International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online)
Vol. 7, Issue 2, pp: (346-361), Month: October 2019 - March 2020, Available at: www.researchpublish.com

Determinants of Loan Non Performance in Kenya Commercial Banks

Edah Kavwanyiri

Kaimosi Friends University College.

Abstract: **Non-Performing loans are one of the key causes of banks breakdown in Kenya commercial banks. The following study sought to deeply investigate on determinants of nonperforming loans and thereafter come up with recommendations in regard to nonperforming loans problem. The general objective of the study was to assess the determinants of loan nonperformance in Kenya commercial banks. The study was guided by the following specific objectives: To determine the effect of Bank Ownership structure on loans nonperformance in Kenya commercial banks and to determine the effect of Credit Monitoring on loans nonperformance in Kenya commercial banks. The study employed descriptive research design where quantitative approach was applied. Census was adopted where data was obtained from 43 commercial banks in Kenya and analyzed using SPSS version 23 by applying both correlation and regression to show relationship between the variables. The results showed that both Bank ownership structure and credit monitoring were statistically significant in relation to Non performing loans. The study recommended that the bank management should take key issues on asset quality of the bank specifically loan performance for prevention of nonperforming loan thus can give due emphasis on the asset management decision then manage them efficiently. Management should also put into consideration the process and procedures in regard to credit monitoring. The internal risk management process must be sophisticated, proactive and adaptable handled by risk management staff and external partners, who can effectively and routinely assess, quantify, prioritize and address Non performing loans in depth.**

Keywords: **Bank Ownership Structure, Credit Monitoring, Non performing Loans.**

1. INTRODUCTION

1.1 Background of the Study

In the recent past, the universal financial crisis and the succeeding recession in many developed and developing countries have increased firms' defaults, causing significant losses to the banks. Case of Kenya is no difference where some banks have gone into bankruptcy and liquidation due to various non-performing loans. If a bank does not receive a timely partial or full payment of a loan, it should classify this as a problem loan and the value of the loan on the bank's financial statements should be adjusted to reflect this. By recording them in this way stakeholders, management, regulators and other individuals will have a clearer picture of the true value and strength of the bank (Apostolik and Donohue, 2015). Therefore, problem loans are defined as financials agreements wherein the borrowing party did not pay the interest and/or installments according to a structured schedule. In other words, loans will be defined as NPLs when they do not generate income for the bank and thus cease to be in accordance with the loan agreement (Anjom & Karim, 2015).

Rossi (2005), examined a sample of 278 banks in nine transition countries, from 1995 to 2002, using the Granger-causality techniques to test the associations among cost efficiency, bank capital and loan quality. They established that increases in NPLs are typically followed by decreasing cost efficiency. This happens since banks increase expenditure on monitoring, becoming more industrious in administering the portion of their prevailing performing loan portfolio. Further, decreasing cost efficiencies are usually followed by increasing NPLs, due to poor management practices, such as excessive expenditure and monitoring practices. Furthermore, they highlight that low bank capital ratios may encourage management to take on more portfolio risks, increasing non performing loans. Keeton and Morris (1987) emphasized on the concept of moral hazard, discovering that commercial banks with low level of capital to asset ratio are encouraged to accept high risk in their loan portfolio. As a result of this, the level of non-performing loans have gone up.

Due to its adverse effect, Non -performing loans in the US started to increase substantially in 2006 in all sectors before the downsize of the sub-prime mortgage market in August. (Greenidge & Grosvenor, 2010). Lending rate, inflation and Real GDP had impact on NPLs on US Banking sector (Saba, Kouser & Azeem, 2012). United States of America saw its NPL ratio rise during 2010 from 2008, in light of the ongoing financial crisis. The Mexican banking industry had a well banking structure but showed an increase in NPL during 2012. Due to the increasing level of non-performing loans in Nigeria banks, the credit management practices were employed. Fulfillment and dealing with nonperforming loans means gaining tactics on how to curb it. Banks not only consider the profitability part of their business, they also contribute to allocation of fund to borrowers evidenced by (Psillaki, Tsolas & Margaritis, 2010).

Commercial banks play important role in the economy, they thus provide source of fund. They allocate loans to individuals who are willing and thereafter repay with an interest. Daniel and Wandera (2013) states that they play a vital role to rising economies where borrowers have no capital. They are thus known as a liaison between the depositors and borrowers. The Banking industry in Kenya is supervised by the Banking Act, the Central Bank of Kenya Act. Currently, Kenya licensed commercial banks is 42 with one licensed mortgage finance Institution (HFC Limited) which has 18 branches. 25 are locally owned while 14 have alien ownership. The central bank of Kenya has also 8 authorized non-operating bank holding companies (CBK Annual Report, 2018). The Kenyan banking industry fall down in profitability in 2015 was caused by increasing non-performing loans, followings the subside of three banks including Chase Bank Dubai and Imperial (CBK Annual Report, 2015). This implies that rules should be laid down on how non performing loans can be controlled.

1.2 Statement of the Problem

The nonperforming loans have been identified as one of the main causes of Bank failures. A failed financial institution brings many negative effects to the entire economy. Therefore managing nonperforming loans and maintaining it at an acceptable level is an important task for the stability of Banks as well as the financial system of a country (Pivithuru, 2017). In order to manage the nonperforming loans, it is important to understand the determinants of the nonperforming loans and their relationship which is the main problem that would be addressed throughout the research. Kenya has shown high rate of Nonperforming loans in due to High Interest rates and growth in loans as some of the causes of non-performing loans in commercial banks in Kenya, which show that Non-Performing loan is influenced by pressure on the banks to retain high lending rates to minimize losses causing borrowers default thus the need to conduct other studies on other determining variables of nonperforming loans on commercial banks (Muriithi, 2013). Weak credit scrutiny, insufficient risk supervision, dishonesty of the borrowers causes an upward trend in non-performing loans on Zimbabwe Commercial Banks attributing to the growth in the loan book by increasing the cost of loans charged on the borrowers leading to NPLs. Thus the need to conduct other studies on management of nonperforming loans on banks (Joseph *et al.*, 2012).

A study conducted in Kenya revealed that all banks loan books contained a significant level of non- performing loans in relation to credit analysis, credit scoring and bank structure (Akehege, 2011). Kiruri (2013) determined the relationship between ownership structure and bad loan in Kenya. The researcher found that ownership concentration is significantly significant with bad loans. The above literature forms the basis of exploring deeply on the various determinants of loan nonperformance in Commercial banks in Kenya due to its diverse gaps that need to be covered.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to assess the determinants of loan non performance in Kenya commercial banks.

1.3 2 Specific Objective

1. To determine the effect of Bank ownership structure on loan non performance in Kenya commercial banks.
2. To determine the effect of Credit monitoring on loan non performance in Kenya commercial banks.

1.4 Research Hypotheses

H_{o1}: Bank Ownership structure has no significant effect on loan non performance in Kenya commercial banks.

H_{o2}: Credit Monitoring has no significant effect on loan non performance in Kenya commercial banks.

2. LITERATURE REVIEW

2.2 Theoretical Review

Various models and theories have been studied by diverse authors while addressing loan non performance in Kenya commercial banks. Authors used different variables in regard to Nonperforming Loans in various Countries. In the current study the following models and theories were adopted.

2.2.1 Models

A model is an abstract representation of a real world situation. Many authors have used different models to come up with different solutions for specific problems. The current study was guided by the use of the following models.

a) Risk-Adjusted Return on Capital (RAROC) Model

RAROC model is used to estimate the return on a loan to many customers. It was developed by Bankers Trust and is now used by virtually all the large banks although with differences (Saunders & Cornett, 2007). The vital idea following RAROC is that lenders balance the loan's expected income against the loan's predictable risk rather than using the actual cash flow on a loan as a percentage of the amount lent. Evidenced by James Christopher (1996) show that the RAROC systems is to provide consistent way to determine the amount of capital essential to support each of their major activities to determine the influence for the bank as a total.

In the current study the model was adopted to provide a uniform measure of performance between customer thus showing how customers return their loans and in turn use this measure to evaluate performance for capital budgeting thus providing a basis for bank regulation.

b) Credit Scoring Model

Credit determines the financial strength of the borrowers, approximating the probability of default and reducing the risk of non-payment to an acceptable level. It involves evaluating a set of variables to determine creditworthiness of similar loan applications. A combined credit score is calculated relative o the value of each variable. The result will be compared to a cutoff point. If the score exceeds the cutoff point, the application is approved or rejected (Tafti & Nikbakht, 1993). Malhotra and Malhotra (2003) state that Credit scoring models have the potential in reducing the contradiction of credit decisions and adding usefulness to the lending risk evaluation practice. In addition, to their role in the loan approval process, credit scoring models assist on loan pricing, loan monitoring, credit risk management and the assessment of loan portfolio risks. Credit scoring is applied in consumer lending mainly in credit cards and credit lending (Limsombunchai *et al.*, 2005).

Due to its adverse effect on bank processes the study adopted credit scoring model for Individual customer to assist in credit monitoring among banks. Thus before a customer is assigned a loan the customer is analyzed in terms of the ability of the customer to pay loan and then afterwards the bank decide how to allocate loan to the customer by using this model to avoid nonperforming loans.

2.2.2 Theories

The term theory is a belief, policy, or procedure proposed as the basis of action. A lot of authors have used different theories to come up with different solutions for specific problems. In regard to the current study the following theories were used.

a) Loan Pricing Theory

Banks cannot always set high interest rates, that is, trying to earn maximum interest income. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Ewert, 2000). If banks allocate interest rates to be high, they may encourage adverse selection problems since high risky borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may expand moral hazard behavior since they are expected to take on highly risky projects (Chodecai, 2004).

Pagano and Jappelli (2003) demonstrate that sharing information reduces adverse selection by civilizing banks information on credit applicants. Each bank has confidential information about its applicants, but has limited about foreign applicants. Access to information helps lenders measure borrower risk accurately and to set loan terms and conditions. Borrowers with low risk would be given fair prices, inspiring credit demand while fewer higher risk borrowers

would be limited out of the market because of lenders incapability to offer these borrowers compliant charge (Bofondi & Gobbi, 2003).

Padilla and Pagano (2000) illustrate that if banks exchange credit information on defaults, borrowers are optimistic to apply energy in their projects. In both models nonpayment is a symbol of terrible quality for outside banks and thus higher interest rates. The moral hazard problem states that a borrower has the inducement to default except there are costs for his expectations applications for credit. Thus lenders will increase rates, leading to the collapse of the economy (Alary & Goller, 2001).

The current study adopted this theory on how bank can come up with a credit policy in line with interest rate thus to show how an increase in interest rates can have a chance of loan default, consequently it boosts the rate of nonperforming loan.

b) Hold-up and Soft-Budget-Constraint Theories

Banks choice of multiple-bank lending is in terms of two inefficiencies affecting exclusive bank firm relationships, namely the hold-up and the soft-budget-constraint problems. According to the hold-up literature, sharing lending avoids the expropriation of information. This improves firms' incentives to make proper investment choices and in turn it increases banks' profits (Von Thadden, 2004).

For the soft budget-constraint problem, several bank lending makes the banks not to widen wasteful credit, thus decreasing firms' planned defaults. These theories consider numerous banks lending as a way for banks to consign towards proprietors and improve their incentive. Arguments report that banks only require security for moderately perilous firms that also pay advanced interest rate (Chodechai, 2004).

The theory in the study was used to enhance credit monitoring thus a bank can monitor its performance in terms of its lending hence if it is multiple lending it cannot extend its lending to a certain level.

2.3 Conceptual Framework

Mugenda and Mugenda (2003) term a conceptual framework as a model identifying the concepts under study and their relationships. The dependent variable is Nonperforming Loan and the independent variables include Bank Ownership Structure and Credit Monitoring

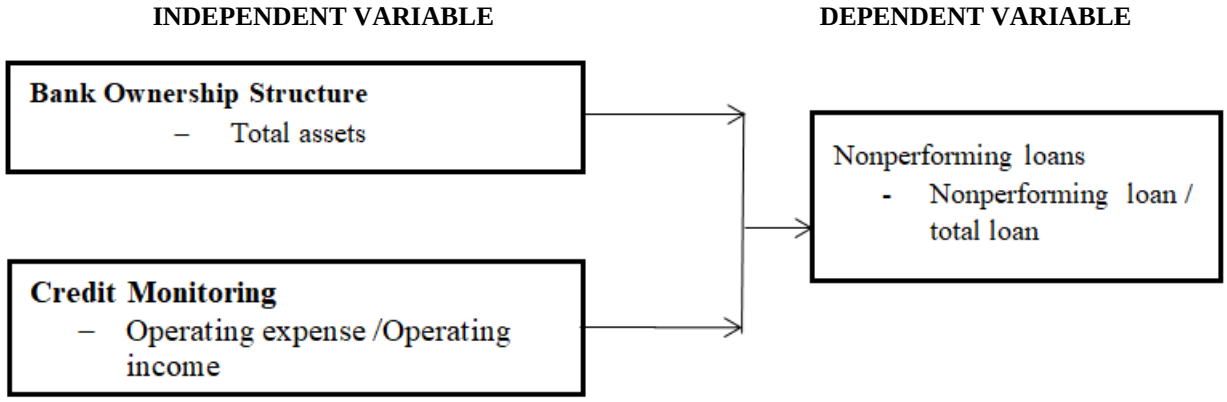

Figure 2.1: Conceptual Framework

2.4 Review of Variables

2.4.1 Bank Ownership Structure

The fiscal reform in Kenyan Banking Industry has seen vibrant changes in the ownership structure. The banking sector has seen the government tumbling its shareholding in once fully owned state banks. The reforms have also buoyant foreign ownership in banks to go into and develop banking operations in the country (Mang'uyi, 2011). Deterioration in asset is much more serious problem of bank unless the mechanism exists to ensure the timely recognition of the problem. It is a common cause of bank failure. Lower asset leads to nonperforming loan that can seriously damage a banks' financial position having an adverse effect on banks operation (Lafunte, 2012). It distresses the performance and survival of banks (Mileris, 2012).

Shehzad *et al*. (2010) investigated the impact of ownership on bank riskiness. They used 500 banks data from 50 countries over the period of 2005-2009. They find that concentration of ownership has negative impact on the NPLs and helps in reducing NPLs. They further argued that at low level of supervisory control and protection rights, ownership structure has negative impact of riskiness. On the other hand, Laeven and Levine (2010) conducted study on theories relating the banks risk appetite and ownership structures. Their study was based on investigating the collision of conflict between owners and managers over bank risk appetite. They found that comparative power of shareholders has positive impact on the risk taking ability of banks. They further proved that capital regulation, bank risk, restriction on bank activities and deposit insurance policies depends on the banks ownership structure.

Habtamu (2012) dispute that Credit managers add an exceptional idea that years of experience of credit managers were positively correlated with nonperforming loans as decision making of credit managers were inclined by the external factors that is, personal gain and political bribery. In contrast, Ongore (2011) investigated out that when managers, dual up as shareholders, they are aggravated to work towards understanding of the prosperity formation objective of the shareholders of whom they are part. On the other hand, managers who are not shareholders are more likely to engage in insider dealings as a way of attracting their personal wealth and prestige. Further Azofra and Santamaria (2011) find that high levels of ownership concentration benefit both the bank's profitability and efficiency for a sample of Spanish commercial banks.

Ongore (2011) investigated the association between Bank loan performance and ownership structure listed firms in Kenya. The author analyzed the data using Pearson's Product Moment Correlation. His finding stipulated that in Kenya, ownership concentration is unfavorable to manager creativity and innovation, and curtails firm performance . Fazlzadeh *et al*. (2011) findings were that ownership concentration doesn't have significant effect on nonperforming loans with the explanation that it has both advantages and disadvantages However, Ownership concentration had a negative impact on nonperforming loans because when an institutional investor owns many shares, the organization would be overwhelmed by its authority and instead of pursuing the benefits of all shareholders, management would only try to please specific institutional shareholder which owns the majority of share of company which would finally lead to failure in impaired loans (Fazlzadeh *et al*., 2011).

The credit practices apply when banks employ customers to obtain more information from them. Hard lending identifies situations in which banks reside on the borrowers' statement of financial position to assess creditworthiness. De la Torre *et al*. (2010) argue that large banks may have reward comparative to other financial institutions through economies of scale in processing of information technology like credit scoring. Hence, they may be superior able to enumerate and expand the range risks associated with hard information credit. The idea of Berger and Black (2011) found that big banks have a benefit in lending money in US. In distinction, they reported that small banks have benefit in lending and that this gain was powerful for the largest firms. Nevertheless, Uchida (2012) illustrate that individual who pay loans play important role in coming up with information which is soft. They show that small banks are more live in producing this information. Thus they find that information gathering vary from bank to bank.

Ongare (2011) studied that government ownership was found to have a negative impact on firm performance. In the ownership by corporations his findings suggested a positive relationship with firm performance since most of the holding companies are usually large corporations who translate their investment practices and risk taking behavior to those firms. The researcher however found a positive relationship between diverse ownership and firm loan performance. In distinction, Ongore, K'Obonyo and Ogutu (2011) their findings were that financial performance of firms listed on the NSE is not affected by government shareholding or control since financial performance of partially privatized but listed firms is indifferent to the government control.

Fazlzadeh *et al*. (2011) determined the position of ownership structure on nonperforming loans in firms of Tehran stock exchange for 6years. The researchers used balanced panel data in the regression analysis by concentrating on institutional ownership, ownership concentration and institutional ownership concentration. On the other hand, there was a significant positive influence of institutional ownership on loan performance this was due that investors from institution are successful owners because they monitor loans frequently.

However, Kiruri (2013) sought to determine the relationship between ownership structure and bad loan in Kenya. The researcher used descriptive study design, data was pinched from all the registered banks by the Central Bank of Kenya. The study obtained information from annual reports of the banks and also in the Central bank of Kenya. The researcher

obtained data for a five year .Findings were that ownership concentration is significantly negatively correlated with bad loans implying that ownership concentration leads to lower bad loans of commercial banks in Kenya.

Ongore *et al*. (2011) used a census approach in their research design with the aim of determining the relationship between different type of shareholder and firm performance. Findings indicate a negative relationship between state ownership of firms and financial performance. On the other hand, foreign, diverse and institutional ownership gave important positive relationships with financial performance. Their results however fail to establish the critical level of shareholding, beyond which there would be accelerated performance of firm arising from promise of managers.

2.4.2 Credit Monitoring

Frequent monitoring of loan value with a developed system of alerting regulatory authorities in regard to nonperforming loans is essential to a bank to increase its performance (Agresti *et al.*, 2013). There is a tendency by borrowers to give better attention to their loans when they perceive they got better attention The need to give due attention to borrower thus need not be overemphasized in order to ensure loan performance. It is convinced that banks to follow up with their loans timely (Makri *et al*., 2014). In order to improve loan value, bank will increase monitoring and incur higher costs, affecting the measure of operating efficiency In assessment of current loans status, the borrower's credit worthiness and the market value of collateral are not taken into account thereby rendering it difficult to spot bad loans (Saba, 2012).

Most banks incur nonperforming loans because they fail to do pre credit monitoring before allocating loans. Though there are risks that they can incur the banks continue to allocate loans to low quality borrowers (Machiraju, 2011). The banks lose money since they fail to monitor their borrower's possessions, and fail to make out caution signs at an early stage. Failing to see the risk of lose is when the banks don't take keen note on following up the borrower before lending. The aim of supervising a loan is to prove the basis on which the lending decision was taken in prose to hold good and to ascertain the loan funds are being properly maintained.

Banks need to see whether the nature of the borrower, capacity to repay the loan, current market conditions and the value of the collateral that was taken during loan allocation (Migwi, 2013). It is apparent that effectual credit monitoring involves looking into various performance of the bank, examination whether the bank is well organized and its position in terms of nonperforming loans. Credit monitoring is basically productive, and not a fright reaction and of benefit to the bank (Donaldson, 201I).

In addition a bank should have visibly constant procedures for identifying nonperforming loans. These procedures should include habitual independent reviews of the loan collection. Formal procedures for the continuous review of all large loans and all areas of lending concentration should be in this system. These reviews should place particular importance upon the borrower's ongoing ability to service the loan (Upal, 2010).

2.4.3 Nonperforming Loans

Nonperforming Loans result from the inability of debtors to repay their loans and their interests within the specified time resulting in adverse effects on the financial condition of the creditor (Agu & Okoli, 2013). By the time they are referred to as "bad loans", there is the fear that the amounts involved and their interest cannot be fully paid by the debtor (Chelagat, 2012; Awunyo-Vitor, 2013). Bad loans need to be avoided in view of the fact that their effects are multidimensional; thus they do not only hinder profitability among commercial banks, but they also limit lending to the defaulting SMEs, individuals and other corporations. This assertion is based on evidences in Ghana (Appiah, 2011; Awunyo-Vitor, 2012)

At large, the main effect of bad loans on banks is the fact that increasing bad loans limit the financial growth of banks (Karim, Chan & Hassan, 2010; Kuo *et al*., 2010). This consequence is as a result of the fact that bad loans deprive banks of the needed liquidity and limit their capability to fund other potentially viable businesses and make credit facilities available to individuals. Karim *et al*, (2010) argues that there are a lot of other viable businesses that the bank cannot explore as a result of the fact that its funds are caught up in bad loans. In the face of these consequences, the bank experiences a shortfall in generated revenues (Ghana Banking Survey, 2013), and this translates into reduced financial performance (Karim *et al*, 2010; Nawaz *et at*, 2012;Ghana Banking Survey, 2013). Another basic effect of bad loans on the bank is a reduction in the bank's lending potential (Karim *et al.*, 2010).

2.5 Empirical Studies

Study conducted by Dimitrios Angelos and Vasilios (2011) data of nine largest Greek banks by using generalized method to examine the determinants of nonperforming loans in Greek banking system separately for each loan category that bank specific variable performance and quality of management with risk management practices are responsible for variation in NPLs. Dash and Kabra (2010) discovered that the idea of interest rates and exchange rates influence nonperforming loans . However, Adela and Iulia(2010) offered the idea by using Pearson correlation coefficient that how banks set their interest rate influence nonperforming loans in Romanian banking system covering the period of 2006 till 2010 suggesting also that there are direct ways which affect the non-performing loans.

Solarin, Sulaiman and Jauhari (2011) complied their findings on the basis of Auto regressive distributed lag (ARDL) approach on Islamic banks of Malaysia that interest rate has significant positive long run impact on Nonperforming loans whereas productivity has a positive but insignificant relationship with NPLS which also lessens the stronger belief of Islamic banks operating on profit and loss mechanism because productivity has a weak impact than interest rate. Conversely Appiah et *al.,* (2011) also bring the opinion with the help of vector error correction model among commercial banks in Malaysia during 2006 till 2010 to unearth the relationship of inflation and interested rate with non performing loans. By using Stata software they found a strong long run relationship between interest rate and nonperforming loans while inflation and interest rate have insignificant relationship in long run. During short run interest rate couldn't influence non performing loans. Saad and Kamran (2012) concluded outcomes of their study using generalized autoregressive and heteroskedasticity, they found that political factors and credit policy of the banks require to be studied in depth to find the root cause of Nonperforming loans. Interest rate volatility significantly but not exclusively affect on rising nonperforming loans

Joseph *et al.* (2012) Studied to find out the influence of non-performing loans in Zimbabwe. Loans generated from the total assets in banks generate huge interest income for banks which determine the level of nonperforming loans. However, these loans fail to be paid causing default. According to Nir Klein (2013) studied about non-performing loans in Eastern, Central, and South- Eastern Europe. The researcher found that the NPLs can be accredited to bank specific factors. The investigation also indicates that there are tough effects from the banking thus signifying that the high NPLs that many CESEE countries incur adversely affect the banks.

Geletta (2012) assessed determinants of nonperforming loans in Ethiopia banks. The mixed research approach was adopted for the study. The findings of the study shows that deprived credit assessment, disastrous loan monitoring, , indulgent credit terms and conditions, aggressive lending, weak institutional capacity, willful default by borrowers and their knowledge limitation, fund diversion for unintended purpose, causes of loan evasion.

Hassan *et al. (*2010) by using the stochastic cost frontier approach and by applying normal-gamma efficiency distribution model, the researcher found non-performing loans has impact on bank efficiency in Malaysia and Singapore. However Pasha and Khemraj (2010) studied the determinants of non-performing loans in Guyanese Banking sector. The empirical results show that GDP growth is inversely related to non-performing loans when the economy improves nonperforming loans decreases. In addition, banks with high interest rates have non-performing loans. However, contrary to previous studies, their evidence does not support the view that large banks are more effective in showing loan customers when compared to their smaller counterparts.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study used descriptive research to show the what, where and how of a phenomenon (Ngechu, 2004). The choice was suitable in this study because descriptive research help examine the tendencies, spread normality and reliability of the data sets. Descriptive research is also employed because it enables the researcher to infer the findings to a larger population with high level of accuracy. Doriana (2015) used descriptive research to determine the impact of non-performing loans on bank lending behavior evidence from the Italian banking sector. Quantitative research seeks out explanatory laws. According to Allan and Randy (2005) descriptive research is used to describe the characteristics of a population by directly examining samples of that population. Migwi (2013) adopted a descriptive research that aimed at exploring the credit monitoring and recovery strategies adopted by commercial banks in Kenya.

3.2 Study Population

Population refers to the total collection of the elements about which the researcher wishes to make inferences (Cooper & Schindler, 2006). For the purpose of the study, the population of the study was all Commercial Banks in Kenya. These Banks are forty two (42) in number as per the Central Bank of Kenya's Banking Supervision Report of 2018. It implies all the members of a real or hypothetical set of people, events to which a researcher wishes to simplify the results of the research study. The target population for this study based on all the 42 banks in Kenya.

3.3 Sampling and Sampling Technique

A census approach was applied to all the 42 commercial banks in Kenya as outline in Appendix 1 and also constitutes the sample size to the study. Nzambi (2010) used census based on a descriptive Study on factors contributing to nonperforming loans in commercial banks in Kenya. This method was used to describe the area of interest by bringing out the facts as they are without alterations. Census sampling was used in this study to select data from the study population this is because it enhances validity of the collected data by including certain information regarding the study (Saunders, Lewis & Thornhill, 2009).

3.4 Data Collection Instruments

It refers to the device used to collect data such as a questionnaire (Sekara & Bougie 2010). Data was taken from reliable sources to ensure reliability of the study this included data from Central bank of Kenya annual reports, statements of cashflows, comprehensive income and financial position of the commercial banks. According to Dawson (2009) secondary data involves collecting data using information from studies that others have done in an area or subject.

3.5 Data Collection Procedure

Data to be used was collected from CBK Annual Reports and Annual Reports of the commercial banks in Kenya that have published account for a five year period from 2010-2014. Data collection is the process of gathering information and measuring information on targeted variables in an established systematic fashion which then enables one to answer questions and evaluate outcomes (Sekara & Bougie, 2010). Emmanuel (2014) studied on modeling Non-performing Loans in Kenya Commercial Banks where secondary data was obtained from Central Bank of Kenya.

3.6 Pilot Testing

A pilot study is a small scale preliminary study conducted in order to evaluate feasibility, time, cost, adverse events, and effect size in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project (Billé 2010). The instrument was piloted to commercial banks found in Kakamega County. Piloting is essential to eliminate ambiguity in question items, establish problem in administering the instrument, test data collection instrument, establish the feasibility of the study and allow preliminary data analysis.

3.6.1 Test of Validity

Validity shows the ability of a research instrument to measure the proposed variable(s) (Trochim, 2006). The features tested here included construct validity, criterion validity and content validity. In testing construct validity the researcher sought to assess the degree of compliance with other established suggestions. A measure can be alleged to possess this validation if it fits to the degree that it conforms to predicted correlations with other theoretical propositions Kothari (2004).

If an instrument can foretell an outcome of some present condition with minimum error besides relating well with other measures of known validity, then it is a good estimator (Trochim, 2006). In order to safeguard the threshold of criterion validity the researcher conquers upon presence of availability of information specified by the criterion, freedom from bias by giving each subject an opportunity to score well, reliability by reproducible ability and relevance. Whilst testing content validity the researcher sought after assessing the degree to which the research tool gives sufficient coverage of the matter under study. If representative samples of the population are covered by the instrument, then validity is said to be good Kothari (2004).

3.6.2 Test of Reliability

In testing reliability, the researcher intended at attaining stability and equivalence. The researcher secured reliability by regulating conditions under which measurement was done and by devotedly designing instructions for measurement to the

research tool. Owino (2012) used pilot study to test reliability of the study by administering the questionnaires to three banking institutions in Kenya. From the pilot study, it was possible to detect questions that needed editing and those with ambiguities. Owino (2012) 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. The cronbach alpha is a coefficient of reliability that measures internal steadiness of a measuring instrument in research. The cronbach alpha was used to test reliability of the study; it is a coefficient of reliability that measures internal steadiness of a measuring instrument in research. The reason why the study adopted cronbach alpha was because it permitted testing of partial credit to the likert scale and finally support both continuous and dichotomous data.

3.7 Data Processing and Analysis

According to Babbie (2010) data analysis is carried on the data collected to transform it to a form that is suitable for use in drawing conclusions that reflect on the ideas, and theories that initiated the inquiry. Data collected was coded, keyed in the computer and analyzed with the aid of the Statistical Package for Social Science (SPSS) computer software for Windows. On the other hand Kaume (2010) investigated on factors contributing to nonperforming and used Statistical Package for Social Sciences (SPSS) software and the Excel worksheet for data analysis. The study employed descriptive and inferential statistics. Inferential analysis was in form of Pearson's correlation coefficient. The correlation analysis enabled the researcher to determine the strength and significance of relationship between each individual independent variable and the dependent variable. Data was presented in form of tables to demonstrate facts, to support an argument especially between the respondents.

Regression analysis is a statistical technique that can be used to develop a mathematical equation showing how variables are related. Metin and Ali (2013) used regression to investigate whether there are significant long-term effects on non-performing aggregate loan ratio in Turkish banking systems. The study adopts Pearson regression to show relationship between variables. Correlation Analysis prediction is likely to be more valuable and near to reality when used in research study. The study adopts Bi- Variate correlation to analyze data. Adela and Iulia (2010) used correlation to study relationship between average interest rate and nonperforming loans inβ the Romanian banking system. The study adopts a model similar to Gakure, Ngugi, Ndwiga and Waithaka (2012) which studied the effect of credit risk management techniques of unsecured bank loan employed by commercial banks in Kenya

Model:

$Y_{NPLs} = \beta o + \beta_1 X_1 + \beta_2 X_2 + e$

Where:

Y_{NPLs}	=	Nonperforming Loans.
$\beta_1, \beta_2, \beta_3 \beta_4$	=	Regression coefficient
X_1	=	Bank ownership structure
X_2	=	Credit Monitoring
e	=	error term
βo	=	Constant term

The above model will be tested to know its validity on investigating on the determinants of loan nonperformance in Kenya Commercial banks.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 Pilot Testing

Reliability being the extent to which results are consistent over time and accurately representative of the total population, it is the consistency of research results if is repeated at different times the same results are obtained. When reliability is upheld, then the research instrument should collect similar results when administered to different sampled populations exhibiting related characteristics. The study employed Cronbach's alpha to test reliability of the research instrument. Mugenda and Mugenda (2012) recommend a Cronbach coefficient of 0.7. The research tool met the necessary reliability

for measuring the internal reliability between items. The permissible level coefficient value was a Cronbach alpha of 0.70. The research used all items in the secondary data questionnaire.

Table 4.1 Measurement of Reliability

Variable	Number of items	Cronbach alpha
Bank Ownership Structure	1	0.681
Credit Monitoring	1	0.651
Nonperforming Loans	1	0.704

4.2 Descriptive Analysis

Table 4.2 Descriptive Analysis

	Minimum	Maximum	Mean	Std. Deviation
TA	45057.74	91144690568.60	2663071854.1885	14003729605.09745
OE	.16	.86	.6128	.17585
NPL	.02	.46	.0742	.07814

The above table depicts that the variable bank ownership structure measured by total asset has STD = 14003729605.09. For c monitoring the standard deviation for operating expense to operating income ratio (STD= 0 .17585 with mean 0.6128). The describe that NPL was measured using Nonperforming loans to total loan ratio with (STD 0.7814 with mean 0.742).

4.3 Correlation Analysis

Table 4.3 Correlation Matrix

		TA	CM	NPL
TA	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	42		
CM	Pearson Correlation	.745**	1	
	Sig. (2-tailed)	.000		
	N	42	42	
NPL	Pearson Correlation	-.505**	-.575**	1
	Sig. (2-tailed)	.001	.003	
	N	42	42	42

Correlation analysis enable researcher to determine the strength and significance of relationship between each individual independent variable and the dependent variable. The bank ownership structure has a negative correlation of -0.505. The *p* value (0.001) < 0.01 indicating that banks that do not have enough total assets will incur higher NPLs. This result is in line with Emmanuel (2014) who found out that total asset has a negative correlation relation with NPL evidence from commercial banks in Kenya. The Credit monitoring has a negative correlation of -0.575. The p value (0.003) < 0.01 indicating that banks that fail to monitor their credit will incur higher NPLs. This result is in line with Mayer (2010) who found out that credit monitoring has a negative relation with NPL evidence from commercial banks in Kenya.

4.4 Regression Analysis

4.4 .1 Bank Ownership Structure

Table 4.4 Linear Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.505[a]	.255	.237	1.18056	2.099

a. Predictors: (Constant), TA
b. Dependent Variable: NPL

The results indicate that the value of R^2 is 0.255 thus 25.5% of variance in the independent variables can be accounted in the dependent variable NPL. The Durbin Watson value of 2.099 indicates there is no autocorrelation since the value is between 1 and 3.

Table 4.5 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.555	1	19.555	14.031	.001[b]
	Residual	57.142	42	1.394		
	Total	76.698	43			

a. Dependent Variable: NPL
b. Predictors: (Constant), TA

The result shows that p value (0.001) < 0.01 confidence level. The F value is significant at 1% level (F= 14.031, *P* <0.01) indicating application of the model. Thus the result shows that Independent variable bank ownership structure is significant in determining NPLs among commercial banks in Kenya.

Table 4.6 Model Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.200	.480		8.758	.000		
	TA1	-.481	.128	-.505	-3.746	.001	1.000	1.000

a. Dependent Variable: NPL

The results depicts that there is no multicollinearity because the VIF values are less than 10 (Robert, 2015). The regression equation is $Y_{NPL} = 4.200 - 0.505BOS$. These results are consistent with Kiruri (2013) who sought to determine the relationship between ownership structure and bad loan in Kenya. Findings were that ownership concentration is negatively correlated with bad loans implying that higher ownership concentration leads to lower bad loans of commercial banks in Kenya.

4.4.2 Credit Monitoring

Table 4.7 Linear Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.575[a]	.330	.314	1.11942	2.128

a. Predictors: (Constant), CM
b. Dependent Variable: NPL

The results indicate that the value of R^2 is 0.330 thus 33.0% of variance in the independent variables can be accounted in the dependent variable NPL. The Durbin Watson value of 2.128 indicates there is no autocorrelation since the value is between 1 and 3.

Table 4.8 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.320	1	25.320	20.206	.000[b]
	Residual	51.377	42	1.253		
	Total	76.698	43			

a. Dependent Variable: NPL
b. Predictors: (Constant), CM

The result shows that p value (0.000) < 0.01 confidence level. The F value is significant at 1% level (F= 20.206, *P* <0.01) indicating application of the model. Thus the result shows that Independent variable Credit monitoring is significant in determining NPLs among commercial banks in Kenya

Table 4.9 Model Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	4.316	.431		10.004	.000		
	CM	-.539	.120	-.575	-4.495	.000	1.000	1.000

a. Dependent Variable: NPL

The results depicts that there is no multicollinearity because the VIF values are less than 10 (Robert, 2015). The regression equation is $Y_{NPL} = 4.316 - 0.575CM$. This result is in line with Mayer (2010) who found out that credit monitoring has a negative relation with NPL evidence from commercial banks in Kenya.

4.5 Overall Regression Analysis

Table 4.10 Overall Regressions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.677[a]	.458	.401	1.04624	2.031

a. Predictors: (Constant), TA, CM
b. Dependent Variable: NP1

The results indicate that the value of R^2 is 0.458 thus 45.8% of variance in the independent variables can be accounted in the dependent variable NPL. The Durbin Watson value of 2.031 indicates there is no autocorrelation since the value is between 1 and 3.

Table 4. 11 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.102	4	8.776	8.017	.000[b]
	Residual	41.595	39	1.095		
	Total	76.698	43			

a. Dependent Variable: NPL
b. Predictors: (Constant), TA, CM

The result shows that p value (0.001) < 0.01 level of significance. The F value is significant at 1% level (F= 8.017, P<0.01) indicating application of the model. Thus the result shows that Independent variables are significant in determining NPLs among commercial banks in Kenya.

Table 4.12 Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	4.388	.458		9.580	.000		
	TA	-.024	.225	-.025	-.105	.017	.255	3.924
	CM	-1.201	.586	-0.280	-0 .049	.047	.037	7.326

a. Dependent Variable: NPL

The results depicts that there is no multicollinearity because the VIF values are less than 10 (Robert, 2015). The regression equation is $Y_{NPL} = 4.388 - 0.025X_1 - 0.280X_2$

4.6 Hypothesis Testing

This section presents the hypothesis testing of the study variables. The significance was tested at a critical *P* value of 0.05. From the results of overall regression coefficient for Bank ownership structure p (0.017) < 0.05 therefore we accept alternate hypothesis. Credit monitoring show result of p (0.047) < 0.05 therefore we accept the alternate hypothesis.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Bank Ownership Structure

The study investigated how this variable influence Nonperforming loans on commercial banks in Kenya. The findings indicate that Bank Ownership structure significantly affect NPLs this is evidenced from the results which show that total asset is statistically negative correlated with nonperforming loans. Thus commercial banks should find a way to increase their total assets because a reduction will lead to high nonperforming loans. The results depicts that there is no multicollinearity between the variable.

From the findings it is evidenced that Bank Ownership Structure has a negative statistically and significant effect on nonperforming loans. Thus bank with low total asset can incur high NPLs. This result is in line with Emmanuel (2014) who found out that total asset has a negative relation with NPL evidence from commercial banks in Kenya. The study found that ownership concentration is negatively correlated with bank profitability. The study concludes that higher ownership concentration leads to lower profitability of commercial banks in Kenya (Kiruri 2013).

In order to recover asset quality the bank management should take key issues on asset quality of the bank specifically loan performance for prevention of nonperforming loan thus can give due emphasis on the asset management decision then manage them efficiently. The bank managers can utilize its current assets and loans than fixed assets in order to reduce the level of nonperforming loans. Besides, loan officers should provide financial counseling to the borrowers on the wise use of loan and should make decision on timely fashion to meet their needs. From the finding the study recommends that there is need for commercial banks in Kenya to increase their total assets, as it was found that total asset negatively significant affects the NPLs of commercial banks in Kenya.

5.2 Credit Monitoring

From the findings the results indicate that operating expense to operating income is statistically significant in determining nonperforming loans. Thus the negative correlation indicate that when credit monitoring decreases nonperforming loans increases. Thus the result show that credit monitoring is significant in determining NPLs among commercial banks in Kenya.

It is evidenced from the findings that credit monitoring negatively affects nonperforming loans indicating that banks that do not follow up their credits incur high nonperforming loans. This result is in line with Mayer (2010) who found out that total asset has a negative relation with NPL evidence from commercial banks in Kenya. Montana (2012) study has established that all the banks monitor loans to ensure proper payment. This indicates that banks take keen interest of loan repayment to ensure that they undergo minimal losses. The study has established that the banks in Kenya do generate reports to monitor loans by their clients.

Management should put into consideration the process and procedures in regard to credit monitoring. The internal risk management process must be sophisticated, proactive and adaptable handled by risk management staff and external partners, who can effectively and routinely assess, quantify, prioritize and address NPLs in depth. The policy makers in the banking institutions should use credit score card as a tool of monitoring of loan and recovering of such loans. The credit score card is a number that is based on a statistical analysis of a borrower's credit report, and is used to represent the creditworthiness of that person.

5.3 Areas for Further Research

The study recommends that a study should be done on other variables other than the ones used in this study on nonperforming loans among Financial Institutions. The study also recommends that a study should be done on the managing and causes on nonperforming loans among commercial banks. The study collected data for only five years since 2010 - 2014. The study therefore recommends that a study be carried with the aim of increasing the period under study.

REFERENCES

[1] Adela, S., & Iulia. (2010). Study of correlation between average interest rate and Nonperforming loans in the Romanian banking system. *Journal of the Faculty of Economic*, 10 (2), 777-782.

[2] Agu, O. C., & Okoli, B. C. (2013). Credit Management and Bad Debt in Nigeria Commercial Banks: Implication for development. *Journal of Humanities and Social Science*, 12 (3), 47-56.

[3] Akehege, B. (2011) Determinants of non-performing loans among commercial banks in Kenya. University of Nairobi, Unpublished Thesis

[4] Alary, D., & Goller, C. (2001). *Strategic default and penalties on the credit market with potential judgment errors*. (EUI working paper).England: Bank of England.

[5] Anjom, W., Karim, A.M. 2016. Relationship between non-performing loans and macro-economic factors (with specific factors: a case study on loan portfolios-SAARC countries perspective). *Asia Pacific Journals of Finance and Risk Managment.* 15(3), 84-103

[6] Appiah, N. B. (2011). *Factors influencing loan delinquency in small and medium enterprises' in Ghana commercial bank ltd.* (Master's Dissertation, Kwame Nkrumah University of Science and Technology). Kumasi.

[7] Apostolik, R., Donohue, C. 2015. Foundations of Financial Risk: an overview of financial risk and risk-based financial regulation, 2ndedition. Wiley Finance. John Wiley and Sons, New Jersey and Canada, 44-47

[8] Azofra, V., Santamaría, M. (2011). Ownership, control, and pyramids in Spanish commercial banks. *Journal of Banking & Finance*, 35 (6), 1464–1476.

[9] Berger, A. N., & Black L. K. (2011). Bank Size, Lending Technologies, and Small Business Finance. *Journal of Banking & Finance, 11* (35), 724-35.

[10] Bille, R. (2010). *Action without change? On the use and usefulness of pilot experiments in environmental management*. (Working Paper No.3). Australia: Alpha test

[11] Bofondi, M., & Gobbi, G. (2003). *Bad Loans and Entry in Local Credit Markets,* (Working paper no. 458).Rome: Bank of Italy.

[12] Central Bank of Kenya. (2015). Annual Bank supervision Reports: Retrieved from*https://www.centralbank.go.ke/index.php/banksupervision*.

[13] Chelagat, K. N. (2012*). Determinants of Loan Defaults by Small and Medium Enterprises among Commercial Banks in Kenya. (*Master's Dissertation, University of Nairobi). Kenya.

[14] Chodechai, S.(2004). *Determinants of Bank Lending in Thailand: An Empirical Examination for the years 1992 – 1996.* (Unpublished Thesis). Thailand

[15] Cooper, D. R., & Schindler, P.S. (2006). *Business research methods* (9th ed.) New York, NY: McGraw- Hill/Irwin.

[16] Dash, M. K., & Kabra, G. (2010). The determinants of non- performing assets in Indian commercial banks: An econometric study. Retrieved from *http://www.eurojournals.com/MEFE*.

[17] De la Torre, A., Martínez Pería, & Schmukler, S. L. (2010). Bank Involvement with SMEs: Beyond Relationship Lending. *Journal of Banking & Finance*, 10(34), 280–93.

[18] Donaldson, T.H. (2011). *How to handle problem Loans: A Guide for bankers*,New York: Martin Press.

[19] Doriana, C. (2015). Impact of Non-performing Loans on Bank Lending Behavior: Evidence from the Italian Banking Sector. *Eurasian Journal of Business and Economics*, 15 (8), 59-71.

[20] Emmanuel, M. M. (2014). *Modeling Non-performing Loans in Kenya Commercial Banks.* (Degree of Master of Science in Social Statistic. University of Nairobi). Kenya

[21] Ewert, A. (2000). Determinants of bank lending performance in Germany. *Schmalenbach Business Review*, 1 (52), 344-362.

[22] Fazlzadeh, A., Hendi, A.T., & Mahboub, K. (2011). The Examination of the Effect of Ownership Structure on Firm Performance in Listed Firms of Tehran Stock Exchange Based on the Type of the Industry. *International Journal of Business and Management*, 6 (3), 654-676.

[23] Gakure, R. W., Ngugi, J. K., Ndwiga, P. M., &Waithaka, S. M. (2012).Effect of credit risk management techniques on the performance of unsecured bank loan employed by commercial banks in Kenya. *International Journal of Business and Social Research*, 2 (4), 567-612.

[24] Geletta, W. N. (2012).*This study intends to assess determinants of nonperforming loans.* (Master's Dissertation University of South Africa). *E*thiopia.

[25] Greenidge, K., & Grosvenor, T. (2010). Forecasting non-performing loans in Barbados. *Journal of Business, Finance and Economics in Emerging Economies*, 3 (5), 80-107.

[26] Habtamu, N. (2012). *Determinants of Bank Profitability: An Empirical Study on Ethiopian Private Commercial Banks*. (Published thesis (MSC), Addis Ababa University.

[27] Hasan, I. Wall, L.D. (2004). Determinants of the loan loss allowance: some cross-Country comparison. *The Financial Review*, 39(1), 129-152.

[28] Joseph, Mabvure, T., Edson, G., Manuere, F., Clifford, M., &Michael, K. (2012).Non Performing loans in Commercial Banks: A case of CBZ Bank Limited In Zimbabwe. *Interdisciplinary journal of contemporary research in business Institute of Interdisciplinary Business Research*, 4 (7), 232-234

[29] Karim, M. Z. A., Chan, S. G., & Hassan, S. (2010). *Bank Efficiency and Non-Performing Loans: Evidence from Malaysia and Singapore.* (Prague Economic Papers, 2). Malaysia: Casa publishers.

[30] Kiruri, R. M. (2013). The effects of ownership structure on bank profitability in Kenya. *European Journal of Management Sciences and Economics, 1*(2), 116-127.

[31] Kaume, R. (2010). *The significance of factors contributing to nonperforming loans in Commercial banks in Kenya.* (Degree of Master of Business Administration (MBA, Finance), Kenyatta University). Kenya.

[32] Khemraj, T., & Pasha, S. (2010). *The determinants of non-performing loans: an econometric case study of Guyana.* Presented at the Caribbean Centre for Banking and Finance Bi-annual Conference on Banking and Finance, St. Augustine, Trinidad.

[33] Kothari, C.R. (2004). *Research Methodology, Methods and Techniques*. New Delhi: New Age International publishers

[34] Limsombunchai, V., Gan, C., & Lee, M. (2005). An Analysis of Credit Scoring For Agricultural Loans in Thailand. *American Journal of Applied Science*, 2 (8)-1205.

[35] Machiraju, H. R. (2011). *Modern Commercial Banking*, India: VIKAS Publishing House Pvt. Ltd. Co.

[36] Malhotra, R., Malhotra, D. K. (2003).Evaluating consumer loans using NeuralNetworks. *Wiley & Sons Inc.*

[37] Makri *et al*. (2014). Determinants of Nonperforming Loans: The Case of Eurozone. *Panoeconomicus*, 2(8), 193 - 206

[38] Metin, V., & Ali, H. (2013). Determining Impacts on Non-Performing Loan Ratio in Turkey. *Journal of Finance and Investment Analysis, 2(4), 119-129.*

[39] Migwi, J. (2013). *Credit monitoring and recovery strategies adopted by commercial Banks in Kenya*, *(school of business, University of Nairobi)* Nairobi.

[40] Muriithi, M. W. (2013). *Causes of non-performing loans in commercial Banks in Kenya*. *(Degree of master of business administration, University of Nairobi).* Kenya.

[41] Mugenda, O., & Mugenda, A. (2003). *Research methods*: Quantitative and qualitative approaches Nairobi: Acts Press.

[42] Ngechu. M. (2004). *Understanding the research process and methods*. *An introduction to research methods*. Nairobi: Acts Press.

[43] Nir Klein (2013). *Non-Performing Loans in CESEE: Determinants and Impact on Macroeconomic Performance*. (IMF working papers No 13/72). Europe: Federation publishers

[44] Nzambi (2010). *The significance of factors contributing to nonperforming loans in commercial banks in Kenya*. (Master Dissertation Kenyatta University). Kenya.

[45] Olokoyo (2011) .Determinants of Commercial Banks Lending Behavior in Nigeria Economies. *International Journal of Business and Social Research*, 4 (6), 215-222.

[46] Ongore, V.O. (201I). The Relationship between Ownership Structure and Firm Performance: An Empirical analysis of Listed Companies in Kenya. *African Journal of Business Management*, 5 (6), 2120-2128.

[47] Ongore, V.O., K'Obonyo, O. P., & Ogutu, M. (2011). Implications of Shareholder Types on Financial Performance: Empirical Evidence from Listed Companies in Kenya. *Interdisciplinary Review of Economics and Management*, 1 (1), 99-122.

[48] Owino, M. O. (2013). *The effect of the lending policies on the levels of Non-performing loans of commercial banks in Kenya.* (Master Dissertation University of Nairobi). Kenya.

[49] Pagano, M., & Tullio, J. (2003). Information Sharing in Credit Markets.*The Journal of Finance*, *43*(5), 1693-1718.

[50] Padilla, A. Jorge and Marco Pagano (2000). Endogenous Communication among Lenders and Entrepreneurial Incentives. *The Review of Financial Studies* 10 (1), 205 -236.

[51] Rossi, S., Schwaiger, M. and Winkler, G. 2005. Managerial Behaviour and Cost/Profit Efficiency in the Banking Sectors of Central and Eastern European Countries. *Working Paper (*96), Austrian National Bank

[52] Uchida, H. (2012). Bank Size and Lending Relationships in Japan. *Journal of the Japanese and International Economies 12(*22), 242–67.

[53] Upal, L. (2010), Priority sector advances: Trends, issues and strategies. *Journal of Accounting and Taxation*, 1 (5), 079-089.

[54] VonThadden, E. L. (2004).Asymmetric Information, Bank Lending and Implicit Contracts: Retrieved from *http://dx.doi.org/10.1016/S1544-6123(03)00006*

[55] Saba, I., Kouser, R., & Azeem, M. (2012). Determinants of nonperforming Loans: Case of US Banking Sector. *International Journal of Banking and Finance*, 4 (44), 479-88.

[56] Saunders, A., & Cornett, M.M. (2007). *Financial Institutions Management: A risk management approach* (4th edition). McGraw Hill, New York

[57] Sekara, U., & Bougie, R. (2010). *Research methods for business*: Askill building approach Chicheste. *International Journal of Financial Research*, *5* (6), 120-125.

[58] Shehzad, de Haan, J., & Scholtens, B. (2010). The impact of bank ownership Concentration on impaired loans and capital adequacy. *Journal of Banking and Finance* 34, 399-408.

[59] Solarin, S. A., Won, S., Wan, Y., & Auhari, D. (2011). An ARDL approach to the determinants of Nonperforming loans in Islamic banking system in Malaysia. *Kuwait Chapter of Arabian journal of business and management review*, 1 (2), 234-265.

[60] Tafti, M. A., & Nikbakht, E. (1993). Neural Networks and Expert Systems: New Horizons in Business Finance Applications, Information Management & Computer Security *International Journal of Financial Research*, 9 (1), 125-130.

[61] Trochim, W. M. (2006). Research Methods Knowledge Base. Retrieved from http://www.socialresearchmethods.net/kb/sampnon.php.