



Credit Risk Management and Level of Non-Performing Loans in Commercial Banks in Kenya

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ABSTRACT

The management of non-performing loan has been a major challenge facing financial institutions especially commercial banks. According to the Central Bank of Kenya Bank Supervision Annual Report 2014, Non-performing loans increased by 32.4 per cent to Kshs. 108.3 billion in December 2014 from Kshs. 81.8 billion in December 2013. However, the ratio of gross NPLs to gross loans increased marginally from 5.2 per cent to 5.6 per cent in December 2014. The ratio for total loans to total assets of the banking sector for the quarter ended 30th September 2015 was 62.68% a slight increase from 61.38% reported in September 2014. Further, the pile of bad bank loans rose from Kshs 47 billion to Kshs 259 billion to December 2017 in the latest credit officer survey report for the quarter ending December 2017 by the Central Bank of Kenya. This resulted in significant annual increase in the ratio of non-performing loans to gross loans rising to 10.56 per cent from the 9.1 per cent for the ending December 2016. This lead to banks giving profit warnings for coming financial years. The objective of this study was to establish the relationship between credit risk management approaches employed by commercial banks in Kenya and the loans performance using credit risk identification, risk assessment and risk monitoring to measure credit risk management. In order to achieve this objective, both primary and secondary data were be used. The data was collected using a questionnaire. The questionnaire had have both closed and open-ended questions. The closed ended questions enabled the collection of quantitative data while open-ended questions enabled collection of qualitative data. The secondary data obtained from the annual reports of the commercial banks for period

2011 to 2016. The data collected include the amount of credit, number of non-performing loans, number and value of total loans. The collected data was analyzed though descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) was used to analyze data. The results were presented in tables, charts and bar graphs. The study established that credit risk identification, credit risk assessment and credit risk monitoring influence loan performance positively. The ANOVA analysis was intended to investigate whether the variation in the independent variables explained the observed variance in the outcome, in this study the loan performance in commercial banks in Kenya. ANOVA findings in this study showed that there was correlation between the predictor variables these are the credit risk identification, credit risk assessment and credit risk monitoring and response variable, loan performance since P value was less than 0.05. This indicated that there was a strong relationship between the study variables.

Keywords : CRM, Risk Identification, Risk Assessment, Risk Monitoring, NPLs

INTRODUCTION

1.1 Background to the study

Banking services are subjected to a great deal of regulations. The minimum capital requirement commercial banks must hold in absorbing loss if unexpected huge losses occurred. Such requirement is conducted by Basel Committee which aims to enhance the key supervisory issue and improve the quality of banking supervision (Bis.org, 2014). In Europe 1974, some disruptions took place in the

international financial markets. West Germany's Federal Banking Supervisory Office withdrew Bankhaus Herstatt's banking license after finding that the bank's foreign exchange exposures amounted to three times its capital. Consequently, banks outside Germany took heavy losses as a result on their unsettled trades with Herstatt. In the same year, the Franklin National Bank of New York also closed its door after racking up huge foreign exchange losses (Bis.org, 2014). These events contributed to the debacle of financial market which led to the Basel Committee on Banking Regulations and Supervisory Practices by central bank governors of the G-10 countries.

In Latin American debt crisis burst in early 1980's. Mexico's bank indebtedness expanded almost 230% over the six-year period from 1976 to 1982, Brazil's 160%, Venezuela's obligations spurted 330%, Argentina's by a monstrous 550% and Chile's 850% (Wessel 1984). This has attracted the attention of Basel Committee, and the capital adequacy soon became the main focus of its activities. In December 1987, the capital measurement system called Basel Accord was approved by the G-10 central bank governors and came into effect in 1988 (Bis.org, 2014). The Basel Accord (Basel I) mainly focused on credit risk and called for a minimum capital ratio of capital to risk-weighted assets of 8% to be implemented by the end of 1992 (Bis.org, 2014).

In June 2004, Basel II was introduced. Basel II framework contained three pillars. However, the 2007 financial crisis made the Basel committee realize that Basel II seems not enough in the complicated financial markets. A major overhaul of Basel II was necessary. The banking sector had entered the crisis with high leverage, too much loans and inadequate liquidity. The high leverage and inadequate liquidity accompanied by poor corporate governance and risk management, as well as inappropriate incentive structures lead to mispricing of credit and liquidity risk, and excess credit growth. Therefore, a new standard Basel III was published in December 2010 and will be fully effective by the end of 2019. The new standard Basel III strengthened the Basel II framework and made some innovations, including tightened definition of capital, requirements for leverage ratio and a countercyclical buffer.

Credit risk is one of the important risks of banks by the nature of their activities. Through effective mitigation of credit risk exposure banks not only support the viability and profitability of their own

business but also contribute to systematic stability and to an efficient allocation of capital in the economy (Psillaki, Tsolas, and Margaritis, 2010). Credit risk is a risk of borrower default, which happens when the counterpart fails to pay on time. There can be many reasons for default. One of the most common ones is the obligor is in a financially stressed situation. Besides, if a borrower with high credit quality has deteriorated profile, it can also cause credit risk loss to the banks. Banks invest in debt of those customers. The price of debt sold might be lower than the price as the bank bought debt. This makes a net loss of banks. However, the loss from the default of the bank does not have to be great. It depends on the percent of recover from obligor and total exposure of banks. And a good risk management and mitigation tries to avoid high exposure on risk (Gestel & Baesems, 2008). Although the regulations have been evolutionarily developed, the three Basel Accords all have placed explicitly the burden on banks to adopt sound internal credit risk management practices to assess their capital adequacy requirement.

As challenges posed by difficult economic development continues to increase, banking and financial institutions are subsequently exposed to increasing risks. The degree of non-performing credits and advanced loans in the banking system is an alarm for major concern to different key stakeholders in the banking industry including bank management which grant the loans, depositors whose funds has been expropriated and trapped, and regulatory agencies responsible for protecting the banking system and sound financial system in the economy. In Nigerian, commercial banks have invested huge sums of funds to credit risk management practices and modeling with a view to maximizing returns and minimizing bank's risk exposure through provision for potential loan losses against advanced credits. In Kenya, commercial banks play an important role in mobilizing financial resources for investment and enhancing resilient sound financial system by extending credit to various businesses and investors. Lending represents the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income. Loans however expose the banks to the greatest level of risk. There are 43 licensed commercial banks in Kenya.

1.1.1 Credit Risk Management

Basel committee define credit risk as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms (Basel,

2000). Credit risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk. The process of risk management is a two-step process. The first is to identify the source of the risk, which is to identify the leading variables causing the risk. The second is to devise methods to quantify the risk using mathematical models, in order to understand the risk profile of the instrument.

It is crucial for banks to have comprehensive risk management framework as there is a growing realization that sustainable growth critically depends on the development of a comprehensive risk management framework (Greuning & Iqbal, 2007). Credit risk management forms a key part of a banks' overall risk management strategy. Weak credit risk management is a primary cause of many bank failures. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization (Hull, 2007).

The main techniques for measuring credit risk include: credit scoring, development of a credit policy, assessment of credit exposure, determination of credit risk premium and credit ratings. Credit risk is important in monetary and credit institution because resources applied for facilities are in debt of monetary institution (bank) to its shareholders and if the money doesn't have flow, power of giving credit and shareholders' capital return reduces (Jamaat & Asgari, 2010). The purpose of credit risk management is that by maintaining of credit risk in acceptable range; the ratio of return level banking facility to risk be maximized. Therefore, responsibilities in bank should be determined clearly thereby ensure that bank's policies and procedures in risk management are managed effectively.

1.1.2 Non-performing loans

Non-performing loans are loans that are in default or close to being in default. Many loans become non-performing after being in default for 90 days, but this can depend on the contract terms. A loan is non-performing when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full (International Monetary Fund, 2005). Prudential Guidelines (2006) defines non-performing loan as a loan that is no longer generating income. The guidelines state that loans are non-performing when: principal or interest is due and unpaid for 90 days or more; or interest payments for 90 days or more have been re-financed, or rolled-over into a new loan.

Non-performing loans problems tend to emerge after credit booms or protracted periods of low growth in structurally weak financial systems. Non-performing loans crowd out new lending, eroding both the profitability and solvency of banks. When high non-performing loans levels affect a sufficiently large number of banks, the financial system stops functioning normally, and banks can no longer provide credit to the economy. A prompt recovery can be obstructed by impaired market functioning and coordination failures among banks. In such circumstances, authorities usually step in to lead the crisis response. To this end, they can deploy a variety of resolution instruments, although these typically require a large amount of resources and take time to deliver results according to Bis org, 2017.

Several tools are available to gauge the size of the non-performing loan portfolio problem, such as on-site branch inspections, asset quality reviews and stress testing. In general, commercial banks can assess the scale of non-performing loan problem with reasonable accuracy by combining backward-looking assessments, via on-site branch inspections and credit risk management, with forward-looking ones, such as stress testing (Bholat et al (2016). An assessment of banks' loss-absorption capacity is also needed. Once the size of the non-performing loan stock has been estimated, together with some projections over new non-performing loan flows measure against banks' provisions and capital buffers. Create buffers for non-performing loans absorption, Improve information gathering and sharing on non-performing loans and related collaterals. In the absence of sufficiently large

buffers, non-performing loan losses can quickly erode banks' solvency.

1.1.3 Credit risk management and Non-performing loans

The strength of the banking industry is an important prerequisite to ensure the stability and growth of economy. As a consequence, the assessment of banks' financial condition is a fundamental goal for regulators (Halling & Hayden, 2010). The safety of banking system depends on the profitability and capital adequacy of banks. Profitability is a parameter which shows management approach and competitive position of bank in market-based banking. This parameter helps the banks to tolerate some level of risk and support them against short-term problems according to Tabari, Ahmadi and Emami (2013).

The profitability of banks is influenced by different factors including management, size, location and time according to a study conducted by Haslem (2008). And it is of great interest to see how the profitability is affected by the risks faced by commercial banks. In Sweden for example, several studies have been done and found a positive relationship between credit risk management and profitability of commercial banks in Sweden. Kolapo, Ayeni and Oke (2012) showed that credit risk management is positively related to profitability of banks in Nigeria. Kithinji (2010) assessed the effect of credit risk management on the profitability of commercial banks in Kenya and found that banks' profitability is not affected by credit risk management. When it comes to both credit risk and liquidity risk, Ruziqa (2013) has tested the impact of credit risk and liquidity risk on the financial performance of conventional banks in Indonesia. The results illustrated that credit risk was negatively related to profitability while liquidity risk demonstrated a positive effect. These kinds of researches show that no exact final conclusion could be drawn until now and thus make this area worth studying.

Ekrami and Rahnama (2009) stated that the high amount of non-performing loans represents high credit risk in today bank system and this encounters banks with market risks and liquidity risk. Although banks are trying to control the risks within the organization, but high percentage of this risk and its consequences for the future could not be ignored. Non-performing loans emerge due to weak criteria of credit assays, ineffective policies, risk acceptance without regard to limitation of bankroll and wrong

functional indicators (Morton, 2003). For instance a study by Haneef et al (2012) concluded that nonperforming loans are increasing due to lack of risk management which threatens the profitability of banks.

1.2 Statement of the problem

Credit plays an important role to individuals, businesses and investors in the economy. Credit is mainly granted by banks, banks also offer services like mobilizing deposits, local and international transfers, and currency exchange service. Hence, the issue of credit management has a profound implication both at the micro and macro level. When credit is allocated poorly it raises costs to successful borrowers, erodes the fund, and reduces banks flexibility in redirecting towards alternative activities (Haneef et al, 2012). Moreover, the more the credit, the higher is the risk associated with it. The problem of loan default, which is a result of inefficiency in credit management, reduces the lending capacity of a bank. It also denies new applicants' access to credit as the bank's cash flow management problems augment in direct proportion to the increasing default problem. Consequently, it negatively affects the normal inflow and outflow of funds thus a bank has to keep staying in sustainable credit market.

Hence, adequately management of credit in commercial banks is critical for the survival and growth of the commercial banks. The issue of credit management among commercial banks is of even greater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients, business conditions and economic environment in which they find themselves. The very nature of the banking business is so sensitive because more than 85% of their liability is deposits mobilized from depositors (Saunders, Cornett, 2005). The credit creation process, if not managed properly, exposes the banks to high default risk which might led to financial distress including bankruptcy.

Even though preliminary studies are undertake in preparing the master business plan for the opening of new banks and branches; little work is done in studying the performance of credit management of the branches that would alleviate the problems encountered and contribute to the growth of market share and income generation of the bank. Hence the study contribute to the objectives of the banks in

general in assessing the gaps in credit risk management performance which is crucial in the prevailing stiff competition in line with the modern financial measurements. Therefore, the main concern of this study is to establish and determine the effect of credit risk management on performance of loans in commercial banks in Kenya.

1.3 Objectives of the study

1.3.1 General Objectives

The overall objective of the study is to determine the effect of credit risk management on loan performance by commercial banks in Kenya

1.3.2 Specific Objectives

The study's specific objectives were;-

- i) To determine the effect of credit risk identification on the level of non-performing loans by commercial banks in Kenya.
- ii) To establish the effect of credit risk assessment on the level of non-performing loans in commercial banks in Kenya.
- iii) To examine the effect of credit risk monitoring on the level of non-performing loans by commercial banks in Kenya.

1.4 Research Questions

Given the various issues relating to the impact of credit risk mitigation on banks profitability among commercial banks in Kenya, The following research questions were used in the study;-

- i) What is the effect of credit risk identification on loan performance by commercial banks in Kenya?
- ii) What is the effect of credit risk assessment on the level of non-performing loans in commercial banks in Kenya?
- iii) To what extent does credit risk monitoring affect the level of non-performing loans by commercial banks in Kenya?

1.5 Scope of the study

The study was carried out among the licensed 43 commercial banks in Kenya as registered by Central Bank of Kenya by December 31, 2015. The list of the banks is provided in Appendix V. Out of the 43 banks that operate in Kenya, 39 commercial banks are privately owned while the Kenya Government holds controlling stakes in the remaining 3 commercial banks. 25 of the 39 privately owned banks and the 1

mortgage finance institution are locally owned while 14 banks are foreign owned. Licensed banks usually have higher level of transparency and strict regulations hence the secondary data was collected from the published annual reports for the period from 2011 to 2016.

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. It covers the theoretical review which discusses the theories that guide the study. Further it discusses the empirical review where research work by other researcher and authors in the field under study is discussed. Lastly, a summary of the chapter is provided.

2.2 Theoretical literature

According to Torracco 2011, Theories are formulated to explain, predict, and understand phenomena and, in many cases, to Challenge and extend existing knowledge, within the limits of the critical bounding assumptions. A theory consists of concepts, together with their definitions, and existing theory/theories that are used for the particular study. The theoretical review will seek to establish some of the theories that are attributed by other researchers, authors and scholars, which are relevant to this study. The study will be guided by the capital asset pricing theory, modern portfolio theory, and information asymmetry theory.

2.2.1 Capital Asset Pricing Theory

Capital asset pricing theory was published in 1964 by Sharpe. Parallel work was also performed by Treynor (1961) and Lintner (1965). Capital Asset pricing theory extended Markowitz's portfolio theory to introduce the notions of systematic and specific risk. For his work on Capital asset pricing theory, Sharpe shared the 1990 Nobel Prize in Economics with Markowitz and Miller, (1961). In such a simple world, Tobin's (1958) super-efficient portfolio must be the market portfolio. All investors will hold the market portfolio, leveraging or de-leveraging it with positions in the risk-free asset in order to achieve a desired level of risk. Capital asset pricing theory decomposes a portfolio's risk into systematic and specific risk. Systematic risk is the risk of holding the market portfolio.

As the market moves, each individual asset is more or less affected. To the extent that any asset participates in such general market moves, that asset entails systematic risk. Specific risk is the risk which is

unique to an individual asset. It represents the component of an asset's return which is uncorrelated with general market moves (Lintner, 1965). No matter how much we diversify our investments, it's impossible to get rid of all the risk. As investors, we deserve a rate of return that compensates us for taking on risk. The capital asset pricing theory helps us to calculate investment risk and what return on investment we should expect. Here we look at the formula behind the model, the evidence for and against the accuracy of Capital asset pricing theory, and what Capital asset pricing theory means to the average investor (Sharpe, 1964).

When the Capital asset pricing theory was first introduced, the investment community viewed the new model with suspicion, since it seemed to indicate that professional investment management was largely a waste of time. It was nearly a decade before investment professionals began to view the Capital asset pricing theory as an important tool in helping investors understand risk. The key element of the model is that it separates the risk affecting an asset's return into two categories. The first type is called unsystematic, or company-specific, risk. The long-term average returns for this kind of risk should be zero. The second kind of risk, called systematic risk, is due to general economic uncertainty.

The Capital asset pricing theory states that the return on assets should, on average, equal the yield on a risk-free bond held over that time plus a premium proportional to the amount of systematic risk the stock possesses (Markowitz, 1952). The treatment of risk in the CAPM refines the notions of systematic and unsystematic risk developed by Markowitz in the (1950s). Unsystematic risk is the risk to an asset's value caused by factors that are specific to an organization, such as changes in senior management or product lines. For example, specific senior employees may make good or bad decisions or the same type of manufacturing equipment utilized may have different reliabilities. In general, unsystematic risk is present due to the fact that every company is endowed with a unique collection of assets, ideas and personnel whose aggregate productivity may vary.

2.2.2 Modern Portfolio Theory

Modern portfolio theory explains how risk-averse investors can construct and hold portfolios that optimize or maximize expected asset return based on a given degree of market risk, emphasizing that risk is an inherent part of higher reward. This theory was

developed by Harry Markowitz in his paper portfolio selection published in 1952 by the journal of finance which explains the four basic steps involved in portfolio construction as; security valuation, asset allocation, portfolio optimization and performance management. The essence of coming up with the theory is to validate construction of an efficient portfolio that optimizes returns of a particular investment.

It suggests that it is not enough to look at expected risk and return of a particular stock, but by investing in more than one stock, an investor can reap the benefits of diversification, particularly a reduction in the riskiness of a portfolio. MPT quantifies the benefits of diversification also known as not putting all your eggs in one basket. It considers that, for most investors, the risk they take when they buy a stock is that the return will be lower than expected. In other words, it is the deviation from the average return. Each stock has its own standard deviation from mean which Modern Portfolio Theory calls it risk. Markowitz theory asserts that, the risk in a portfolio of diverse individual stock will be less than the risk inherent in holding any one of the individual stocks provided the risk of the various stocks are not directly related. He showed that investment is not just about picking stocks, but about choosing the right combination of stocks which to distribute ones' nest egg (Seibel, 2006).

An increasing body of analytical work has attempted to explain the functioning of credit markets using new theoretical developments. Challenging the model of competitive equilibrium, they have explored the implications of incomplete markets and imperfect information for the functioning of credit markets in developing countries. These provide a new theoretical foundation for policy intervention. In this explanation, interest rates charged by a credit institution are seen as having a dual role of sorting potential borrowers and affecting the actions of borrowers. Interest rates thus affect the nature of the transaction and do not necessarily clear the market. Both effects are seen as a result of the imperfect information inherent in credit markets (Horne, 2006).

Adverse selection occurs because lenders would like to identify the borrowers most likely to repay their loans since the banks' expected returns depend on the probability of repayment. In an attempt to identify borrowers with high probability of repayment, banks are likely to use the interest rates that an individual is willing to pay as a screening device. Since the bank is

not able to control all actions of borrowers due to imperfect and costly information, it will formulate the terms of the loan contract to induce borrowers to take actions in the interest of the bank and to attract low risk borrowers. The result is an equilibrium rate of interests at which the demand for credit exceeds the supply. Other terms of the contract, like the amount of the loan and the amount of collateral, will also affect the behavior of borrowers and their distribution, as well as the return to banks (Moti et al., 2012).

Raising interest rates or collateral in the face of excess demand is not always profitable, and banks will deny loans to certain borrowers. Since credit markets are characterized by imperfect information, and high costs of contract enforcement, an efficiency measure as exists in a perfectly competitive market will not be an accurate measure against which to define market failure. These problems lead to credit rationing in credit markets, adverse selection and moral hazard. Adverse selection arises because in the absence of perfect information about the borrower, an increase in interest rates encourages borrowers with the most risky projects, and hence least likely to repay, to borrow, while those with the least risky projects cease to borrow (Ewert et al., 2000).

Interest rates will thus play the allocation role of equating demand and supply for loan funds, and will also affect the average quality of lenders' loan portfolios. Lenders will fix the interest rates at a lower level and ration access to credit. Imperfect information is therefore important in explaining the projects have identical mean returns but different degrees of risk, and lenders are unable to discern the borrowers' actions. An increase in interest rates negatively affects the borrowers by reducing their incentive to take actions conducive to loan repayment. This will lead to the possibility of credit rationing (Boland, 2012).

2.2.3 Information Asymmetry theory

In a debt market, information asymmetry arise when a borrower who takes a loan usually has better information about the potential risks and returns associated with investment projects for which the funds are earmarked. The lender on the other hand does not possess adequate information pertaining the borrower (Edward and Turnbull, 2004), for Perceived information asymmetry brings about two problems for financial institutions, moral hazard and adverse selection. Commercial banks finds it difficult to overcome these problems as it is not economical to

devote resources to appraisal and monitoring where lending is for small amounts. This is because data is needed to screen applicants and monitor borrowers are not freely available as and when it is required by banking institutions before giving out loans to its clients.

Hence commercial banks face a situation of information asymmetry while assessing lending applications (Binks & Ennew, 2004). Derban, Binner and Mullineux (2005) recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by asymmetric information theory. Qualitative and quantitative techniques can be used in assessing the borrowers although one major challenge of using qualitative models is their subjective nature. However according to Derban et al (2005), borrowers attributes are assessed through qualitative models can be assigned numbers with the sum of the values as compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases.

The rating systems will be important if it indicates changes in expected level of credit loan loss. Brown (2008) concluded that quantitative measures make it possible to numerically establish which factors are important in explaining default risk, evaluating the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan applicants and calculating any reserve needed to meet expected future loan losses. The theory is relevant in the sense that, if borrowers could provide true and complete information regarding their financial status to the lenders at the time of seeking for credit, then lenders could be at a better position of making informed credit decisions thereby reducing the risks associated with credit. When credit risk is reduced, level of non-performing loans is reduced hence a good portfolio quality for the commercial banks.

2.3 Empirical Review

This section presents the empirical literature review. It covers a review based on observations, induction, deduction, testing and evaluation of research work by other researchers and authors in the field under study. The review for this study was guided by Risk identification, Risk Assessment and Risk monitoring.

2.3.1 Risk Identification

Risk identification is vital for effective risk management among financial institutions especially commercial banks in Kenya. In order to manage credit risk associated with advancing credit effectively, commercial banking management have to identify risks facing the bank. The important thing during risk identification is not to miss any risks out. There are a number of different techniques that can be used in risk identification. The first step in organizing the implementation of the risk management function is to establish the crucial observation areas inside and outside the corporation (Kromschroder and Luck, 2008). Then, the departments and the employees must be assigned with responsibilities to identify specific risks. For instance, interest rate risks or foreign exchange risks are the main domain of the financial department.

In relation to commercial banks' practice of risk management, Al-Tamimi (2002) found that the United Arab Emirates commercial banks were mainly facing credit risk. The study also found that inspection by branch managers and financial statement analysis are the main methods used in risk identification. The main techniques used in risk management are establishing standards, credit score, credit worthiness analysis, risk rating and collateral. The recent study by Al-Tamimi and Al-Mazrooei (2007) was conducted on banks' risk management of United Arab Emirates national and foreign banks. Their findings reveal that the three most important types of risks encountered by United Arab Emirates commercial banks are foreign exchange risk, followed by credit risk, then operating risk.

Risk identification is positively significant to influence risk management practices. In the case of banks, studies made especially on risk identification and risk mitigation includes the work of Haron and Hin Hock (2007) on market and credit risk, and Haron (2007) specifically on operational risk. Haron and Hin Hock (2007) explain the inherent risk; credit and market risk exposures in Banks. Also, they illustrate the notion of displaced commercial risk that is important in Banks. They conclude that certain risks may be considered as being inherent in the operations of conventional banks. Although the risk exposures of Banks differ and may be complex than conventional financial institution, the principles of credit and market risk management are applicable to both. In addition, the International Financial Standards Board's standards on capital adequacy and risk

management guiding principles mark the first steps in an ongoing process of developing prudential standards and filling regulatory gaps in the field of finance.

2.3.2 Risk Assessment

There are many conceptual studies made on risk analysis and assessment by reference to measurement and mitigation of risk. In practice, it is useful to classify the different risks according to the amount of damage they possibly cause. This classification enables the management to divide risks that are threatening the existence of the corporation from those which can cause slight damages. Frequently, there is an inverse relationship between the expected amount of loss and its corresponding likelihood, that is; risks that will cause a high damage to corporation, like earthquakes or fire, occur seldom, while risks that occur daily, like interest rate risks or foreign exchange risks, often cause only relatively minor losses, although these risks can sometimes harm the corporations seriously. The empirical findings by Al-Tamimi and Al-Mazrooei (2007) highlighted that UAE banks are somewhat efficient in analyzing and assessing risk and there is a significant different between UAE national and foreign banks in the practice of risk analysis and assessment.

Additionally, the findings show that risk analysis and assessment are influencing risk management practices. The measures are used not only for risk control purposes, but also for performance measurements and pricing. In the context of banking, few conceptual studies (Sundararajan, 2007) discuss the risk measurement aspects particularly on the unique risk. Notwithstanding the report title, Risk: Analysis, Perception and Management, the working definitions employed by the Royal Society Study Group (1992) do not include the term risk analysis. According to the study group, risk estimation comprises identification of the outcomes and estimation of both the magnitude of the consequences and the probability of those outcomes. The addition of risk evaluation completes the process of risk assessment. British Standard 4778 considers risk assessment to refer to analysis of inherent risks and their significance in an appropriate context. It therefore seems possible at this stage to conclude that risk assessment and risk analysis are synonymous terms.

Risk analysis now goes beyond evaluation to include some of the decision making processes of risk management. Brainstorming is the main intuitive

technique, involving a group generating ideas off the top of their heads with a philosophy of nobody is wrong - let's get the ideas on the board. Although quick and simple, it lacks the comprehensive approaches of the more sophisticated techniques. A comprehensive risk measurement and mitigation methods for various risk arising from financing activities and from the nature of profit and loss sharing in the source of funds especially investment account holders are explained by Sundararajan (2007). He concludes that the application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for banks. Also, he suggests that the need to adopt new measurement approaches is particularly critical for banks because of the role play, the unique mix of risks in finance contracts.

2.3.3 Risk Monitoring

The main function of the risk manager is to monitor; measure and control credit risk. The Risk Manager's duty includes identification of possible events or future changes that could have a negative impact on the institution's credit portfolio and the bank's ability to withstand the changes. The areas to examine critically are: economic or industry changes, Market risk events and Liquidity conditions. Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place (Institute of Risk Management-IRM, The Association of Insurance and Risk Manager-AIRMIC and The Public Risk Management Association - ALARM; 2002). Risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover mistake at early stage (Al-Tamimi and Al-Mazrooei, 2007).

Monitoring is the last step in the corporate risk management process (Pausenberger and Nassauer, 2002). According to Parrenas, (2005), the shareholders of the institutions can use their rights to demand information in order to judge the efficiency of the risk management system. The director's report enables the shareholders to assess the status of the corporation knowledgeable and thoroughly. Khan and Ahmad (2001) conducted a survey of risk management practices and found that on average the lowest percentage is on the measuring, mitigating and monitoring risk that is 69% score as compared to risk management policies and procedures that is 82.4%, and internal control of banks that is 76%. Al-Tamimi

and Al-Mazrooei (2007) found that there is significant difference between UAE national and foreign banks in risk monitoring and controlling. Also, the UAE commercial banks have an efficient risk monitoring and controlling system and it has positive influence on risk management practices.

Efficient monitoring and management of exposures is necessary for banks to reduce its losses on earnings, solvency and depositors' refunds in case of insolvency (Van Gestel & Baesens, 2010). Banks also needs to carefully monitor risk arising from elaborate bank products as per the regulators requirements (Hull, 2012). However, it is error to believe that meeting regulatory requirements is the sole for establishing a sound, scientific risk management system.

Managers need reliable risk measures to direct capital to activities and estimate the size of potential losses to stay within limits imposed by available capital, creditors and regulators (Pyle, 2007). They need mechanisms to monitor positions and create incentives to be prudent in taking risk. Consequently, risk management is the process by which managers satisfy these needs by identifying key risks, obtaining consistent, understandable, operational risk measures, deciding which risks need to be manage and by which methods, and establishing procedures to monitor the resulting risk position (Pyle, 2007).

The area of interest rate risk is the second area of major concern and on-going risk monitoring and management. However, the tradition has been for the banking industry to diverge somewhat from other parts of the financial sector in their treatment of interest rate risk. Most commercial banks make a clear distinction between their trading activity and their balance sheet interest rate exposure. Investment banks generally have viewed interest rate risk as a classic part of market risk, and have developed elaborate trading risk management systems to measure and monitor exposure. For large commercial banks and European-type universal banks that have an active trading business, such systems have become a required part of the infrastructure. But, in fact, these trading risk management systems vary substantially from bank to bank and generally are less real than imagined. In many firms, fancy value-at-risk models, are up and running. But, in many more cases, they are still in the implementation phase. In the interim, simple ad hoc limits and close monitoring substitute for elaborate real time systems. While this may be completely satisfactory for institutions that have little

trading activity and work primarily on behalf of clients, the absence of adequate trading systems elsewhere in the industry is a bit distressing.

2.4 Summary of Knowledge gap

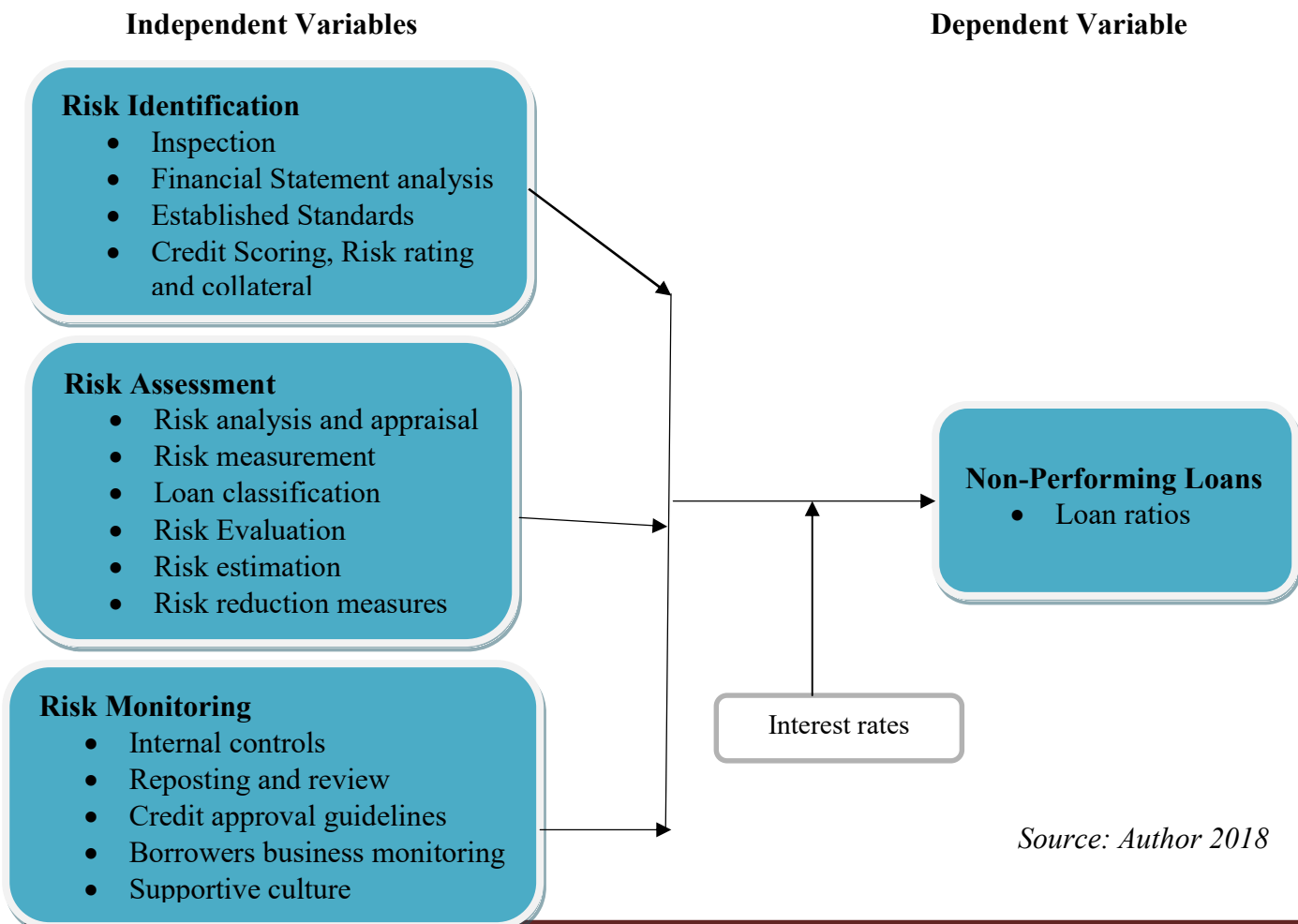
Banks' strength plays an important role in the stability and growth of economy. The stability of banks depends on the profitability and capital adequacy. From the forgone previous studies, studies has been carried on the impact of credit risk management and financial performance of commercial banks, most of these studies have leaned heavily towards the various tools and techniques of credit risk management, practices and strategies used by various institutions. Credit risk still remains one of the most significant risks that the commercial banks in Kenya face, considering that granting and giving credit is one of the main sources of income in commercial banks.

A review of empirical studies discussed in this study shows that there are mixed results on how credit risk management practices adopted by financial institutions impact on non-performing loans. In some instances, some studies shows that credit risk management has a significant impact on the profitability of commercial banks while on the other

hand, results show that credit risk management was found to have a negative impact on banks' profitability. Therefore, there is need for a study in the Kenyan context for comparison of results. Moreover, though there is increased literature on credit risk management and financial performance of commercial banks in developing countries; the literature on the Kenyan context is scare. There are few studies conducted on this context. It is based on these identified gaps that this study seeks to fill these knowledge gaps by conducting a study on the relationship between credit risk management and the level of non-performing loans by commercial banks in Kenya.

2.5 Conceptual Framework

The foundation of this study is built on effect of credit risk management on levels of non-performing loans by commercial banks in Kenya. To achieve this, Risk Identification, Risk Assessment and Risk Monitoring were used as independent variables representing effects of credit risk management on the dependent variable level of non-performing loans by the commercial banks in Kenya.



Source: Author 2018

Figure 2.1: Figure of Conceptual Framework Presentation

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology to be adopted by the researcher in carrying out the study. The chapter presents the population to be studied, the methods to be used to sample it, the instruments used in data collection and procedures that were used in data analysis.

3.2 Research Design

The study adopted descriptive research design. According to Robson (2002), descriptive study portrays an accurate profile of persons, events or situation. Descriptive study describes the existing conditions and attitudes through observation and interpretation techniques, Chandran (2004). Descriptive research design is one of the best methods for conducting research in human contexts because it portrays accurately current facts through data collection for testing hypothesis or answering questions to conclude the study through use of descriptive and inferential statistics, thus this design is deemed the best design to fulfill the objective of this study.

3.3 Target Population

The study targeted all the 43 commercial banks in Kenya as registered by Central Bank of Kenya by December 31, 2015. The list of the banks is provided in Appendix V. Out of the 43 banks that operate in Kenya, 39 commercial banks are privately owned while the Government of Kenya holds controlling stakes in the remaining 3 commercial banks. 25 of the 39 privately owned banks and the 1 mortgage finance institution are locally owned while 14 banks are foreign owned. Licensed banks usually have higher level of transparency and strict regulations hence the secondary data to be collected from the published annual reports were reliable.

3.4 Sampling Design

The target population of this study was all the 43 commercial banks in Kenya as registered by Central Bank of Kenya by December 31, 2015. The list of the banks is provided in Appendix V. Since the population is small and variable, the study adopted a census study approach. According to Cooper and Schindler (2006) a census is feasible when the population is small and necessary when the elements

are quite different from each other. When the population is small and variable, any sample drawn may not be representative of the population from which it is drawn. Therefore since the target population for this study is small and variable, it is appropriate to choose census method because the population is small and the institutions are easily accessible, hence the sample size was all 43 banks commercial banks in Kenya targeting bank branch managers, credit managers and credit officials.

3.5 Data Collection Instruments

The study was carried out using primary and secondary data. Primary data is the information obtained from the field. Primary data was collected using semi-structured questionnaires. According to Michael S (1998), a self-administered questionnaire is the only way to elicit self-report on people's opinion, attitudes, beliefs and values. The questionnaire contains both closed-ended and also a few open ended questions. These types of questions were accompanied by a list of possible alternatives from which respondents were required to select the answer that best describes their situation. The main advantage of close ended questions is that they are easier to analyze since they are in an immediate usable form, they are easy to administer because each item is followed by an alternative answers and also they are economical to use in terms of time saving. The questionnaires were administered using drop and pick method. The questionnaires were used because they allow the respondents to give their responses in a free environment and help the researcher gather information that would not have been given out had interviews been used. The questionnaire were self-administered to some respondents while for others the researcher administered.

3.6 Data Collection procedure

The questionnaires was administered using drop and pick method or as may be agreed by the respondents. The questionnaires were used because they allow the respondents to give their responses in a free environment and help the researcher gather information that would not have been given out had interviews been used. The questionnaire were self-administered to some respondents while for others the researcher administered. The Secondary data was collected from past published scholarly articles and

annual reports of the target commercial banks for the period of 6 years from 2011 to 2016.

3.7 Pilot Study

Piloting was carried out to test the validity and reliability of the instruments. Validity indicates the degree to which the instrument measures the constructs under investigation (Mugenda and Mugenda, (1999)). There are three types of validity test which include content, criterion and related construct validity. The study used content validity because it measures the degree to which the sample of the items represents the content that the test is designed to measure. A pilot study was conducted by taking some questionnaires to some commercial banks to be filled by respondents at random. From this pilot study the researcher was able to detect questions that need editing and those that are ambiguous. The final questionnaire was then printed and to be used to collect data for analysis.

3.7.1 Data Reliability

Reliability is the extent to which the same answers can be obtained using the same instruments more than one time according to Babbie, E. R. (2010). Bryman & Bell 2011 refer to reliability is “the consistency of a measure of a concept”. One of the important factors when considering whether a measure is reliable and stable over time. The need to be able to generate the same results, using the same research methods under similar conditions over time. It focuses on the stability of measure over time, therefore the results from that measure will have little variation (Bryman & Bell, 2011).

In the study, a pre-test of the questionnaire was out prior to the actual data collection. The developed questionnaire was checked for its validity and reliability through pilot testing. Reliability test helped establish the internal consistency of the instrument. Test re-test method was used to pilot the questionnaires, which do not form sample of the study. Reliability was tested by the Cronbach’s alpha test which was calculated with the help of Statistical Package for Social Sciences (SPSS). A pilot study of 8 respondents was undertaken on from the targeted population through random sampling. The reliability of the questionnaire was evaluated through Cronbach’s Alpha which measures the internal consistency. The reliability values were checked for the three independent variables. The results illustrated that all the four variables were reliable as their reliability values exceeded the prescribed threshold of

0.7 according to Loehlin (2004). The results of reliability test are shown on table 3.7.1 presented below.

Table 3.7.1: Reliability test

Study variables	Cronbach's Alpha (α)	Number of Items
Credit risk identification	0.85	8
Credit risk assessment	0.81	8
Credit risk monitoring	0.87	8

Source: Author 2018

3.7.2 Data Validity

Carmines and Zeller (2014) mention the validity is regarded as an indicator of “abstract concept” and is measured exactly to what it intend to measure. It is also regarded as the most important criterion of research by Bryman & Bell (2011).

In the study, pilot study was carried out to test the validity of the research instruments. Validity indicates the degree to which the instrument measures the constructs under investigation (Mugenda and Mugenda, (1999)). There are three types of validity test which include content, criterion and related construct validity. The study used content validity because it measures the degree to which the sample of the items represents the content that the test is designed to measure. A pilot study was conducted by taking some questionnaires to some commercial banks to be filled by respondents at random. From this pilot study the researcher was able to detect questions that need editing and those that are ambiguous. The final questionnaire was then printed and to be used to collect data for analysis.

3.8 Data Analysis and Presentation

The collected data was analyzed through descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) was used to analyze data. The results were presented in tables, charts and bar graphs. The study adopted the following regression model to establish the form of relationship between credit risk management and the level of non-performing loans by

the commercial banks in Kenya. The equation took the following form;

$$Y = \beta_0 + \beta_1 Ri + \beta_2 Ra + \beta_3 Rm + \varepsilon$$

Where: Y = Non-performing loans, Dependent Variable

Ri = Risk Identification Ra = Risk Assessment

Rm = Risk Monitoring β_0 = the constant

β_1 -n = the regression coefficient or change included in NPL by each factor

ε = error term

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.8 Regression Results

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. In order to determine the effect of risk management on the level of non-performing loans in commercial banks in Kenya, the research used statistical package for social sciences (SPSS Version 20) to code, enter and compute the measurements of the multiple regressions. The results of regression analysis are presented in the table 4.8.1 of Regression analysis model summary.

Table 4.8.1: Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887	.787	.752	.26548

Source: Author 2018

From the table above, R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by R 0.887 at 5% significance level. The Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the table above the value of adjusted R squared was 0.752 an indication that there was variation of 75% on non -

performing loans due to changes in credit risk identification, credit risk assessment, credit risk monitoring process at 95% confidence interval. This is an indication that 75% of the changes in credit risk management could be accounted for by the independent variables. Therefore the relationship between non-performing loans and the independent variables (credit risk identification, credit risk assessment, credit risk monitoring) is strong.

Further, an analysis of variance of the regression model was done to establish the data for the study is idea for making study conclusions. The results of the analysis of variance are presented in the table 4.8.2.

Table 4.8.2: Analysis of Variance Table

Model	Sum of Squares	Df	Mean Square	F
	Regression	3.256	3	0.8
	Residual	7.854	34	0.2
	Total	11.11	37	

Source: Author 2018

From the table above, the processed data, which is the population parameters, had a significance level of 2.6548% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. The F critical at 5% level of significance, 4 degrees of freedom, 34 degrees of freedom was 2.6548, while F computed was 3.524, since F calculated is greater than the F critical (value = 2.6548), this shows that the overall model was significant.

4.8.1 Regression Coefficients

The general objective of this study was to determine the credit risk management and the level of non-performing loans in commercial banks in Kenya. There were more than one study objective and they were to determine the effect of credit risk identification on the level of non-performing loans, establish the effect of credit risk assessment on the level of nonperforming loans and to examine the effect of credit risk monitoring on the level of non-performing loans in commercial banks. The results of regression coefficients are presented in table 4.8.3.

Table 4.8.3: Regression Coefficients

Mode I		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
1		B	Std. Error	Beta		
	Constant	.417	.984		1.101	.017
	Risk identification	.737	.537	.334	2.679	.006
	Risk assessment	.695	.441	.029	3.093	.027
	Credit risk monitoring	.480	.258	.681	3.247	.018

Source: Author 2018

From the results tabulated above on table 4.8.3, the coefficients of the regression are used to come up with the following regression equation:

$$Y = 0.417 + 0.737 X_1 + 0.695 X_2 + 0.48 X_3$$

Where X_1 , X_2 , and X_3 are risk identification, credit risk assessment and credit risk monitoring respectively.

From the regression equation above it was found that holding Credit risk identification, Credit Assessment and Credit risk monitoring to a constant zero, the level of non-performing loans will be 0.417, a unit increase in risk identification would lead to decrease in the level of non-performing loans by 0.737 units, a unit increase in risk assessment would lead to decrease in the level of non-performing loans by 0.695 units, a unit increase in risk monitoring would lead to decrease in the level of non-performing loans by 0.48 units respectively.

These results imply that increase in risk identification would lead to reduction of the level of non-performing loans in the commercial banks in Kenya. A positive increase in credit assessment would lead to a reduction in the level of non-performing loans. An increase in credit risk monitoring would also lead to a decline in the level of non-performing loans. Risk identification has the highest influence on the level of non-performing loans as represented by 0.737 followed by risk assessment as represented by 0.695 and finally credit risk monitoring as represented by 0.480. All the three variables were noted to have a positive influence on the level of non-performing loans in the commercial banks in Kenya.

At 5% level of significance and 95% level of confidence, risk identification had a 0.006 level of significance; risk assessment had a 0.027 level of significance while risk monitoring had a 0.018 level of significance. All the variables were statically significant ($p < 0.05$).

4.9 Interpretation and Discussion of the results

A multiple regression analysis was conducted out of the data collected for the study to test the influence among predictor variables. From table 4.8.1 of Regression analysis model summary results, R is the correlation coefficient which shows the relationship between the study variables, from the findings it was established that there is a strong positive relationship between the study variables as shown by R 0.887 at 5% significance level. The Adjusted R squared being coefficient of determination which gives more insights on the variation in the dependent variable due to changes in the independent variable. The value of adjusted R squared was 0.752 an indication that there was variation of 75% on non - performing loans due to changes in credit risk identification, credit risk assessment, credit risk monitoring process at 95% confidence interval. This is an indication that 75% of the changes in credit risk management are explained by the independent variables. Therefore the relationship between the level of non-performing loans and the independent variables (credit risk identification, credit risk assessment, credit risk monitoring) is strong and statistically significant.

In addition to regression analysis model summary, an analysis of variance of the regression model was done. The results had a significance level of 2.6548% which showed that the data was ideal for making research conclusions on the population parameters. The level of significance (p-value) was found to be less than 5%. The F critical at 5% level of significance, 4 degrees of freedom, 34 degrees of freedom was 2.6548, while F computed was 3.524, since F calculated is greater than the F critical (value = 2.6548), this showed that the overall model was significant.

Regression coefficients represent the mean change in the response variable for one unit of change in the predictor variable while holding other predictors in the model constant. This statistical control that

regression provides is important because it isolates the role of one variable from all of the others in the model.

From the regression equation above it was found that holding Credit risk identification, Credit Assessment and Credit risk monitoring to a constant zero, the level of non-performing loans will be 0.417, a unit increase in risk identification would lead to decrease in the level of non-performing loans by 0.737 units, a unit increase in risk assessment would lead to decrease in the level of non-performing loans by 0.695 units, a unit increase in risk monitoring would lead to decrease in the level of non-performing loans by 0.48 units respectively.

These results imply that increase in risk identification would lead to reduction of the level of non-performing loans in the commercial banks in Kenya. A positive increase in credit assessment would lead to a reduction in the level of non-performing loans. An increase in credit risk monitoring would also lead to a decline in the level of non-performing loans. Risk identification has the highest influence on the level of non-performing loans as represented by 0.737 followed by risk assessment as represented by 0.695 and finally credit risk monitoring as represented by 0.480. All the three variables were noted to have a positive influence on the level of non-performing loans in the commercial banks in Kenya.

At 5% level of significance and 95% level of confidence, risk identification had a 0.006 level of significance; risk assessment had a 0.027 level of significance while risk monitoring had a 0.018 level of significance. All the variables were statically significant ($p < 0.05$).

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.2 Summary of the study

The overall objective of the study was to determine the effect of credit risk management on loan performance by commercial banks in Kenya. The study specifically sought to determine the effect of credit risk identification on the level of non-performing loans, establish the effect of credit risk assessment on the level of non-performing loans and examine the effect of credit risk monitoring on the level of non-performing loans by commercial banks in Kenya. The study employed quantitative research as the main approach to guide the study. The target

population was 43 commercial banks in Kenya. The research instrument used in data collection was a questionnaire issued to all respondents. Data analysis was started immediately after the field work. Data was summarized into frequencies, percentages and presented in tables as presented below by the following discussion.

5.2.1 Influence of credit risk identification on the level of non-performing loans

The study find that credit risk identification influence the level of non-performing loans in the commercial banks. This is due to the fact that once risks are identified they can be controlled. The risks are identified through the risk registers managed by the risk and audit officers in the banks. The staff are also taken through training of the credit policy and the risk register to create awareness and the ability of identifying and curbing risk. The study findings are consistent with Kodithuwakku (2015), where banks have a well-defined or clear and documented methodology for identifying and assessing the credit risk of their system. This is necessary for a bank to mitigate the impact of credit risk, as this would enable all the staff members to clearly identify the risks and assess them on the reasonable conditions. If a bank is aware of its risk, including credit risk, then it can develop all the necessary controls and strategies, based on risk assessment to mitigate the risk.

5.2.2 Influence of credit risk assessment on the level of non-performing of loans

Credit assessment influences the performance of the loans in the commercial banks. Quality credit risk assessment helps in evaluation of the credit worthy customers. The credit staff analyse and appraise all loans applications submitted within a month in order to assess the level risk attached to the loans. They advise the management on the loans that may perform, which determines approval of loans within the month, against the set limit. This agree with a study by Kagoyire (2016) where it revealed that client appraisal is a viable strategy for credit, aspects of collateral are considered while appraising clients, failure to assess customer's capacity to repay results in loan defaults, client appraisal considers the character of the customers seeking credit facilities and that commercial banks in Rwanda have competent personnel for carrying out client appraisal.

5.2.3 Influence of credit risk monitoring on the level of non-performing loans

The banks have clear credit approval guidelines, internal controls and monitoring structures; due to the stringent measures put by the central bank. The structures monitor loan performance and classify the loans into current, performing, substandard, and doubtful and loss in order for the management to make provisions based on the risk attached to each category. The risk monitoring helps the credit officers in the bank to follow-up on the borrowers also follow the set up procedures of recoveries in cases of default. Credit risk monitoring is done on a daily basis due to the diversified products offered by the bank, because the repayment schedules vary. The level and strength of risk monitoring determines the performance of the bank's profitability. The banks have a well-established credit committee, which monitors loan performance mostly on a monthly basis. The credit committee plays a great part in the monitoring of loan performance and also give recommendations to the management where the loan performance is poor.

This study agrees with study by Gatuhu (2013) which established that Credit committees involvement in making decisions regarding loans are essential in reducing default, credit risk, the use of credit checks on regular basis enhances credit management, Penalty for late payment enhances customers commitment to loan repayment, the use of customer credit application forms improves monitoring and credit management, flexible repayment periods improve loan repayment and finally that the use of credit checks on regular basis enhances credit management. This concurs with a study by Onkoba (2014), which established that is a significant relationship between financial performance, in terms of profitability and credit risk management in terms of loan performance, loan loss reserves and capital adequacy. In addition bank managers need to practice prudent credit risk management, safeguard the assets of the bank and protect the shareholders' interests.

5.3 Conclusions of the study

The study concluded that all the three independent variables influence the level of non-performing loans positively in the commercial banks in Kenya. Credit risk identification, credit risk assessment, credit risk monitoring positively influence the level of loan book portfolios in the commercial banks in Kenya. The banks have put in place credit policies that control their terms when lending to the customers. The Central bank in Kenya has also been very proactive on the banking sector to ensure maximum compliance, in credit management. A study by Kibor

(2015) established that effective lending policies played a significant role in credit risk management amongst commercial banks in Nakuru town. It was inferred that lending policies have significant influence on the performance of bank loans. The study concluded that credit standards were adopted by commercial banks in Nakuru town. In the same light, it was deduced that putting a ceiling on the loans advanced to bank customers could enhance credit risk management. The study further concluded that determination of borrowers' credit worthiness is crucial in credit risk management. Lastly, credit standards were found to strongly affect loan performance of commercial banks.

5.4 Recommendations of the study

On the basis of above study conclusions, the following recommendations were made after analyzing the findings the study.

5.4.1 Risk Identification

The banks should ensure that they have competent personnel who appraise the borrowers, in addition ensure that they are credit worthy. The staff should be well oriented with the bank standards and policies to ensure that they understand them and comply. The credit portfolio can also be used to assess staff performance as this would enhance further control to ensure that staff do not only aim to meet targets but ensure that loans are disbursed to the credit worthy customers. Risk awareness campaigns should be continuously done so that the management and all the staff are aware of the possible risk on appraisal and monitoring of the credit facilities. The credit committee meetings should be regular with a clear agenda to ensure that over 95% of the loans are performing. Daily performance reports should be closely scrutinized so that risk of default is identified at an early stage and control measures taken. Securities attached to the loans should be charged and of a higher value than the amount disbursed to the borrowers.

5.4.2 Credit Risk Assessment

The study recommends to the commercial banks in Kenya to bench-mark with best performing banks in terms of credit risk identification. Credit risk identification factors such as credit risk registers should be updated on a continuous basis so that the management and the staff are able to focus on the risks in the credit management. The management and the credit committee should be independent when assessing the loan applications and ensure that all the

applicants meet the required standards as set in the policy.

5.4.3 Credit Risk Monitoring

The management should also focus on the credit reports continuously so that before a loan becomes substandard the necessary measures are taken to prevent loss. This agrees with a study by Kibor (2015), which recommended that credit standards for commercial banks should be customized to the credit worthiness of prospective borrowers. The foregoing is likely to enhance their financial performance by mitigating financial losses that would otherwise emanate from credit risks.

5.5 Limitations and Area for further research

The study was conducted among the licensed 43 commercial banks in Kenya. Thus, the small and medium size banks and other financial institutions operating in Kenya were not included in the study. In addition, the banks have mixed activities from commercial banking services, several differentiated products and services and investment banking. The risks facing commercial banks and investment banks are not usually identical. For instance, credit risk is more important to commercial banks while market risk and credit risk are important to investment banks. The difference between concentrations of risks also vary greatly.

Further research and studies should be conducted to examine the influence of information technology on the credit management among financial institutions in Kenya, there is also need to research on the influence of the staff training on the performance of the loans in the commercial banks in Kenya and further studies on the influence of leadership on the performance of the loans in the commercial banks in Kenya.

Moreover a study should also be carried out to establish the relationship between the risk management strategies on unsecured loans in both the banking and non – banking financial institutions in Kenya. This will help the policy makers in coming up with an air tight Risk management framework to guide the monetary sector in improving the performance of unsecured loans.

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