use risk management measures, 13.3% said that they use the annual financial reports while 6.7% said that they use credit rationing. The majority said that they use the credit scoring model which might be due to the reason that the client’s financial variables are easily available and easy to evaluate.



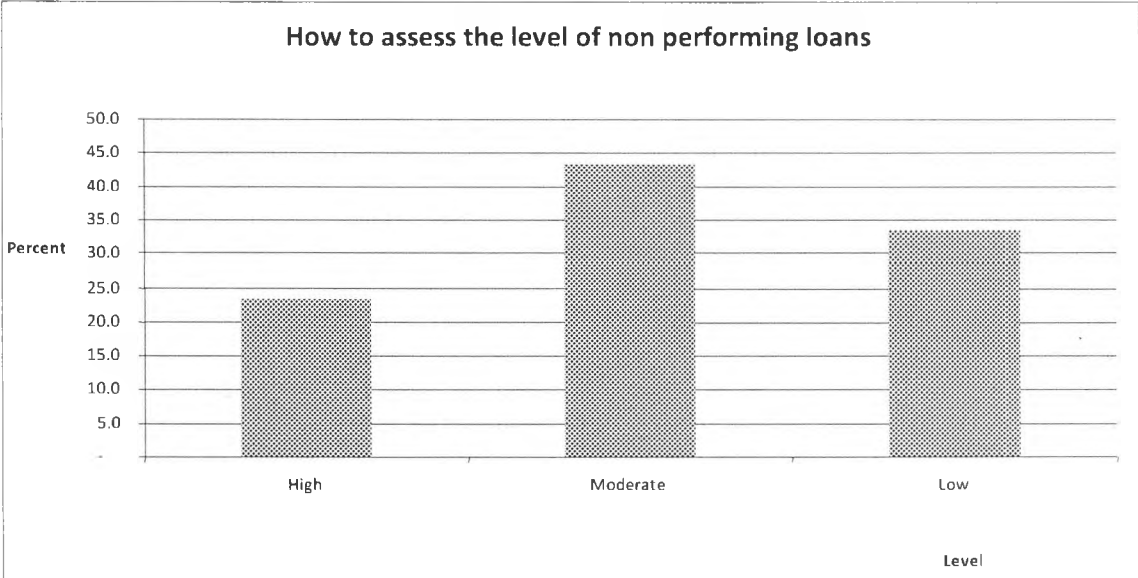
**Table 4. 3: The year when the banks introduced credit risk management models**

	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Frequency</b>	<b>Percent</b>
Credit scoring model	9	4	11	5	1	0	30	100.0
Reference bureaus	4	8	3	10	3	2	30	100.0
Risk management ratio	2	2	7	6	4	9	30	100.0
Credit rationing	4	3	9	6	0	8	30	100.0

The respondents were requested to indicate the year when they started using the credit risk management models. For the credit scoring model majority of the banks said that they started in the year 2004, reference bureaus the majority said that they started using the credit risk management in the year 2007 while for the credit rationing they said that started using it in the year 2004.

For the credit risk management measure(s) the type of loan used to assess credit scoring are the personal individual loans, business loans and corporate loans, for the reference borrowing the loan type used is the corporate loans, for the risk management ratio the loan used to assess the credit management risk are the personal individual loans, business loans and corporate loans while for the credit rationing the type of loan used are the personal loans, business loans, corporate loans and credit loans while for the default risk model the type of loan used is the corporate loans. For the annual financial reports the type of loan used is the business loan and corporate loan.

**Figure 4. 4: How to assess the level of non performing loans**



The table above shows the results on how to assess the level of non performing loans in the commercial banks. 43.3% of the respondents said that they assess it moderately, 33.3% of them said that they assess it lowly while the rest 23.3% said that they assess it highly. This might be due to the slow results realized at the commercial banks due to the credit risk management.

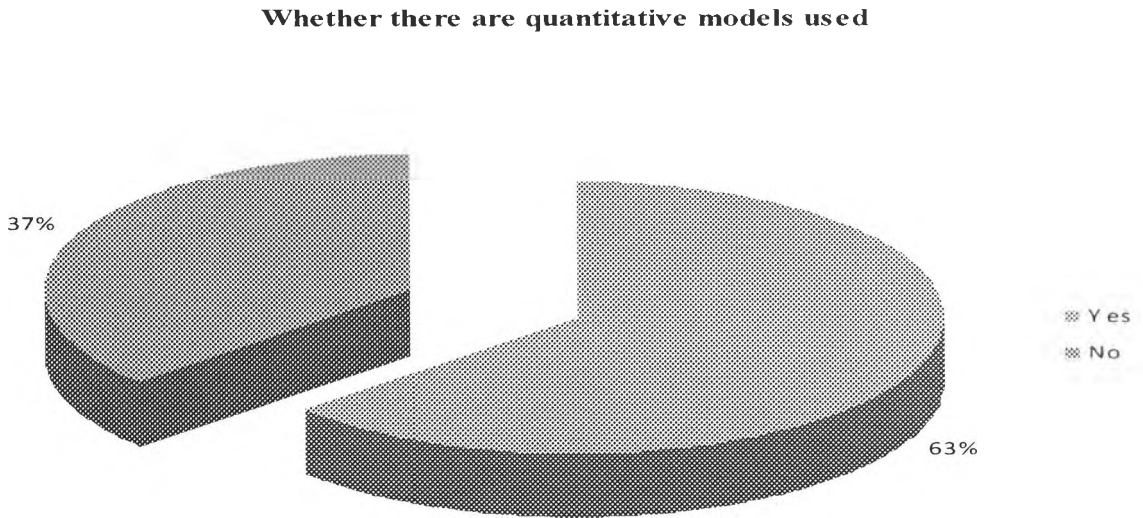
**Table 4. 4: How important the credit management models are to the commercial banks**

	Not important	Moderately important	Important	Very important	Very important	Mean
Credit rationing	2	3	5	11	9	3.7
Reference bureau	3	2	5	9	11	3.8
Risk management ratio	1	5	6	10	8	3.6
Loan less provision policy	3	6	8	9	4	3.2
Non performing loan portfolio	3	5	8	9	5	3.3
Default risk model	4	2	6	12	6	3.5
Use of annual financial reports	3	4	3	10	10	3.7

The table above shows how important the credit management policies are to the commercial banks. A Five point Likert scale was used to interpret the respondent's extent. Accorded to scale those factors which were not important were awarded 1 while those which were very very important were awarded 5. Within the continuum are 2 for moderately important, 3 for important and 4 for at very important. Mean and standard deviation were used to analyze the data. According to the researcher those factors with a mean close to 3.0 were not important on while those with a mean close to 4.0 were very very important. On the same note the higher the standard deviation the higher the level of disagreement or dispersion among the respondents. In regard to this, the factor that the reference bureau was considered very very important with a mean of 3.8, credit rationing and use of annual financial reports were considered very important with a mean of 3.7 respectively, risk management ratio model with a mean of 3.6 and default risk model with a mea of 3.5 were considered important, non performing loan portfolio was considered moderately important with a mean of 3.3 while loan less provision policy was considered

not important with a mean of 3.2. The majority considered reference bureau as very very important which might be because the commercial banks were cautious of defaulting clients.

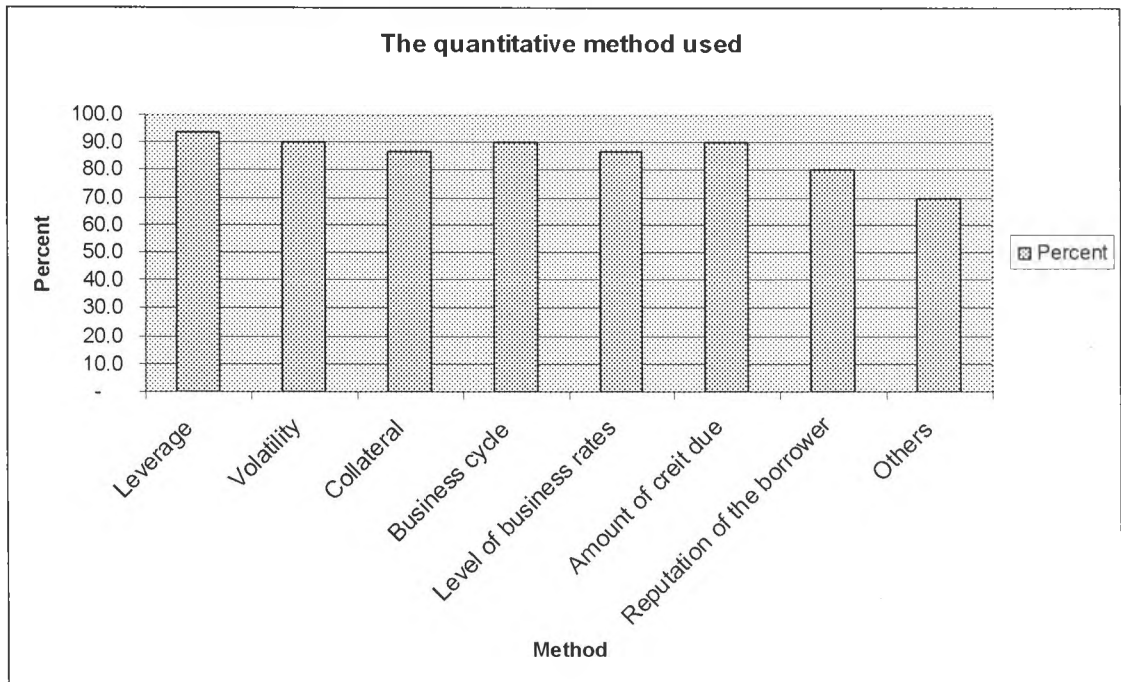
**Figure 4. 5: Whether there are quantitative models are used**



The chart above shows whether the banks use any quantitative models in arriving at credit decisions. 63% said that there are quantitative models used while 37% said that there are no quantitative models used. This might be because the models have not been implemented in all commercial banks. For the commercial banks that they said that they have models in use; the model they specified use of financial reports, default risk model and non-performing loans portfolio.

The difficulties they highlighted that affects them are that the staff do not know how to apply the model as its technical, complex and time consuming. Hence a lot of time is used and employees need a lot of training.

**Table 4. 5: The quantitative methods used**



The table above shows the quantitative method that is used to make credit decisions. 93% said that they use collateral, 90% said that they use volatility earnings, amount of credit due or business cycle, use of leverage or level of business rates was supported by 86.7% while reputation of the borrower was supported by 80% of the respondents. The majority used collateral and others variables like the credit due or the business cycle which might be due to the fact that the commercial banks needed to know the clients capability in repaying back the loan.

The quantitative and qualitative models which are mostly relied on are the qualitative which is because a client borrowing money with an aim of repaying back is treated like a virtue hence relied on mostly, its also not time consuming hence highly recommended but all in all quantitative factors are also important.

The conditions that the clients should meet as per the commercial banks are the ability to repay the loan as well as credit worthiness, terms of payment and interest to be charged, consequences in case of default, customers character, deposit and collateral.

Any other information that the banks considers important to improve on credit risk management models are public and banks awareness on risk management models, more information should be provided to enhance knowledge of the models through workshops and training, more research should be done on the models and quality lending must be emphasized

## CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

### 5.0 Introduction

This chapter is devoted to summarizing the findings of the study, conclude, provide recommendations of the researcher and give suggestions for the mitigation and further research that she deems fit in this field of study.

### 5.1 Summary of findings

A total of 30 commercial banks were sampled which included Consolidated bank, Barclays bank, National bank, Equity bank and others whereby 37% were owned by foreigners, 33% of the respondents did not state the ownership of the commercial banks in which they worked in, 13% were government owned, 10% of the respondents said the banks in which they worked in they were owned by individuals while only 7% who said that the banks were publicly owned. The majority are owned by foreigners may be due to the fact that most banks are foreign owned.

On credit risk management; the number of times the banks credit policy is reviewed. 40% of the respondents said that its reviewed twice in a year, 30% said that they review it quarterly in a year, 16.7% said that they review it once in a year while 13.3% said that they review often as there is no fixed frequency.

Use of different ways through which the commercial banks make employee aware of credit risk management is by regular training was mostly considered with a mean of 3.9, use credit manual was considered at times with a mean of 3.8, meeting regularly was least considered with a mean of 3.5 while use of supervision one to one basis was hardly considered with a mean of 3.4. The majority said that they create awareness by regular training which might be due to the fact that the credit risk management is technical and time consuming.

The results on whether the commercial banks use any credit risk measures. The respondents all agreed to it which might be due to the risk involved in the lending business. The researcher wanted to know the credit risk management measures used. 40% said that they credit scoring model, 23.3% said that they use reference bureau, 16.7% said they use risk management measures, 13.3% said that they use the annual financial reports

while 6.7% said that they use credit rationing. The majority said that they use the credit scoring model which might be due to the reason that the client's financial variables are easily available and easy to evaluate.

The respondents were requested to indicate the year when they started using the credit risk management. For the credit scoring model majority of the banks said that they started in the year 2004, reference bureaus the majority said that they started using the credit risk management in the year 2007 while for the credit rationing they said that started using it in the year 2004.

For the credit risk management measure(s) the type of loan used to assess credit scoring are the personal individual loans, business loans and corporate loans, for the reference borrowing the loan type used is the corporate loans, for the risk management ratio the loan used to assess the credit management risk are the personal individual loans, business loans and corporate loans while for the credit rationing the type of loan used are the personal loans, business loans, corporate loans and credit loans while for the default risk model the type of loan used is the corporate loans. For the annual financial reports the type of loan used is the business loan and corporate loan.

The results on how to assess the level of non performing loans in the commercial banks as a result of the credit management, 43.3% of the respondents said that they assess it moderately, 33.3% of them said that they assess it lowly while the rest 23.3% said that they assess it highly. This might be due to the slow results realized at the commercial banks due to the credit risk management.

On how important the credit management policies are to the commercial banks, the factor that the reference bureau was considered very important with a mean of 3.8, credit rationing and use of annual financial reports were considered very important with a mean of 3.7 respectively, risk management ratio model with a mean of 3.6 and default risk model with a mean of 3.5 were considered important, non performing loan portfolio was considered moderately important with a mean of 3.3 while loan loss provision policy was considered not important with a mean of 3.2. The majority considered reference bureau as very important which might be because the commercial banks were cautious of defaulting clients.



On whether reference bureau, 63% said that there are quantitative models used while 37% said that there are no quantitative models used. This might be because the models have not been implemented in all commercial banks. For the commercial banks that they said that they have models in use; the model they specified use of financial reports, default risk model and non-performing loans portfolio.

The difficulties they highlighted that affects them are that the staff do not know how to apply the model as its technical, complex and time consuming. Hence a lot of time is used and employees need a lot of training.

The quantitative method that is used to make credit decisions was noted whereby 93% said that they use collateral, 90% said that they use volatility earnings, amount of credit due or business cycle, use of leverage or level of business rates was supported by 86.7% while reputation of the borrower was supported by 80% of the respondents. The majority used collateral and others variables like the credit due or the business cycle which might be due to the fact that the commercial banks needed to know the clients capability in repaying back the loan.

The quantitative and qualitative models which are mostly relied on are the qualitative which is because a client borrowing money with an aim of repaying back is treated like a virtue hence relied on mostly, its also not time consuming hence highly recommended but all in all quantitative factors are also important.

The conditions that the clients should meet as per the commercial banks are the ability to repay the loan as well as credit worthiness, terms of payment and interest to be charged, consequences in case of default, customers character, deposit and collateral. Any other information that the banks considers important to improve on credit risk management models are public and banks awareness on risk management models, more information should be provided to enhance knowledge of the models through workshops and training, more research should be done on the models and quality lending must be emphasized.

## **5.2 Conclusion**

The objective of the study is to determine credit risk management in the Kenya Commercial banks. From the study the researcher concluded that most banks are foreign and they have a credit policy that is reviewed frequently. Although the credit management is technical and consumes a lot of time the employees are trained regularly and manual used to create awareness. Different measures or models are employed in credit risk management like whereby the most frequently used is the credit scoring model, reference bureau among others like the use of annual financial reports. To ensure that the measures are well implemented several loan types like the personal, business loans, corporate loan and credit loan. To achieve this quantitative method like collateral, use volatility earnings, amount of credit due or business cycle, use of leverage or level of business rates are used. This helps checks the client's ability to repay the loan as well as credit worthiness, terms of payment and interest to be charged, consequences in case of default, customers character, deposit and collateral. To help deal with the difficulties of credit risk management more information should be provided to enhance knowledge of the models through workshops and training, more research should be done on the models and quality lending must be emphasized.

## **5.3 Recommendation**

The researcher recommends that credit risk management has been implemented in the Kenyan commercial banks and is useful in helping reduce the risk that is involved while lending to the customers. Although its technical and time consuming through various quantitative and qualitative models the clients' ability to repay back the loan is calculated hence profit maximization for the banks. This policies associated with the credit risk management have been very helpful in recovering what might not be recovered through the collateral securities or high rates hence minimizing the possibilities of a bank to fail. Hence through the application of the appropriate credit risk management and evaluation techniques the Kenyan commercial banks have been able to manage credit risks.

#### **5.4 Ares for further research**

This study has led to identification of areas that requires further research. The credit risk management and evaluation techniques are technical to apply and the customers have very little knowledge on it. More research should be done on ways in which this can be solved.

More research should also be done on the appropriate models to be used for the minimization of bank failures due to credit risks. As the main reason of commercial bank collapse is the non performing bank loan portfolio.

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## APPENDICES

### Appendix I: Questionnaire

#### STUDY QUESTIONNAIRE FOR ALL COMMERCIAL BANKS IN KENYA.

#### Credit Risk Management models by Commercial Banks in Kenya

Date: ..... Questionnaire No: .....

Note: The information in this questionnaire will be treated confidentially and will not be used for any other purpose other than academic.

#### Background information

1. Name of the Commercial Bank \_\_\_\_\_
2. Year of Establishment \_\_\_\_\_
3. Ownership
  - Government [ ]
  - Individual [ ]
  - Public [ ]
  - Foreign owned [ ]
  - Other specify \_\_\_\_\_

#### Credit appraisal

4. How regularly do you review your credit policy?
  - Quarterly [ ]
  - Half yearly [ ]
  - Yearly [ ]
  - Other specify \_\_\_\_\_

5. Through what ways do you make your employee aware of credit risk management models?

Least	Considered	Most	Considered
1	2	3	4
			5

Regular meeting

Regular training

Using supervision on one to one basis

Credit manual

Any other specify

- 1.
- 2.
- 3.
- 4.

6. Do you use any credit risk management measures in your bank?

Yes [ ]            No [ ]

b) If yes please indicate which credit risk management measure(s) you use

- Credit scoring model
- Reference bureau
- Risk management ratio
- Credit rationing
- Use of annual financial reports

c) When did you start using this credit risk management models?

Credit scoring model	2002	2003	2004	2005	2006	2007
----------------------	------	------	------	------	------	------

Reference bureaus

Risk management ratio

Credit rationing

d) If no please indicate any other credit risk management models you use.

7. If any credit risk management measure (s) is used please indicate which type of loan is used to assess

	Personal individual Loans	Business loans	Corporate loans	Credit loans	Any other (specify)
Credit rationing	[ ]	[ ]	[ ]	[ ]	
Reference borrowing	[ ]	[ ]	[ ]	[ ]	
Risk management ratios	[ ]	[ ]	[ ]	[ ]	
Credit rationing	[ ]	[ ]	[ ]	[ ]	
Default risk model	[ ]	[ ]	[ ]	[ ]	
-	[ ]	[ ]	[ ]	[ ]	
-	[ ]	[ ]	[ ]	[ ]	

b) How would you access the level of non performing loans in your bank?

High	Moderate	Low
[ ]	[ ]	[ ]

8. Indicate how important the following credit management models are to your bank (Mark NI) for not important I for important VI for very important VVI very very important)

Credit rationing

Reference bureau

Risk management ratio

Credit rationing

Loan less provisioning policy

Non performing loan portfolio

Default risk model



b) Do you use any of the quantitative models in arriving at credit decisions?

Yes [  ]

No [  ]

If your answer in question 8a) is yes specify the model

---

---

d) Do you get any difficulties in their application? Explain

---

---

I. Do you use any qualitative method (information to make credit decision) Answer as in (8).

- a) Leverage [  ]
- b) Volatility earnings [  ]
- c) Collateral [  ]
- d) Business cycle [  ]
- e) Level of interest rates [  ]
- f) Amount of credit due [  ]
- g) Reputation of the borrower [  ]
- h) Other (specify) \_\_\_\_\_

9. Of the quantitative and qualitative models which do you rely mostly on? Explain

---

---

10. Briefly outline the conditions to be met before an application for credit facility is considered?

---

---

10) Provide any other information you consider important to improve on credit risk management models?

---

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Nairobi, Kenya

DATE..... 3/10/09 .....

**TO WHOM IT MAY CONCERN**

The bearer of this letter ..... **SALOME MUTONGA** .....

Registration No: ..... **D6117916/06.** .....

is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate if you assist him/her by allowing him/her to collect data in your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

**DR. W.N. IRAKI**  
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