FACTORS AFFECTING THE PERFORMANCE OF LOAN PORTFOLIO OF COMMERCIAL BANKS IN KENYA, A CASE OF MACHAKOS COUNTY

BY

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A Research Dissertation Submitted to the Faculty of Business and Communication in Partial Fulfilment of the Award of a Masters Degree in Business Administration St. Pauls University, Finance Option.

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DECLARATION

I declare that this dissertation is my original work and to the best of my knowledge, it has not been submitted to any other college, university or institution for academic credit.

Signed:…… Date:……..

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

Signed:…… Date:…….

Dr. Paul Gesimba

Signed…… Date……..

Stephen Ndungu

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May the Almighty God bless you All.

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ABSTRACT

The banking industry plays a major role in economic growth and development of a country through provision of credit facilities to customers in order to carryout economic activities. However, the major concern for any commercial bank is whether they will get their cash back after lending and if there is any value earned on the principal amount. Although commercial banks have procedures and regulations that they use in administering credit, they still have customers defaulting on loan repayments and thus increasing the effects of bad debts. Several theories have emerged both empirical and theoretical on factors leading to the increase of non-performing loans; however they have not fully addressed the issues pertaining the same. The performance of the loan portfolio in commercial banks has therefore not produced the expected returns. The objective of this study was to establish the relationship between loan interest rates and the performance of loan portfolio in commercial banks, determine the effect of bank policies and procedures on the performance of loan portfolio ,analyse the extent to which collateral affects the performance of loan portfolio and to establish the relationship between ecological factors and performance of loan portfolio of commercial banks .The research was a cross sectional survey of selected banks in Machakos county. There are forty three (43) commercial banks in Kenya and a total of all the twelve (12) commercial banks in Machakos were used in this study. A questionnaire was used to gather the primary data. The questionnaire was self- administered and the drop and pick later method was adopted. One (1) Branch Manager, One (1) credit manager and two (2) credit officers were chosen from each of the twelve (12) commercial banks, bringing the target population to 48 respondents who were used to obtain the data. Descriptive statistics was used to analyse the data and findings presented using tables and other graphical presentations for ease of understanding and analysis. The study found out there was a rapid increase in the number of nonperforming loans in commercial banks, loan interest rates affects the performance of loan portfolio up to 40.3%, bank policies and procedures up to 15.6%, collateral up to 35.9%and ecological factors up to 99% .This implied that there was a positive relationship between loan interest rates, bank policies and procedures, collateral and ecological factors and the performance of loan portfolio of

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commercial banks. The study recommended that banks should come up with strategies to reduce on the turnaround time for credit facilities in order to improve on customer satisfaction which in turn will reduce the number of non-performing loans. The study also recommended that banks should be involved in the review of interest rates, both customers and employees should be involved in the review of the banks policies and procedures, the amount of unsecured loans should be reduced and the political leadership of the country should allow the banks to be controlled by the regulator only.

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Definition of Key Operational Terms

Loan Portfolio–According to Harry Markowitz (1952) a portfolio is a collection of assets and therefore, loan portfolio can be defined as the total number of loans disbursed by a bank, since loans constitute the largest asset for a commercial bank.

Performance of Loan Portfolio-According to oxford English dictionary, performance is the accomplishment of a given task measured against a pre-set known standard of accuracy, completeness, cost and speed. Stephan and Pace (2002), performance has two outcomes, mainly productivity and quality. Performance of loan portfolio can therefore be defined as rate of return on investments in various loans.

Commercial Bank- According to Idiab A and Mohammed H (2011) a commercial bank can be defined as a financial institution that carry out banking as a business through accepting demand deposits and making loans thereby facilitating the transfer of funds in the economy.

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LIST OF ABBREVIATIONS

IMF- International Monetary Fund

NPLs- Non-performing loans

CBK- Central Bank of Kenya

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The importance of a good and functional banking sector to a country's economic growth and development is well set in literature.(Adekunle, Salami & Adedipe Oluseyi, 2013).An efficient and effective banking system helps countries to grow by widening access to external finance and also channelling resources to the benefiting sectors,(Mugume,2007).Banks only have an effective and an efficient system if they generate the necessary income required to cover operational costs incurred during the course of their operations (Ongore&Kursa,2013).

In their business of lending, banks however have customers that default in payment thus resulting in non-performing loans which become a hindrance to the efficiency of bank activities. Non-performing loans usually create problems to a commercial bank's balance sheet on the asset side and also have a negative impact on the income statement of the bank due to the creation of a provision for bad and doubtful debts (Kumar & Tripathi, 2012).For instance, in Uganda, the level of non- performing loans has continued to remain high despite the financial sector reforms. In 2013, it increased to 6% from 4.2% in 2012.The level of bad and doubtful debts provisioning in Tanzania has increased in the past few years both in monetary terms and as a percentage of non-performing loans. The ratio of loans to non-performing loans in the year 2007 was 6% in the year 2008 it was 6.5% and in the year 2009 it was 7%, (Mutarubkwa,2011).According to National Bank Commerce of Tanzania financial report (2012) the percentage of non-performing loans in the year 2010 was 14% and 16% in 2011.

Data from the international monetary fund (IMF) Global Stability Report (April 2015) shows that asset quality continued to deteriorate as a whole in euro area in 2014 with total non-performing loans standing at more than €900 billion .The stock of non-performing loans in Cyprus, Greece, Ireland, Italy, Portugal and Spain amounts to more than €600

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billion .In addition, the April 2010 IMF report shows that, while the level of non-performing loans measured as a percentage of total loans in 2009 was more than 3.5 times larger than the level observed in 2007 for the United States of America and United Kingdom, that ratio was less than 1.5 times larger in the case of Brazil, China and India. In addition, 90% of developing economies across Asia, Latin America, Middle East and Africa experienced an increase of the non-performing loans in 2009 less than two times the level in 2007.

The Nigerian banking industry has been strained by the deteriorating quality of its credit assets as a result of the significant dip in the equity market indices, global oil prices and sudden depreciation of the naira against global currencies (BGL Banking report, 2010).Due to the poor quality of the banks' loan assets, the bank was no able to extend more credit to the domestic economy, thereby affecting adversely the economic performance for the country as a whole. This prompted the federal government of Nigeria through enactment of an Act of the National assembly to establish the Asset Management Corporation of Nigeria (AMCON) in July 2010, to provide a permanent solution to the recurring problems of Non-performing loans that were encountered by the Nigeria banks. According to Ahmad and Ariff, (2007) in his book "Multi country study of bank credit risk determinants", most banks in economies such as Thailand, Indonesia, Malaysia, Japan and Mexico experienced high non-performing loans and significant increase in credit risk during financial and banking crises which resulted in the closing down of several banks in Indonesia and Thailand.

In Kenya, commercial banks are regulated by the central bank. According to (Ongore 2013) in his study, "Determinants of financial performance of commercial banks in Kenya", the Banks play an important role in the country through allocation of economic resources to members of the public. Banks contribute to the economic growth of the country through making funds available for those people who wish to borrow and invest as well as dealing with financial deepening in the country (Otuori, 2013). Through lending, the banks build their loan portfolio whose performance directly affects the overall performance of the bank. According to Standard Digital Report(2013),there has been a tremendous increase in the number of people defaulting on loans (defaulters)

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leading to an increase in the non-performing loans(NPLs) which seems to be taking most of the banks' profits and as a result, some of these financial institutions have been posting flat profits.

According to a cross section of commercial banks' un-audited financial statements, the level of NPLs in the industry appears to be on the rise. For instance, Kenya Commercial Bank's (KCB) net non-performing loans and advances grew by 72% to ksh 8.81B for the half-year ended 30th June 2013, up from ksh 5.1B in a similar period the previous year. Equity Bank group's net NPLs more than tripled (222%) to ksh3.45B from ksh 1.07B while standard chartered bank net NPLs and advances more than doubled (116%) to ksh 2.42B from 1.12B.Coopertaive Bank's net NPLs and advances went up by 55% to ksh 3.35B from 2.15B in a similar period, the previous year. Barclays bank's net NPLs, and advances reduced by 6% to 912.86M from 971M owing to an increase in loss provisions to ksh 581.15M from ksh 458.92m.National bank's proportion of non-performing loans for the first three months of the year grew by 171% to 1.77B from 6572.72 M in December 2012.

1.1.1Loan Portfolio

A bank loan is a debt that a person owes to a bank. It constitutes an agreement between a borrower and the bank about a certain amount of money that the borrower will borrow and then pay back in specific instalments at a specified rate of interest. Interest is the fee that one pays to borrow the money. Loan portfolio is the total number of loans that a commercial bank has disbursed to its customers. There are several types of loans, According to Signoriello, Vincent (1991) in his book "commercial loans practices and operations" there are several types of loans and include, secured loans, unsecured loans, revolving loans and term loans. A secured loan is a kind of loan facility in which the person borrowing known as the borrower has to pledge an asset as collateral for the loan while an unsecured loan is the loan in which the borrower does not pledge anything as security

A revolving loan is the kind of loan that can be spent, repaid and spend again. An example includes a credit card and an overdraft. A term loan on the other hand, refers to a

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loan paid off in equal monthly instalments over a specified period of time. Issuing of loans to clients forms the most important source of long-term financing in many developed and developing countries (Freixas& Rochet, 2008) and therefore, commercial banks play important roles in the economy through provision of such credit facilities that enable customers to carryout various economic activities for the overall economic growth of the country as a whole. While lending, commercial banks incur some risks such as market risks, operational risk, performance and credit risk. Loan portfolio constitutes a major asset of banks and its value depends not only on the interest rates earned on the loans but also on the quality or the likelihood that the interest earned and the principal amounts lend will be repaid.

1.1.2 The Performance of a Loan Portfolio

The performance of the loan portfolio refers to the rate of profitability or the rate of return earned on investment in various loan products. It therefore looks at the number of clients applying for a loan, how much they are borrowing, timely payments of instalments, security pledged against the borrowed funds, rate of arrears recovery and the number of loan products on the chain. Thus the value of a loan portfolio depends on the interest earned and also on the likelihood that both the interest and the principal will be repaid. The risk of some of the customers not making their loan repayments on due dates or anytime can affect the banks business. On the other hand, a bank with high credit risks has a high risk of having liquidity problems thus putting depositors' funds into risk. Such a bank could also be closed due to the liquidity problems.

According to CBK report (2016) gross NPLs increased by 22% from ksh 101.7bn to ksh 123.9bn over the year to June 2015.The value of non-performing loans increased while the quality of the bank's loans which constitute the bank's asset decreased from 2.7% in June 2015 to 2.5% in September 2015.

1.1.3 Commercial Banks in Kenya

Commercial banks are financial institutions that are involved in banking as a business. They usually accept from members of the public money on deposit, which is usually repayable on demand or after the expiry of a stipulated period of time, money on current account, payment on and acceptance of cheques and finally the investment of the money

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held either on deposit or on current account through lending, or in any other way on behalf of and at the risk of the person who has deposited the money, Khambata, Dara (1996).

The Kenya banking sector consists of 43 commercial banks and one mortgage financial institution. Some of the banks are foreign-owned while others are locally owned. Six commercial banks which include Standard chartered bank, Equity bank, cooperative bank, Barclays bank and Kenya commercial bank are listed in the Nairobi security exchange. The banks have formed an association (Kenya Bankers Association) which addresses issues and interests affecting member institutions. According to (CBK Annual Report, 2009) the banks offer cooperate and retail banking services although a few of them especially the large ones also offer investment services. In Machakos, there are twelve commercial banks which are both public and privately owned. They include; standard chartered bank, Equity bank Nic bank, Barclays bank, credit bank, K-rep (sidian) bank, Kenya commercial bank, cooperative bank, family bank, National bank, Commercial bank of Africa and chase bank.

1.2 The Problem Statement

Commercial banks are financial institutions that carry out banking business. They do so through accepting from members of the public money on deposit which is usually repayable on demand or after expiry of a stipulated period of time, accepting from members of the public money on current account and payment on cheques and acceptance of the cheques and using money held on deposits to lend to its customers or invest in any other manner.

Loans form the largest assets of the commercial banks. The interest generated from such loans constitutes the largest source of income for the banks. Although the banks also have other sources of income such as transaction income and others, income from loans never the less constitute a bigger percentage of the banks income and subsequently determines the overall performance for the bank. Therefore, the performance of the loan portfolio is very crucial since it directly affects the overall performance of the bank. When commercial banks lend money to their customers who could either be individuals or business corporations, they do so based on the assumption that the same funds will fully

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be repaid as per the contractual terms. Due to the nature of their business, commercial banks expose themselves to the risk of default from customers thus leading to non-performing loans. Nonperforming loans are assets which are not generating any income (Hennie and Sonja 2009) .According to Misra (1999) in his book **"**commercial banks and agriculture development", through lending, the bank builds its loan portfolio whose performance directly affects the overall performance of the bank.

Although commercial banks have tried to follow procedures and regulations in administering credit, they still have customers defaulting on loan repayments and thus increasing the effects of bad debts to banks. According to Standard Digital Report (2013), an increase in non-performing loans (NPLs) seems to be affecting bank profits leading to some of them posting flat profits. Although several theories have emerged both empirical and theoretical on factors leading to the increase of non-performing loans, they have not being able to fully address the issues pertaining the same, as evident in the increasing amount of Non-performing loans in the industry. The performance of the loan portfolio in commercial banks has therefore not produced the expected returns and therefore this study sought to establish the factors affecting the performance of loan portfolio in commercial banks in Machakos County, Kenya.

1.3 Research Objectives

1.3.1 General Research Objective

The objective of this study was to identify factors affecting the performance of loan portfolio of commercial banks in Machakos County, Kenya.

1.3.2Specific Research Objectives

i. To establish the relationship between loan interest rates and the performance of loan portfolio.
ii. To determine the effect of bank policies and procedures on the performance of loan portfolio.
iii. To analyse the extent to which collateral affects the performance of loan portfolio in a bank.

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iv. To establish the relationship between ecological factors and the performance of loan portfolio in a bank.

1.4 Hypotheses

Ho_1

Loan interest rates have no significant relationship with the performance of loan portfolio.

Ho_2

Bank policies and procedures have no effect on the performance of loan portfolio.

Ho_3

Collateral does not affect the performance of loan portfolio in a bank.

Ho_4

Ecological factors have no significant relationship with the performance of loan portfolio in a bank.

1.5 The Scope of the Study

The study was carried out on twelve (12) selected commercial banks both in tier one and tier two in order to represent the forty three (43) commercial banks in Kenya. These commercial banks include; Family bank, Equity bank, Chase bank, Credit bank, Kenya commercial bank, Barclays bank, Standard chartered bank, Cooperative bank, National bank of Kenya, NIC bank, Commercial bank of Africa and K-rep bank. The study was carried out in Machakos and involved the collection of data for a period of five years between the years 2011-2015.

1.6 The Justification of the Study

The importance of a good and functional banking sector to a country's economic growth and development is well set in literature. (Adekunle, Salami & Adedipe Oluseyi, 2013). An efficient and effective banking system helps countries to grow by widening access to external finance and also channelling resources to the benefiting sectors,(Mugume,

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2007).Credit creation is the main income generating activity of banks (Kargi, 2011). However, it exposes the banks to credit risk. The Basel Committee on Banking Supervision (2001) defined credit risk as the possibility of losing the outstanding amounts partially or totally, due to credit events. It is an internal mechanism of determining a bank's performance. The higher the exposure of a bank to credit risk, the higher the tendency of the bank to experience financial crisis and vice-versa. The study aims at highlighting the various factors which affect the performance of loan portfolio in commercial banks in order to give an insight to the management of such banks on how to minimize such effects and increase the overall productivity of the bank. The study will also benefit the government as it provides the insight into the effects on the performance of loan portfolios in commercial banks. This is because the government partners with banks to ensure that there is price, interest rates and exchange rate stability and also to enhance economic development through provision of affordable credit facilities.

This study will also enable the management and employees as a whole to fully understand the credit culture of the bank. A bank's credit culture is the sum of its credit values, beliefs and behaviours .It is what is done and how it is accomplished. The credit culture exerts a lot of influence on a bank's lending and credit risk management. Values and behaviours that are rewarded become the standards and take precedence over written policies and procedures. Understanding the credit culture and risk profile of the bank is important for a successful loan portfolio management. Due to the significance of a bank's lending activities, the influence of the credit culture frequently extends to the other bank's activities hence creating an impact on the overall performance of the bank. The findings of this research will also be valuable to researchers as it could form a basis for further research.

1.7Assumptions of the Study

This study was done on the assumption that all confidential data would be obtained from all the selected commercial banks. This was achieved through obtaining and signing a commitment letter from the banks that all the confidential information provided by them shall be kept as such.

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CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter will cover theoretical review, empirical review and the conceptual frame work related to the research objectives and research gaps.

2.2 Theoretical Literature Review

Most theories on the performance of loan portfolio are grouped according to relationship between the borrower and the lender and include; Option pricing model, portfolio theory, soft budget theory and information asymmetry theory.

2.2.1 The Portfolio Theory

Modern portfolio theory is a theory that explains how risk-averse investors can construct portfolios to optimize or maximize expected returns based on a given level of market risk, emphasizing that risk is an inherent part of higher rewards. This theory was developed by Harry Markowitz stating that it is possible to construct an efficient frontier of optimal portfolios offering the maximum possible expected return for any given level of risk. The theory also asserts that, the concept of credit risk management is built on the principle of management of working capital. A sound policy on the management of working capital is essential in business and therefore a company must have adequate working capital at all times and funds tied up in working capital should be collected as soon as possible so as to enhance the company's profitability(Nzuve,2013).

The theory was pioneered by Markowitz (1952) in his paper portfolio selection published in 1952 by the journal of finance which explained 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 was to validate the construction of an efficient portfolio that maximizes returns of a particular investment. The 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 various stocks are not directly related. He shows that investment is not just about picking stocks, but about choosing the right combination of stocks.

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In Banking loans constitute the assets in the financials. Different types of loans offered by the banks form the portfolios for the commercial bank and therefore the theory can be used to expound on the needs of commercial banks to form a portfolio that cuts across different industries and businesses. The portfolio can be formed on the basis of purpose, time period, industry etc. The theory poses a number of gaps; the initial intent by Markowitz was to address the importance of investment portfolio for investors to spread risk when investing and not management of loan portfolio in banks. Some of the issues not addressed by the theory include; how banks can form a portfolio of loans that minimize risk and maximize return. It does not outline ways of determining a risk free portfolio. In addition the theory does not address various risks that are faced by banks when managing a loan portfolio. Therefore, the theory cannot apply holistically when managing credit risk in banks.

2.2.2Option Pricing Model

This theory was developed by Fischer Black and Myron Scholes in 1973 in a bid to explain the concept of the effects of loan interest rates on the performance of loans in commercial banks. The theory explains why it is not prudent for banks to set very high interest rates to optimize profits from loan sales. If banks set up high interest rates, they could induce the problem of moral hazards and adverse selection by attracting borrowers with very risky projects into their portfolio. The high interest rates would later act as an incentive for the risky borrowers to consider adding more risk to their investment portfolio due to high affinity for high returns (Chodechai 2004).When the banks set interest rates which are too high, they usually induce adverse selection problems since high-risk borrowers are willing to accept these high rates. Once these borrowers receive these loans, they may develop moral hazard behaviour since they are likely to undertake high risky projects or investments (Chodechai 2004).The model however does not provide the optimum amount of interest that should be charged on loans and also does not explain the effects of setting very low interest rates on the performance of the banks as a whole.

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2.2.3 Risk- Adjusted Return on Capital (RAROC) Model.

This is an increasingly popular model used to evaluate the return on a loan to a large customer. This model, originally pioneered by Bankers Trust (acquired by Deutsch bank in 1998) is now adopted by virtually all the banks in Europe and the US although with some differences among them (Saunders and Cornett, 2007).The essential idea behind RAROC is that rather than evaluating the actual annual promised cash flow on a loan as a percentage of the amount lent or (ROA), the lenders balance the loan's expected income against the loan's expected risk. Setting up of banks policies and procedures is the responsibility of the banks management, particularly those in the top management level. The purpose of the RAROC risk measurement system is therefore to provide managements with a more reliable way to determine the amount of capital necessary to support each of their major activities, and thus to determine the overall leverage for the bank as a whole. The RAROC system also provides a uniform measure of performance and that management can in turn use this measure to evaluate performance for capital budgeting and as an input to the compensation system used for senior managers. The model does not however explain the effects of these policies and procedures on the performance of loan portfolio and overall performance of the bank.

2.2.4 Soft Budget Constraint Theory

A soft budget constraint arises whenever a particular source of finance finds it impossible to keep an enterprise to a fixed budget such that the enterprise can extract a bigger subsidy or loan than would have been considered efficient. This soft budget constraint theory was formulated by Kornai (1979) in his paper "resource-constrained versus demand-constrained systems", who categorized it as consisting of ex-post renegotiation of a firm's financial plan and a close administrative relationship between the firm and the lender. According to this article, although state owned enterprises were vested with a moral and financial interest in maximizing their profits, the chronic loss-makers among them were not allowed to fail since they were always bailed out with financial subsidies or other instruments and thus could count on surviving even after chronic losses.

This Soft Budget Constraint phenomenon is usually present in socialist economies, particularly those who intend on undertaking some reforms, but can also appear on other

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economies environment even in those settings based entirely on private ownership. Most banks offer credit facilities to both individual and corporate customers based on their ability to pay and the amount of collateral offered. However most banks do not access regularly the condition of the collaterals offered and therefore in the event of a default, they are not able to fully recover their loan from such collateral. This has led to more banks incurring losses through non-performing loans and bad debts due to loan provisions. This Soft Budget Constraint Syndrome applies to banks and other financial intermediaries since is quite rare these days for a large bank in severe financial trouble to go out in business; even in circumstances where these financial troubles is occasioned by poor management and employee/management integrity issues, normally, it is allowed to continue operating, perhaps after being acquired by another bank. The theory explains why banks continue with their operations despite making losses, but it does not explain how to mitigate those losses.

2.2.5 Information Asymmetry Theory.

This theory was first developed in 1970s and 1980s.George Arkelof was the first to argue about information asymmetry in his paper "the market for lemons; quality uncertainty and market mechanism". It was later advanced by Grossman and J Stiglitz (1980).Information asymmetry arise when a borrower has better information about the potential risks and returns associated with a particular investment and the lender does not have adequate information pertaining the borrower. This leads to moral hazards and adverse selection problem. Moral hazard refers the risk in which a party to a transaction provides misleading information about its assets, liabilities or credit capacity.

A party to a transaction may not enter into the contract in good faith, thus providing misleading information about its assets, liabilities or credit capacity. This is attributed by the fact that different customers possess different characters and also different attitudes towards the operation of the banks. Moral hazard problems are usually caused by asymmetric information thus making it difficult to distinguish between good and bad borrowers. This has led to substantial accumulation of NPLs. This theory is considered relevant in this study since borrowers and lenders tend to conceal crucial information pertaining to the lending and borrowing agreement.

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Derban, Binner and Mullineux (2005) in his paper "loan repayment performance in community development finance institutions in UK" recommended that borrowers should be screened by banking institutions through credit assessment. Collection of reliable information from prospective customers becomes critical in accomplishing effective screening as indicated by asymmetric information theory. Qualitative and quantitative techniques can be used in assessing borrowers although qualitative models are subjective in nature. However, according to Derban et al (2005), borrowers attributes assessed through qualitative models can be assigned numbers with the sum of values compared to a threshold, in order to minimize processing costs, reduce subjective judgments and possible biases.

Information asymmetry theory is only concerned with customer attitude and character as one of the ecological factors affecting the performance of loan portfolio. However, it does not take into consideration other ecological factors such as political environment and changes in climatic conditions.

2.3 Empirical Literature

2.3.1 Performance of loan portfolio in commercial banks

In his study on the impact of asset quality on profitability of private banks in India, Khalid (2012), found out that a bad asset ratio is negatively associated with the banking operating performance after controlling the effects of operating scale, traditional banking business concentration and idle fund ratio. The research also showed that the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans and subsequently, the higher the banking operating performance.

When a bank advances credit to its customer, there is always a risk of non-payment of that facility. The bank has to therefore exercise a good and credible credit risk management system in order to reduce the loss incurred in the event of default. Credit risk management refers to the procedures, systems and controls which a bank has put in place to ensure efficient collection of customer payments and minimize the risk of non-

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payment, (Naceour and Goaied 2002).In their study on key elements of credit risk in commercial banks of an emerging economy compared to developed economies, Ahmad and Ariff (2007) found that regulation is significant for the banking system that offer different products and services and that an increase in loan loss provisions is considered to be a determinant of potential credit risk which has an impact on the performance of the loan portfolio in the banks.

Chernykh and Theodossiou (2011) investigated the determinants of long-term lending to firms in an emerging market in Russia and found out that the size of the bank which is usually measured by its assets and the bank's capitalization are the only determinants of the amount of loans extended to businesses and individuals. According to these findings, only bigger and well capitalized banks can be able to withstand the risks emanating from long-term lending.

In his research on banking consolidation, asset quality and credit crisis in Nigeria, Ezeoha (2011) the deterioration of asset quality and increased credit crisis in Nigeria was caused by inability of the banks to utilize their asset capacity optimally in order to improve on their earnings. The findings showed that circumstances in which there is excess liquidity and huge capital bases usually lead to reckless is lending by banks.

2.3.2 Interest Rates and Performance of Loan Portfolio

According to a study that was carried out by Wensheng (2002) on the impact of interest rate shocks on the performance of the banking sector, he found out that a rise in the Hong Kong dollar risk premium, signified by a widening of the spread between Hong Kong dollar and US dollar interest rates, would influence banks' profitability mainly through its impact on asset quality that affects provisioning charges and net interest margin. The objective of his study was to establish the impact of interest variation on the bank performance where he sampled two banks and analysed data from 1992 to 2002 a period of ten years.

In his study, "managing financial institutions" Garder and Cooperman (2005), found out that the loan component has a significant effect on quoted banks profit. If banks do not

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get enough deposits, capital adequacy level may be affected and advancing of loans to clients may not be done, hence the conclusion that, interest on deposits is an important consideration. As market interest rates change, different degrees of elasticity lead to non-proportional change in the assets and liabilities value thus affecting the value of the banking firm.

Adofu and Audu (2010) in his paper "interest rates deregulation and investment in Nigeria" used ordinary least square method to ascertain the assessment of the effects of interest rates deregulation in enhancing agricultural productivity in Nigeria. The study found out that interest rate played a significant role in the enhancement of economic activities and as such, monetary authorities should ensure appropriate determination of interest rate level that will break the double edge effect of interest rate on savers and local investors. According to Berge and Boye (2007) in his paper, "analysis of banks problem loans", problematic loans are usually highly sensitive to the real interest rates and unemployment.

2.3.3 Bank Policies and Procedures and Performance of Loan Portfolio

Lending policies should be clearly defined and set forth in such a manner as to provide effective supervision by the directors and senior officers. To stay profitable, examiners of banks credit facilities should encourage establishment and maintenance of written and up to date lending policies, which have been approved by the board of directors. A bank's lending policy must be reviewed periodically and revised in consideration of the changing circumstances surrounding the borrowing needs of the bank's customers as well as changes that may occur within the bank itself. These lending policies are designed to serve only as guidelines for areas needing consideration in overall policy evaluation.

In addition, the management should maintain a written loan review policy that is reviewed and approved at least annually by the board of directors. Policy guidelines should include a written description of the overall credit grading process and establish responsibilities for the various loan review function. The sources and causes of problematic loans include mistakes that a bank may permit a borrower to make, as well as

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mistakes attributed to the weaknesses in the bank's credit administration and management. Some loans may develop problems due to unforeseen circumstances on the part of the borrower; however, bank management must strive to protect a loan in order to preserve its performance.

Loan portfolio is an investment to the banks due to the interest earned from it. The general rule of the investment states that investors always prefer an investment portfolio with a risk that gives a higher level of expected returns and that they are often ready to invest in risky assets and expect a higher level of return. In a liberalized financial sector, a large and rapidly increasing loan portfolio can signify a weaker corporate governance mechanism, since the incentive for excessive risk taking in pursuit of profits are not well balanced with the internal controls to ensure prudent processing of loan applications. In the absence of controls associated with weak corporate governance, a rapidly increasing loan portfolio exerts pressure on the bank officers and managers and allows loan applicants that are not credit worthy to be issued with loans (Tennant &Tracey, 2013)

The determinant of a bank's performance and subsequently its profitability can be divided into internal and external factors. Internal factors are those factors that are influenced by the bank's policies, objectives and decisions. Management effects are the result of differences in bank management of these policies, decisions, objectives and actions as reflected in bank operating results and profitability. A good bank's performance is usually attributed to quality management which is assessed in terms of senior officers' awareness and control of the bank's policies and procedures. According to IMF Website-Global financing stability report (2014), banks have focused primarily on raising capital and de-risking their balance sheet to meet risk-based requirements.

2.3.4: Collateral and Performance of Loan Portfolio

The first step that is used in reducing credit risk involves screening clients to ensure that they have the willingness and also the ability to repay a loan. Commercial banks use the 5Cs model of credit to evaluate a customer as a potential borrower (Abedi, 2000). The 5Cs help commercial banks to increase loan performance, as they get to know their customers better. These 5Cs are: character, capacity, collateral, capital and condition.

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Character - refers to the trustworthiness and integrity of the business owners. It's an indication of the applicant's willingness to repay and ability to run the enterprise. Capacity assesses whether the cash flow of the business (or household) can service the loan repayments. Capital - Assets and liabilities of the business and/or household**.** Collateral -Access to an asset that the applicant is willing to cede in case of non-payment, or a guarantee by a respected and worthy person to repay a loan in default. Conditions- a business plan that considers the level of competition and the market for the product or service, and the legal and economic environment.

The 5Cs need to be included in the credit scoring model. The credit scoring model is a classification procedure in which data collected from application forms for new or extended credit line are used to assign credit applicants to credit risk classes. In his study "beyond the 5Cs of lending" Inkumbi (2009) notes that capital (equity contributions) and collateral (the security required by lenders) as major stumbling blocks for entrepreneurs trying to access capital. This is especially true for young entrepreneurs or entrepreneurs with no money to invest as equity; or with no assets which can be offered as security for a loan. One way to guarantee the recovery of loaned money is to take some sort of collateral on a loan

2.3.5: Ecological Factors and Performance of Loan Portfolio

Most empirical studies examine the influence of the macroeconomic environment on non-performing loans. Rinaldi and Sanchis-Arellano (2006) in his paper, "household debt sustainability" analysed non-performing loans for a panel of European countries and provided empirical evidence that disposable income, unemployment and monetary conditions have a strong impact on non- performing loans. A study by Ongore and Kusa (2012) in "determinants of financial performance of commercial banks in Kenya" found out that apart from liquidity variable, bank's specific factors affected their performance, while the gross domestic product (GDP) and inflation variables together with moderated ownership identity showed an insignificant result.

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The banks form their loan portfolios in the lending process and the ability to earn the interest income highly depends on the quality of the loans. The payment for the loans may ultimately be made but the delay in receiving payments is costly for the banks (Scannella, 2013).In such a context, banks become increasingly concerned about controlling and analysing their costs and revenues, as well as measuring the risks taken to produce acceptable returns. The banks need to evaluate their ability to use resources effectively and generate income from the services. The banks must be able to sort borrowers from information they have on their quality. Individual audits, recurrent meetings, and scoring methods are powerful tools that banks use regularly to screen their customers. As a result, they charge riskier borrowers with higher loan rates and require higher collateral from these borrowers (Blazy &Weill, 2013)

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2.4 Conceptual Framework

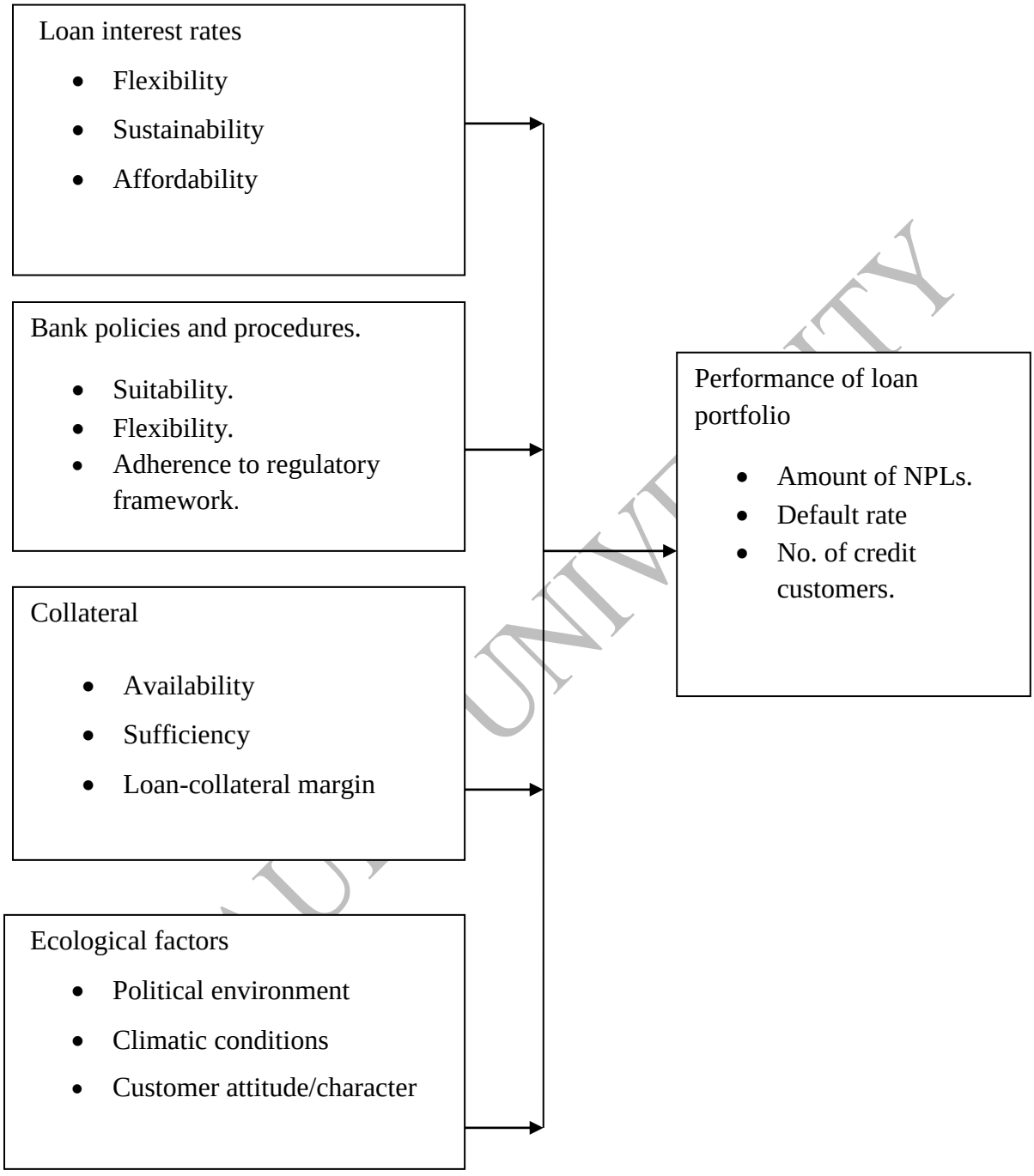


Figure1: **Factors affecting the performance of loan portfolio in commercial banks**.

Source: Researcher 2017

2.5 Summary of Literature Review and Research Gap.

A study by Ongore V (2013) on the determinants of financial performance of commercial banks in Kenya showed that bank specific factors significantly affect the financial performance of the bank. Loans constitute the largest source of income for the banks and therefore the performance of the loan portfolio affects the overall performance of the banks. According to the study, the financial performance of commercial banks in Kenya is driven mainly by board and management decisions. This study has therefore not addressed the performance of loan portfolios in commercial banks which usually affects the overall financial performance of the bank.

A study by Erick Leboo (2011) on the effects of demographic characteristics of borrowers on loan performance in commercial banks in Kenya found out that income level, level of education, gender and age had no relationship with the performance of loan portfolio in commercial banks.AM Kibor, S T Ngahu and J Kwasira (2015) examined the effects of credit risk management practices on loan performance in commercial banks and found out that there exists a positive relationship between lending policy and credit standard and the performance of loans in commercial banks.

Most empirical studies examine the influence of the macroeconomic environment on non-performing loans. Rinaldi and Sanchis-Arellano (2006) analyse household non-performing loans for a panel of European countries and provide empirical evidence that disposable income, unemployment and monetary conditions have a strong impact on non-performing loans. However, it has not been able to address fully the other ecological factors that may affect loan portfolio performance in banks. Although Kennedy Ochung (2013) in his paper "the effect of bank factors, individual factors and loan factors on loan repayment in commercial banks" found out that there was a significant relationship between bank factors, individual factors, loan factors and loan repayment in commercial banks, he did not define the factors affecting the overall performance of loan portfolios in the banks.

This research sought to bridge the conceptual gap between the theoretical literature and the empirical literature through the conceptual framework on the factors affecting the performance of loan portfolio in commercial banks.

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CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology that was used in obtaining data on the Factors affecting the performance of loan portfolio in commercial banks. It includes the research design, target population, data collection and data analysis.

3.2 Research Design

The research was a cross sectional survey of selected banks because out of the various departments in the banks, the study concentrated only on the credit department. According to Ngechu (2004), in his book 'understanding the research process and methods" descriptive studies are more formalized and structured with clearly stated hypothesis or investigative questions. It serves a variety of research objectives such as description of phenomenon or characteristics associated with a subject population, estimates of proportions of a population that have these characteristics and discovery of associations among different variables.

3.3 Target Population

There are twelve (12) commercial banks in Machakos, (appendix 3) both privately and publicly owned. All the twelve commercial banks were studied with each bank's credit manager, credit officers and branch manager targeted to provide data. A target of two credit officers, one credit manager and one branch manager in each bank was used, thus a target population of forty eight (48). According to Mugenda and Mugenda (2003), in "research methods", a study population is defined as consisting of the total collection of elements about which the study wants to make some inferences.

3.4 Sample Design and Procedure

The sampling technique that was used in the study was a purposive stratified sampling design. The stratus in the study constituted credit officers, credit managers and branch

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managers. This is because they are directly involved in the lending process in the bank and are therefore more conversant with the credit procedures of the bank compared to the rest of the employees in the bank.

3.5 Sample Frame

A sampling frame can be defined as an objective list of the population from which a researcher can make a selection. Cooper and Schindler (2000) added that a sampling frame should be a complete and correct list of population members only. The sampling frame that was be used for this study was a list of credit officers, credit managers and bank managers in all the twelve commercial banks chosen in the study.

Position of staff in the bank	**Number of staff**	**Total number of staff**
Credit managers	1	12
Credit officers	2	24
Branch managers	1	12
TOTAL		48

3.6 Data Collection Instruments and Procedure

During the study, both primary and secondary data was collected. The primary data was collected through self-administer and collect the same day questionnaires to increase the efficiency of the return rate. It constituted data on collateral, interest rate, bank policies and procedures and ecological factors. The questionnaires used were easy to administer and interpret. According to Saunders and Schumacher (2000), in his paper "international money and finance" a well standardized and tested questionnaire is a more effective element of a structured survey. The questionnaires were derived from the various research objectives. The secondary data was obtained from publications to help in better understanding and provide an insightful interpretation of the results from the study. It constituted data on the non-performing loans.

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3.7 Data Analysis and Presentations

Data collected was summarized and edited for accuracy and clarity and was coded into a coded sheet. Data analysis was done through descriptive statistics and Multiple Regression model through the use of statistical package for social sciences (SPSS) which simplified the calculation of regression and correlation analysis. Correlation analysis enables one to determine whether there is a relationship between the variables while regression enables one to establish the extent to which the independent variables affects the performance of loan portfolios in commercial banks. Presentation of data was done through the use of tables.

The results from the data indicate that there was a precision range of + or - 0.05% with a confidence level of 95% and a significance level of 5%.

3.7.1 Validity and Reliability

A pilot study was conducted prior to undertaking the main study in order to test the validity and reliability of the instruments. The pilot study indicated that there were some irrelevant questions in the questionnaire which have since been removed and also there were some variables which had not been captured but have since been captured in the study.

3.7.2 Model Specifications

The model that was used in data analysis is;

$LPF = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$ where

LPF represents performance of loan portfolio

B_0, B_1, B_2, B_3, B_4 represents constants/coefficients.

X_1 represents loan interest rates

X_2 represents bank policies and procedures

X_3 represents collateral

X_4 represents ecological factors

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e is an error term

3.8 Research Ethics

The research was carried out in accordance with the ethical behaviour characterized in any scientific research. The respondents were advised on the main purpose of the research and that all the information obtained in confidence was to be kept confidential as required by the source of the information. Subsequently, no one was coerced to provide any information and all the information provided by the respondents was done out of their own free will.

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CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the factors affecting the performance of loan portfolio of commercial banks in Machakos County. It also presents the analysis of the data obtained in the study, presentation of the data in the form of tables and frequencies where applicable and interpretation of the same data in order to establish the relationship between the variables. The primary data was obtained using questionnaires while the secondary data was obtained from the central bank reports from the years 2011-2015.Analysis of both primary and secondary data showed that there has been a tremendous increase in the number of non-performing loans in the banks and that the default rate by customers has continued to increase thus affecting the performance of the loan portfolio.

The study also found out that the interest charged on loans was affordable and there was a positive relationship between the interest rate charged and the performance of the loan portfolio in commercial banks. It was also established that the banks policies and procedures were specific, measurable, attainable, realistic and time bound (SMART) and that there was a positive relationship between these policies and procedures and the performance of the loan portfolio. The study found out that the collateral required to obtain a loan was not readily available and that banks were offering unsecured loan to its customers and therefore there was a positive relationship between collateral and the performance of loan portfolio.

A change in the political environment was found to influence the operations of commercial bank and thus having a positive relationship with the performance of loan portfolios in the banks. The study also found out that changes in climatic conditions affects the performance of agricultural loans and that there was more cases of loan default during the dry seasons thus establishing a positive relationship between climatic conditions and the performance of loan portfolio. It was also established that customer

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attitude/character towards a loan affects the performance of that particular loan and as such there was a positive relationship between customer attitude/character and the performance of loan portfolio of commercial banks.

4.1.1 Questionnaire response rate

The study targeted forty eight (48) respondents from all the twelve commercial banks targeted in Machakos County. The respondents consisted of the Branch Managers, two (2) credit officers and the Credit manager. Out of the forty eight respondents, only thirty one (31) responses were obtained. This represented 64.6% response rate and also implies that 35.4% of the questionnaires were not obtained at all. This was a good response rate and a representative of the entire population. This is because, according to Mugenda and Mugenda (1999) a response rate of 50% is adequate for analysis and reporting, while a 60% response rate is good and a response rate of 70% and above is excellent.

Table 4.1 Response rate

Instrument	Frequency	Percentage
Response rate	31	64.6
Non response rate	17	35.4
Total	48	100.0

Source : Researcher 2017

4.2 Descriptive analysis

This section represents the descriptive analysis of the various variables in the study.

4.2.1 The age of the respondent

The findings on the age of the respondents are presented in the table below

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Table 4.2 Age of respondent

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30 years	10	32.3	32.3	32.3
	30-40 years	18	58.1	58.1	90.3
	40-50 years	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source: Researcher 2017

The findings show that 32.3% represents respondents aged between 20-30yrs, 58.1% represents respondents aged between 30-40yrs while, only 9.7% were aged between 40-50 yrs. This implies that majority of the staff in the credit section of the banks are of middle age and are therefore full of enthusiasm and energy while exercising their duties at their various work stations due to their maturity.

4.2.2 Number of years worked

The findings on the number of years worked at the current position was presented in the table below

Table 4.3 No. Of years worked

Years worked

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 years	11	35.5	35.5	35.5
	5-10 years	17	54.8	54.8	90.3
	10-20 years	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source: Researcher 2017

The findings show that 35.5% have a working experience of between 0-5yrs, 54.8% of the respondents have a working experience of between 5-10yrs while 9.7% had a working experience of between 10-20yrs.This implies that the respondents had an understanding

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of their work and based on their experience, they could be relied on to provide accurate information on the study.

4.2.3 Loan Default rate

The findings on the rate of loan default is presented in the table below

Table 4.4. Loan default rate

Loan default rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	15	48.4	48.4	48.4
	agree	9	29.0	29.0	77.4
	neutral	4	12.9	12.9	90.3
	disagree	2	6.5	6.5	96.8
	strongly disagree	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings from the table shows that 48.4% strongly agree that the default rate is increasing, 29.0% agree on the same, 12.9% are neutral while only 6.5% disagree and 3.2% strongly disagree with the fact the loan default rate is increasing and. This implies an increase in the loan default rate by most customers thus leading to an increase in the non-performing loans and subsequently affecting the performance of the loan portfolio as a whole. This confirms the findings by Khalid (2012) in his study on the impact of asset quality on the profitability of private banks in India which showed that the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans and the higher the banking operating performance.

4.2.3 Number of credit customers

The findings on the increase in the number of credit customers is presented in the table below

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Table 4.5:No. Of credit customers

Increase in the number of credit customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	10	32.3	32.3	32.3
	agree	15	48.4	48.4	80.6
	neutral	3	9.7	9.7	90.3
	disagree	2	6.5	6.5	96.8
	strongly disagree	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings show that 32.3% strongly agree that the number of credit customers is increasing in the banks, 48.4% agree on the same, 9.7% are neutral while 6.5% disagree and 3.2% strongly disagree that the number of credit customers in the banks is increasing and 9.6% are neutral. This implies that there is an increase in the number of borrowers in the banks and this has also led to the increase in the amount of non-performing loans thus affecting the performance of the loan portfolio as a whole. This confirms the findings of Ezeoha (2011) on banking consolidation, asset quality and credit crisis in Nigeria which showed that excess liquidity and huge capital bases led to reckless lending by banks.

4.2.4 Effect of the amount of time taken on loan approval on the performance of the loan portfolio

The findings on whether the time taken on loan approval affects the performance of the loan portfolio is presented in the table below

Table 4.6 Effect of time taken for loan approval

Effect of time on loan performance

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	25.8	25.8	25.8
	agree	16	51.6	51.6	77.4
	neutral	2	6.5	6.5	83.9
	disagree	3	9.7	9.7	93.5
	strongly disagree	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Source Field data

From the findings above, 25.8% strongly agree that the amount of time taken affects the performance of loan portfolio in banks while 51.6% agree and 6.5% are neutral to the position. Only 9.7 % disagree and 6.5% strongly disagree with effect of time taken on loan approval on the performance of loan portfolios while. This implies that the longer the period of time taken to approve a loan, the more the likelihood of the loan becoming non-performing. This confirms the findings by Khalid (2012) in his study on the impact of asset quality on the profitability of private banks in India which showed that the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans.

4.2.5 The effect of the amount of loan requested against the amount advanced

The findings on the effects of the amount of loan requested against the amount actually advanced on the performance of loan portfolio is presented in the table below

Table 4.7 Effect of amount requested against amount advanced

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Effect of the amount requested against the amount advanced

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	6	19.4	19.4	19.4
	agree	15	48.4	48.4	67.7
	neutral	2	6.5	6.5	74.2
	disagree	5	16.1	16.1	90.3
	strongly disagree	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source :Field data

From the above table, 19.4 % strongly agree that the amount of loan requested against the amount actually advance affects the performance of that loan portfolio, 48.4% agree that the amount of loan requested against the amount advanced affects the performance of that loan portfolio, 6.5% are neutral, 16.1% disagree while 9.6% strongly disagree on the effect of amount of loan requested against amount advanced on the performance of that loan portfolio. This implies that the amount of loan requested against the amount of loan actually advanced to a customer determines the performance of that loan and subsequently the overall performance of the entire loan portfolio. This is because when a client is advanced an amount less than his/her initial request, he/she goes to borrow additional amount in another bank to add on the deficit and thus experience difficulties in servicing different loans in different banks. This confirms the findings by Khalid (2012) in his study on the impact of asset quality on the profitability of private banks in India which showed that the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans.

4.2.6 The effect of the loan credit period

The findings on the effects of the loan credit period advanced on the performance of loan portfolio is presented in the table below

Table 4.8 Effect of loan credit period

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Effect of the loan credit period

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	5	16.1	16.1	16.1
	agree	15	48.4	48.4	64.5
	neutral	3	9.7	9.7	74.2
	disagree	6	19.4	19.4	93.5
	strongly disagree	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings on the table above show that 16.1% strongly agree that the loan credit period advanced on loans affects the performance of that particular loan, 48.4% agree on the same, 9.6% are neutral while 19.4% disagree and 6.5% strongly disagree on the effect of loan credit period on the performance of loan portfolio and. This implies that the credit period given on loans advanced to customers affects the repayment of that particular loan thus increasing the number of non-performing loans in the bank and subsequently affecting the performance of the loan portfolio as a whole. This confirms the findings of Chernykh and Theodossiou (2011) in his study on the determinants of long term lending to firms in an emerging market in Russia that only bigger and well capitalized banks can be able to withstand the risks emanating from long-term lending

4.2.7 Customer involvement in review of credit products

The findings on customer involvement in the review of credit products is presented in the table below

Table 4.9: Customer involvement in review of credit products

Customer involvement in review of credit products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	4	12.9	12.9	12.9

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	agree	2	6.5	6.5	19.4
	neutral	5	16.1	16.1	35.5
	disagree	4	12.9	12.9	48.4
	strongly disagree	16	51.6	51.6	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings of the study shows that 12.9% strongly agree that customers are involved in the review of credit products in the banks, 6.5% agree on the same, 16.1% are neutral while 12.9% disagree that customers are involved in the review of credit products for the banks and 51.6% strongly disagree on the same. This implies that the banks do not involve customers in the review of the credit products offered to them. This confirms the findings of Ezeoha (2011) in his study on banking consolidation, asset quality and credit crisis in Nigeria that the deterioration of asset quality and increased credit crisis in Nigeria was caused by inability of the banks to use their asset capacity optimally in order to enhance their earnings.

4.2.8 Flexibility of Loan Interest Rates

The findings on the ability of customers to negotiate the amount of interest charged on loans are presented in the table below.

Table 4.10 Flexibility of loan interest rates

Flexibility of loan interest rates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	2	6.5	6.5	6.5
	agree	2	6.5	6.5	12.9
	neutral	4	12.9	12.9	25.8
	disagree	6	19.4	19.4	45.2
	strongly disagree	17	54.8	54.8	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings on the table above shows that 6.5% strongly agree and agree on the possibility of customers negotiating on the amount of interest charged on loans offered,

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12.9% are neutral, 19.4% disagree that customers are allowed to negotiate for interest charged while 54.8% strongly disagree on the same. This implies that customers are not allowed to negotiate on the amount of interest charged on loans offered to them. This confirms the findings by Garder and Cooperman (2005) in his study on managing financial institutions that, when banks do not get enough deposits, capital adequacy level is affected and advancing of loans to clients may not be done hence the conclusion that interest on deposits is an important consideration.

4.2.9 Affordability of Loan Interest Rates

The findings on the affordability of the interest rate offered on loans is presented in the following table

Table 4.11 Affordability of loan interest rate

Affordability of loan interest rates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	1	3.2	3.2	3.2
	agree	1	3.2	3.2	6.5
	neutral	3	9.7	9.7	16.1
	disagree	19	61.3	61.3	77.4
	strongly disagree	7	22.6	22.6	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the table above show that 3.2% strongly agree that the loan interest charged are high, 3.2% agree on the same, 9.7% are neutral while 61.3% disagree that the loan interest rates are high and 22.6% strongly disagree on the same. This implies that the loan interest rates charged on loans is not high and is thus affordable.

4.3.0 Sustainability of Loan Interest Rates

The findings on the sufficiency of the interest rate charged on loans such that it is able to cater for the banks operational costs is presented in the table below.

Table 4.12 Sustainability of loan interest rates

Sustainability of loan interest rates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	2	6.5	6.5	6.5
	agree	11	35.5	35.5	41.9
	neutral	7	22.6	22.6	64.5
	disagree	8	25.8	25.8	90.3
	strongly agree	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings from the table above show that 6.5% strongly agree that the interest rates are sufficient, 35.5% agree on the same, 22.6% are neutral while 25.8% disagree on the sufficiency of the interest rates and 9.7% strongly disagree on the same. This implies that the interest charged on loans is sustainable. This confirms the Risk-Adjusted Return on capital model theory which states that rather than evaluating the actual annual promised cash flow on a loan as a percentage of the amount lent, lenders should balance the loan's expected income against the loan's expected risk.

4.3.1 Setting up the rate of interest on loans

The findings on the involvement of the bank in the setting up of the loan interest rates is presented in the table below

Table 4.13 Bank involvement in setting up of loan interest rates

Setting up the rate of interest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	2	6.5	6.5	6.5
	agree	5	16.1	16.1	22.6

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	neutral	4	12.9	12.9	35.5
	disagree	15	48.4	48.4	83.9
	strongly disagree	5	16.1	16.1	100.0
	Total	31	100.0	100.0	

Source: Field data

The findings from the table above shows that 6.5% strongly agree that the bank is involved in the setting up of the loan interest rates, 16.1% agree, 12.9% are neutral while 48.4% disagree that the bank is involved in the setting up of the interest rates and 16.1% strongly disagree. This implies that the bank is not involved in the setting up of the interest rates charged on loans offered to its clients. This confirms the findings of Adofu and Audu (2010) in his paper "interest rate deregulation and investment in Nigeria" that found that interest rate played a significant role in the enhancement of economic activities and as such, monetary authorities should ensure appropriate determination of interest rate level that will break the double edge effect of interest rate on savers and local investors.

4.3.2 SMART goals and objectives

The findings on the SMART (specific, measurable, attainable, realistic and timely) goals and objectives of the bank are presented in the table below.

Table 4.14 Findings on goals and objectives of the bank

Specific, measurable, attainable, realistic and timely(SMART) objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	4	12.9	12.9	12.9
	agree	20	64.5	64.5	77.4
	neutral	7	22.6	22.6	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the table above show that 12.9% strongly agree that the goals and objective of the bank are SMART, 64.5% agree on the same while 22.6% are neutral. This implies that the policies and procedures set by the banks are SMART.

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4.3.3 Review of the banks' policies and procedures

The findings on the review their policies and procedures by the banks and by extension their credit facilities is presented in the table below

Table 4.15 Review of banks policies and procedures

Reviews of the banks policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	25.8	25.8	25.8
	agree	20	64.5	64.5	90.3
	neutral	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the study show that 25.8% strongly agree that there is always a review of the banks policies and procedures and by extension the credit facilities offered by the bank 64.5% agree on the same, while 9.7% are neutral to the position. This implies that the bank is in constant review of its policies and procedures and therefore, these policies and procedure are flexible in nature. This confirms the Risk-Adjusted Return on Capital Model which states that the purpose of this model as a risk measurement system is to provide management with a more reliable way to determine the amount of capital necessary to support each of their major activities and thus occasionally determine the overall leverage for the bank as a whole.

4.3.4 Adherence to the regulatory framework

The findings on the involvement of Central Bank of Kenya (CBK) in one way or another in the review of the commercial banks policies and procedures is presented in the table below

Table 4.16 Involvement of CBK in review of policies and procedures

Involvement of CBK

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	7	22.6	22.6	22.6
	agree	17	54.8	54.8	77.4
	neutral	2	6.5	6.5	83.9
	disagree	5	16.1	16.1	100.0
	Total	31	100.0	100.0	

Source : field data

The findings from the study show that 22.6% strongly agree that the central bank of Kenya is involved in the review of the banks' policies and procedures, 54.8% agree on the same, 6.5% are neutral, while 16.1% disagree on the same. This implies that the banks have adhered to the regulatory framework. This confirms the study done by (Tennant &Tracey, 2013) on applied financial economics which shows that in a liberalized financial sector, a large and rapidly increasing loan portfolio signifies a weaker corporate governance mechanism, since the incentive for excessive risk taking in pursuit of profits are not well balanced with both the internal and external controls

4.3.5 Credit staff involvement in the making of policies and procedures on credit facilities offered by the bank

The findings on involvement of staff in the making of goals and objectives of the bank in relation to the credit facilities offered is presented in the table below

Table 4.17 Staff involvement in making of policies and objectives

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Involvement of staff in making goals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	2	6.5	6.5	6.5

	agree	6	19.4	19.4	25.8
	neutral	6	19.4	19.4	45.2
	disagree	6	19.4	19.4	64.5
	strongly disagree	11	35.5	35.5	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the study show that 6.5% strongly agree that they are involved in the making of goals and objectives of the bank in relation to the credit facilities offered, 19.4% agree on the same, 19.4% are neutral while 19.4% disagree that they are involved in the making of goals and objectives of the bank and 35.5% strongly disagree. This implies that the staffs are not involved in the making of goals and objectives of the bank in relation to the credit facilities offered. This confirms the study done by (Tennant &Tracey, 2013) on applied financial economics which shows that, in the absence of controls associated with weak corporate governance, a rapidly increasing loan portfolio exerts pressure on the bank officers and managers and allows loan applicants that are not credit worthy to be issued with loans.

4.3.6 Customer involvement in the review of banks policies and procedures

The findings on involvement of customers in the review of the banks policies and procedures is presented in the following table

Table 4.18 customer involvement in review of banks policies and procedures

Involvement of customers in review of policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	2	6.5	6.5	6.5
	agree	4	12.9	12.9	19.4

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	neutral	3	9.7	9.7	29.0
	disagree	11	35.5	35.5	64.5
	strongly disagree	11	35.5	35.5	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the study show that 6.5% strongly agree that customers are involved in the review of the banks policies and procedures, 12.9% agree on the same, 9.7% are neutral while 35.5% disagree that customers are involved in the review of the banks policies and procedures and another 35.5% strongly disagree that there is customer involvement in the review of the banks policies and procedures. This implies that customers are not involved in the review of the banks policies and procedures. This confirms the information asymmetry theory by Grossman and Stiglitz which occurs when a borrower has better information about the potential risks and returns associated with a particular investment and the lender does not have adequate information pertaining the borrower.

4.3.7 Availability of collateral

The findings on the availability of collateral required by banks for the acquisition of a loan is presented in the table below

Table 4.19 Availability of collateral

Availability of collateral

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	3	9.7	9.7	9.7
	neutral	3	9.7	9.7	19.4
	disagree	18	58.1	58.1	77.4
	strongly disagree	7	22.6	22.6	100.0
	Total	31	100.0	100.0	

Source: field data

The findings from the study above show that 9.7% agree that the collateral required by banks is readily available, 9.7% is neutral while 58.1% disagree that the collateral required by banks for a loan is readily available and 22.6% strongly

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disagree on the same. This implies that the collateral required for the acquisition of a loan from the banks is not readily available. This confirms the findings of Inkumbi (2009) in his study "beyond the 5Cs of lending" that capital (equity contributions) and collateral (the security required by lenders) is a major stumbling block for entrepreneurs trying to access capital. This is especially true for young entrepreneurs or entrepreneurs with no money to invest as equity; or with no assets which can be offered as security for a loan.

4.3.8 Collateral sufficiency

The findings on the sufficiency of the collateral offered to the bank such that it is able to fully recover its loan from the collateral in the event of default is presented in the table below

Table 4.20 Collateral sufficiency

Collateral sufficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	3	9.7	9.7	9.7
	agree	2	6.5	6.5	16.1
	neutral	3	9.7	9.7	25.8
	disagree	20	64.5	64.5	90.3
	strongly disagree	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source :field data

The findings from the study show that 9.7% strongly agree that the bank is able to fully recover its loan amount from the collateral offered by its customers, 6.5% agree on the same, 9.7% are neutral while 64.5% disagree that the bank is able to fully recover its loan amount from the collateral offered and 9.7% strongly disagree with the same. This implies that the bank is not able to recover fully its loan amount from the collateral offered by its customers in the event of default and therefore, the collateral offered for loan facilities is not sufficient or adequate. This confirms the Risk-Adjusted Return on capital model theory which states that rather than evaluating the actual annual promised cash flow on a loan as a percentage of

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the amount lent, lenders should balance the loan's expected income against the loan's expected risk.

4.3.9 Loan -collateral margin

Findings on the involvement of staff in the determination of loan-collateral margin for the bank is presented in the table below

Table 4.21 Staff involvement in determination of loan-collateral margin

Determination of loan collateral margin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	1	3.2	3.2	3.2
	agree	5	16.1	16.1	19.4
	neutral	2	6.5	6.5	25.8
	disagree	18	58.1	58.1	83.9
	strongly disagree	5	16.1	16.1	100.0
	Total	31	100.0	100.0	

Source: field data

The findings of the study show that 3.2% of the staff strongly agree that they are involved in the determination of loan-collateral margin in advancing customers loan, 16.1% agree on the same, 6.5% are neutral while 58.1% disagree that they are involved in the determination of loan-collateral margin and 16.1% strongly disagree on the same. This implies that the staffs are not involved in the determination of loan-collateral margin of a loan. This confirms the study done by (Tennant &Tracey, 2013) on applied financial economics which shows that, in the absence of controls associated with weak corporate governance, a rapidly increasing loan portfolio exerts pressure on the bank officers and managers and allows loan applicants that are not credit worthy to be issued with loans

4.4.0 Unsecured loans

The findings on the availability of unsecured loans to customers is presented in the

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table below

Table 4.22 Availability of unsecured loans

Availability of unsecured loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	25.8	25.8	25.8
	agree	20	64.5	64.5	90.3
	neutral	1	3.2	3.2	93.5
	disagree	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Source: field data

The findings of the study shows that 25.8% strongly agree that the banks offer unsecured loans to its customers, 64.5% agree on the same, 3.2% are neutral, while 6.5% disagree that the bank offers unsecured loans to its customers. This implies that not all customers obtain secured loans from the banks and that the banks offer unsecured loans to some of its customers.

4.4.1 Political environment

The findings on the influence of the political leadership of the country on the banks' operations is presented in the table below

Table 4.23 Influence of political leadership on banks operations

Influence of political leadership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	16	51.6	51.6	51.6
	agree	10	32.3	32.3	83.9
	neutral	3	9.7	9.7	93.5
	disagree	1	3.2	3.2	96.8
	strongly disagree	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

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Source: field data

The findings of the study show that 51.6% strongly agree that the political leadership has a direct influence on the banks' operations, 32.3% agree on the same, 9.7% are neutral while 3.2% disagree that the political leadership has an influence on the banks performance and another 3.2% strongly disagree on the same. This implies that the political environment affects the operations of the bank and subsequently the performance of its loan portfolio.

4.4.2 Rate of inflation

Findings on the influence of the rate of inflation in the country on the performance of loans in the bank is presented in the table below

Table 4.24 Influence of rate of inflation on loan performance

Influence of inflation rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	13	41.9	41.9	41.9
	agree	18	58.1	58.1	100.0
	Total	31	100.0	100.0	

Source : field data

The findings from the study show that 41.9% strongly agree that inflation rate affects the performance of loans in banks while 58.1% agree on the same. None has disagreed or strongly disagreed on the same. This implies that the rate of inflation of a country influences the performance of loans in the banks and subsequently the overall performance of the loan portfolio as a whole. Although a study by Ongore and Kusa (2012) in "determinants of financial performance of commercial banks in Kenya" found that the gross domestic product (GDP) and inflation variables together with moderated ownership identity showed an insignificant result, the findings from this study show that indeed the rate of inflation affects the performance of loan portfolio of commercial banks and subsequently the overall

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performance of the bank.

4.4.3 Climatic conditions

Findings on the effect of changes in climatic conditions on the performance of agricultural loans is presented in the table below

Table 4.25 Effect of climatic changes on loan performance

Effects of climatic changes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	21	67.7	67.7	67.7
	agree	8	25.8	25.8	93.5
	neutral	1	3.2	3.2	96.8
	disagree	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

Source: field data

The findings of the study show that 67.7% strongly agree that the change in climatic conditions affects the performance of agricultural loans, 25.8% agree on the same, 3.2% are neutral while another 3.2% disagree that change in climatic conditions has an effect on the performance of agricultural loans. This implies that the climatic conditions affect the performance of loan portfolio of banks.

4.4.4 Loan default rate

Findings on the rate of default of loans during the dry seasons is presented in the table below

Table 4.26 Rate of loan default during dry season

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Rate of default

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	15	48.4	48.4	48.4
	agree	9	29.0	29.0	77.4
	neutral	3	9.7	9.7	87.1
	disagree	3	9.7	9.7	96.8
	strongly disagree	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

Source: field data

Findings from the study show that 48.4% strongly agree that high loan default is witnessed during the dry seasons, 29.0% agree on the same, 9.7% are neutral while another 9.7% disagree that high default rate is witnessed during the dry season and 3.2% strongly disagree on the same. This implies that there is high loan default rate during the dry season and therefore, climatic conditions affect the performance of loans in banks. This confirms the findings by Khalid (2012) in his study on the impact of asset quality on the profitability of private banks in India which showed that the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans.

4.4.5 Customer attitude/character

The findings on the effects of the credit history of a customer on their loan repayment is presented in the table below

Table 4.27 Effect of customer attitude on loan repayment

Effect of credit history

	Frequency	Percent	Valid Percent	Cumulative Percent

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Valid	strongly agree	4	12.9	12.9	12.9
	agree	25	80.6	80.6	93.5
	neutral	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Source: field data

The findings of the study show that 12.9% strongly agree that the credit history of a customer affects their loan repayment, 80.6% agree on the same while 6.5% are neutral. No one has either disagreed or strongly disagreed on the same.

4.4.6 Age of a customer

Findings on the influence of the age of a customer on his/her loan repayment is presented in table below

Table 4.28 Influence of age on loan repayment

Influence of age of customer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	16.1	16.1	16.1
	agree	20	64.5	64.5	80.6
	neutral	3	9.7	9.7	90.3
	disagree	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

Source: field data

The finding of the study show that 16.1% strongly agree that the age of a customer has an influence on his/her loan repayment, 64.5% agree on the same, 9.7% are neutral while another 9.7% disagree that the age of a customer has an influence on his/her loan repayment. This means that the age of a customer affects his/her loan repayment thus affecting the performance of that particular loan, therefore implying that customer attitude/character has an influence on the performance of loan portfolio in a bank. This confirms the findings by Derban, Binner and Mullineux (2005) in his paper "loan repayment performance in community development finance institutions in UK" recommended that borrowers should be

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screened by banking institutions through credit assessment and that collection of reliable information from prospective customers becomes critical in accomplishing effective screening as indicated by asymmetric information theory.

4.4.7 Review of loan repayment terms

The findings on regular review of loan repayment terms according to the prevailing conditions is presented in the table below

Table 4.29 Regular review of loan repayment terms

Review of loan repayment terms

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	1	3.2	3.2	3.2
	agree	2	6.5	6.5	9.7
	neutral	3	9.7	9.7	19.4
	disagree	14	45.2	45.2	64.5
	strongly disagree	11	35.5	35.5	100.0
	Total	31	100.0	100.0	

Source: field data

The findings of the study show that 3.2% strongly agree that loan repayment terms are usually reviewed according to the prevailing conditions, 6.5% agree on the same, 9.7% are neutral while 45.2% disagree that loan repayment terms are reviewed according to the prevailing conditions and 35.5% strongly disagree on the same. This implies that the loan repayment terms are not reviewed according to the prevailing conditions. This confirms the findings by Ongore and Kusa (2012) in his study "determinants of financial performance of commercial banks in Kenya" that apart from liquidity variable, bank's specific factors affected their performance.

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4.3 Inferential statistics

Table 4.30: Regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643[a]	.414	.296	.734

a. Predictors: (Constant), customer involvement in review of credit products, availability o f unsecured loans, influence of political leadership, SMART, effects of climatic changes, affordability of loan interest rates

Source: field data

R -square is (coefficient of determination) is used to evaluate model fit. The adjusted R-square, also called the coefficient of multiple determinations is the percentage of the variance in the dependent variable explained jointly by the independent variables.41.4% of the changes in loan default rate could be attributed to the combined effects of the predictor variables. The effects of the loan interest rates on the loan default rate confirms the confirms the theory on option pricing model which explains why it is not prudent for banks to set very high interest rates to optimize profits from loan sales. The effect of banks policies and procedures on the loan default rate confirms the study done by (Tennant &Tracey, 2013) on applied financial economics which shows that, in the absence of controls associated with weak corporate governance, a rapidly increasing loan portfolio exerts pressure on the bank officers and managers and allows loan applicants that are not credit worthy to be issued with loans.

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On the other hand, the effect of collateral on loan default rate confirms the Soft Budget Constraint theory formulated by Janos Konai in 1979 which states that although state owned enterprises were vested with a moral and financial interest in maximizing their profits, the chronic loss makers among them were not allowed to fail since they were always bailed out with financial subsidies or other instruments and thus could count on surviving even after chronic losses.

The influence of the political environment and the changes in climatic conditions on loan default rate confirms the findings of Rinaldi and Sanchis-Arellano (2006) in his paper, "household debt sustainability" that disposable income, unemployment and monetary conditions have a strong impact on non- performing loans.

Table 4.31: ANOVA (analysis of variance)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.499	5	1.900	3.526	.015[b]
	Residual	13.469	25	.539		
	Total	22.968	30			

a. Dependent Variable: loan default rate

b. Predictors: (Constant), customer involvement in review of credit products, availability of unsecured loans, influence of political leadership, SMART, effects of climatic changes, affordability of loan interest rates

Source: field data

The ANOVA table shows that the residual sum (the sum of squared deviations from the least square line) is 13.469, while the total sum of squares (sum of squared deviations from mean) is 22.968.The probability value of 0.015 indicates that the regression relationship was highly significant in predicting how loan interest rates, bank policies and procedures, collateral and ecological factor influence the loan default rate.

Table 4.32: Estimated coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

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1	(Constant)	1.498	.829		1.808	.083
	SMART	.124	.241	.084	.512	.613
	Availability of unsecured loans	.334	.185	.285	1.806	.083
	Influence of political leadership	.259	.143	.296	1.813	.082
	Effects of climatic changes	.282	.210	.232	1.343	.191
	Affordability of loan interest	.323	.104	.541	3.097	.005

a. Dependent Variable: loan default rate

Source: field data

The coefficient table provides the regression equation. Under unstandardized coefficients, the constant 1.498 is a coefficient while the remaining values in the column are b coefficients. Therefore, the unstandardized regression equation is

LDR= 1.498 + 0.323 LI + 0.124BP+ 0.334C+0.541EF+ e

Where,

LDF-loan default rate, LI is loan interest rate, BP is bank policies and procedures, C is collateral and EF is ecological factors.

A unit change in the loan interest rate will lead to a 0.323 change in the loan default rate, a unit change in the bank policies and procedures will lead to a 0.124 change in the loan default rate, a unit change in collateral will lead to a 0.334 change in the loan default rate while a unit change in ecological factors will lead to 0.541 change in the loan default rate.

4.4 Hypothesis testing

The null hypothesis H_O for all the variables was tested using the t-test. The desired probability to make a type 1 error was denoted by α and the null hypothesis was rejected when the p-value was ≤ α.

Variable	N	Mean	StDev	SE Mean	t	p
Loan interest	25	213.92	12.78	1.06	0.12	0.05

To test the null hypotheses, the findings were tested at 95% confidence level and 5% significance level. The *hypothesis* H_O- loan interest rates have no relationship with the

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performance of loan portfolio was tested and gave results as α = 0.05 and p-value =0.05.Since the p-value is equal to the critical value (∝)the Null hypothesis was rejected, thus accepting the alternative *hypothesis* H_1, meaning that loan interest rates have a relationship with the performance of loan portfolio of commercial banks.

Variable	N	Mean	StDev	SE Mean	t	p
Loan interest	28	13.54	2.45	0.54	--0.546	0.019

The *hypothesis* H_0– Bank policies and procedures do not affect the performance of loan portfolio in commercial was tested and gave the results as α = 0.05 and p-value=0.019.The p-value is less than the critical value, therefore the Null hypothesis was rejected, hence accepting the alternative *hypothesis* H_1 meaning that the banks' policies and procedures affect the performance of loan portfolio in commercial banks.

Variable	N	Mean	StDev	SE Mean	t	p
Loan interest	20	12.36	2.05	0.36	-0.346	0.015

The *hypothesis* H_0–collateral does not affect the performance of loan portfolio of commercial banks was tested and gave the results as α = 0.05 and p-value 0.015 .The p-value is less than the critical value thus the null hypothesis was rejected, accepting the alternative *hypothesis* H_1 meaning the collateral affects the performance of loan portfolio in commercial banks.

Variable	N	Mean	StDev	SE Mean	t	p
Loan interest	18	10.25	2.02	0.25	- 0.285	0.03

The *hypothesis* H_0 –ecological factors have no relationship with the performance of loan portfolio in commercial banks was tested and gave the results as α = 0.05 and p-value 0.03.The p-value is less than the critical value hence the null hypothesis was rejected, accepting the alternative *hypothesis*H_1 meaning that ecological factors have a relationship with the performance of loan portfolio in commercial banks.

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CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings, discussion of the findings, conclusions made from the findings and recommendations thereof. The conclusions and recommendations made in this chapter address the purpose of this study which was to determine the factors affecting the performance of loan portfolio in commercial banks in Machakos County. The study sought to establish the relationship between interest rates charged on loans and the performance of loan portfolio, to determine the effect of bank policies and procedures on the performance of loan portfolio, to analyse the extent to which collateral affects the performance of loan portfolio and finally, to establish the relationship between ecological factors and the performance of loan portfolio in commercial banks.

The study found out that there was a significant relationship between the interest charged on loans and the performance of the loan portfolio of commercial banks and that the banks' policies and procedures affect the performance of loan portfolio of commercial banks. It also found out that collateral or the security offered for loans affects the performance of loan portfolio of commercial banks and that ecological factors have a significant relationship with the performance of loan portfolio of commercial banks.

The study found out that majority of the staff were of middle age, aged between 20-40 yrs .This implied that that majority of the staff were mature and able to make good credit decisions in their day to day activities in the bank. The study also found that majority of the staff had worked in the banks for between 5-10yrs.This implied that the employees were experienced in their field of operations and could therefore be relied upon to provide reliable information about the study.

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The study also found out that the amount taken on loan approval affects the repayment of that particular loan thus affecting the overall performance of the loan portfolio. In addition, the amount of loan requested against the amount actually approved and advanced affects the performance of that particular loan thus affecting the overall performance of the loan portfolio.

It was also established that the loan credit period affects the repayment of a particular loan thus affecting the overall performance of the loan portfolio. In addition, customers were not involved in the review of the credit products offered by the banks thus affecting the performance of such loans and overall performance of the loan portfolio.

5.2 Summary of findings

The summary of the findings are as per the research objectives and are based on the data obtained and analysed.

5.2.1 Loan interest rates

The findings of the study on the relationship between the interest on loans charged by the banks and the performance of the loan portfolio showed that the interest rates affects the performance of loan portfolio and have a positive relationship with the performance of the loan portfolio in commercial banks. The study also found that the rate of interest charged on loans is not flexible and that customers are not allowed to negotiate on the amount of interest charged on the loans offered. It was also established in the study that the bank is not involved in the setting up of the amount of interest to be charged on the loans offered to its clients.

The null hypothesis that loan interest rates have no relationship with the performance of loan portfolio of commercial banks was tested and the results shown as $\alpha = 0.05$ and p-value =0.05, leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This meant that there was significant relationship between the interest charged on loans and deposits and the performance of the loan portfolio in commercial banks in Machakos County. According to Garder and Cooperman (2005) in his study on managing financial institutions, when banks do not get enough deposits, capital adequacy level is affected and advancing of loans to clients may not be done

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hence the conclusion that interest on deposits is an important consideration. In addition, Adofu and Audu (2010) in his paper "interest rate deregulation and investment in Nigeria" found out that interest rate played a significant role in the enhancement of economic activities and as such, monetary authorities should ensure appropriate determination of interest rate level that will break the double edge effect of interest rate on savers and local investors. It was however established that the banks are not involved in the establishment of the amount of interest charged on the loans advance to its customers.

5.2.2 Bank policies and procedure

The findings on the effect of the banks' policies and procedures on the performance of loan portfolio of commercial banks showed that the banks policies and procedures affect the performance of the loan portfolio .This is a positive relationship indicating that indeed the banks policies and procedures affect the performance of loan portfolio in commercial banks. The study also found out that there is a constant review of the banks policies and procedures and that these policies and procedures are in line with the rules and regulations set by the regulator, implying that the banks are in adherence with the regulatory framework. However, the study also established that both the employees and the customers were not involved in the review of these policies and procedures.

The null hypothesis that the bank policies and procedures do not affect the performance of loan portfolio in commercial banks was tested and the results shown as $\alpha = 0.05$ and p-value=0.019 leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. This meant that bank policies and procedures affect the performance of loan portfolio in the commercial banks in Machakos County. According to Tennant &Tracey, (2013) in his study" applied financial economics" in the absence of controls associated with weak corporate governance, a rapidly increasing loan portfolio exerts pressure on the bank officers and managers and allows loan applicants that are not credit worthy to be issued with loans. .

5.2.3 Collateral

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The findings on the effect of collateral on the performance of loan portfolio of commercial banks showed that collateral affects the performance of loan portfolio .This is a positive relationship implying that collateral has an effect on the performance of loan portfolio**.** The null hypothesis that collateral does not affect the performance of loan portfolio in commercial banks was tested and showed the results as $\alpha = 0.05$ and p-value 0.015 leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. This meant that that collateral has an effect on the performance of loan portfolio of commercial banks. It was established that the collateral requested by banks while advancing loans to its customers is not readily available and it's not sufficient enough for the bank to be able to fully recover its loan from the collateral in the event of default. According to Inkumbi (2009) in his study "beyond the 5Cs of lending" capital (equity contributions) and collateral (the security required by lenders) is a major stumbling block for entrepreneurs trying to access capital. The study also found that the banks credit staffs were not involved in the determination of loan-collateral margin before advancing a customer a loan.

5.2.4 Ecological factors

The findings on the relationship between the political environment and the performance of loan portfolio of commercial banks showed that the political environment affects the performance of loan portfolio .The study also established that changes in the climatic conditions affects the performance of loan portfolio .The null hypothesis that ecological factors have no relationship with the performance of loan portfolio was tested and showed the results as $\alpha = 0.05$ and p-value 0.03 leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This meant that there is a significant relationship between ecological factors and the performance of loan portfolio of commercial banks in Machakos County. It was established that the political environment and leadership of the country has a direct influence on banks operations and subsequently the performance of its loan portfolio. According to Rinaldi and Sanchis-Arellano (2006) in his paper, "household debt sustainability" disposable income, unemployment and monetary conditions have a strong impact on non- performing loans.

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The study also established that the rate of inflation in the country affects the performance of the loan portfolio through its effects on the operations of the bank.

The study established that changes in the climatic conditions affects the performance of agricultural loans thus affecting the overall performance of loan portfolio of the banks. In addition, cases of loan default were found to be high during the dry seasons thus affecting the overall performance of the loan portfolio as a whole. The study also found out that the credit history of a customer influences his/her loan repayment which affects the performance of loan portfolio of the banks. According to Khalid (2012) in his study "the impact of asset quality on the profitability of private banks in India" the higher the quality of loan processing activities before a loan can be approved, the lower the activities that are required to process problematic loans.

The age of a customer was also found to have an influence on his/her loan repayment hence affecting the performance of the loan portfolio as a whole. The study established that commercial banks do not review the loan repayment terms depending on the prevailing climatic conditions and this affects the performance of the loan portfolio.

5.2.5 Performance of Loan Portfolio

The findings of the study showed that the total amount of non-performing loans for the years running 2011-2015 was increasing on a yearly basis. This implies that there has being a tremendous increase in the number of non -performing loans throughout the years 2011-2015.Similary the study also showed that the rate at which customers were defaulting on loans advanced to them was on the increase. This implies an increase in the loan default rate customers thus leading to an increase in the non-performing loans and subsequently affecting the performance of the loan portfolio as a whole

The study therefore found out that there has being a tremendous increase in the number of non-performing loans throughout the years. It was also found that there is an increase in the number of borrowers in the banks and this has led to the increase in the amount of non-performing loans thus affecting the performance of the loan portfolio as a whole. This confirms the findings of Ezeoha (2011) on banking consolidation, asset quality and

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credit crisis in Nigeria which showed that excess liquidity and huge capital bases led to reckless lending by banks.

5.3 Conclusion

5.3.1 Performance of Loan Portfolio

The study concluded that there has been a significant increase in the number of customers defaulting on loans advanced to them thus leading to an increase in the non-performing loan of the commercial banks in Machakos County. It also concluded that the number of credit customers in the banks is significantly increasing leading to an increase in the loan portfolio and subsequent increase in the non-performing loans thus affecting the performance of the loan portfolio as a whole. The study also concluded that the credit period advanced on loans affects the performance of that loan. This is means that the longer the period advanced on loans the higher the chances of such loans becoming non-performing. This is because the chances of the customer going to get another loan in a different bank as they wait maturity of the other loan are high hence increasing the chance of it becoming non-performing.

The study concluded that the amount of time taken on loan approval or the turnaround time for a credit facility affects the performance of that particular loan. This is because if a customer's loan application takes a longer time to be approved, chances are that the customer will be disappointed and could obtain another credit facility from another bank. This affects his ability to service both loans thus affecting their performance. In case a customer is approved for a loan of lesser amount than requested, he could also obtain the deficit from another bank and this could also affect his ability to service both loans. In addition the study also concluded that customers are not involved in the review of the credit facilities offered by banks and this affects the performance of these loans since the banks could be advancing loans which are not suitable or in line with the operations and wishes of the customer.

5.3.2 Interest Rates

This study concluded that there is a significant relationship between the loan interest rates and the performance of loan portfolio in commercial banks and that the banks are not

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involved in the determination of the interest rates charged on loans offered to its customers since the rates are currently regulated by an act of parliament that has set the maximum amount of rate that should be charged by all the banks. The study also concluded that the interest rates charged on loans are not flexible and thus not negotiable although they are affordable. These interest rates are sufficient enough to cater for the banks operational costs and thus are sustainable in nature.

5.3.3 Bank Policies and Procedures

The study concluded that there is a significant relationship between the policies and procedures set out by banks and the performance of loan portfolio in the banks. These policies and procedures set out the rules and regulations that are used in the process of advancing credit to customers. If these procedures are not adhered to, they could adversely affect the performance of the loan portfolio. The study also concluded that there is a constant review of the banks policies and procedures in line with any changes which may occur in the course of the bank's operations. Commercial banks operate under the umbrella of the central banks and thus the study concluded that all the banks operate in adherence to the regulatory framework as set by the central bank of Kenya.

5.3.4 Collateral

The study concluded that collateral affects the performance of loan portfolio of commercial banks. Most banks give unsecured loans to their customer thus contributing to the increase in the non-performing loans in the banks which subsequently affects the performance of the loan portfolio in the banks. The collateral required to secure a loan is also not readily available as per the findings in the study and not sufficient since most of the banks are not able to recover their loan amounts from the collateral offered in the event of default. The study also concluded that the credit staffs are not involved in the setting of loan –collateral margin for the bank. This staffs are in constant contact with the customers and as such are in a position to confirm the condition of the collateral offered as security for loan and hence make decision on the amount of loan to advance based on the condition of the collateral.

5.3.5 Ecological Factors

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The study concluded that ecological factors have a significant relationship with the performance of loan portfolio in commercial banks. The political environment affects the rules and regulations governing the operations of the banks which in turn affect the performance of the loans offered and subsequently the overall performance of the loan portfolio as a whole. Changes in climatic conditions affect the performance of agricultural loans due to poor performance of the agribusiness thus affecting the performance of the loan portfolio in commercial banks. During the dry seasons, the banks experience high loan default rate due to the fact that majority of its customers are forced to spend more of their income on basic necessities than in paying loans thus affecting the performance of those loans. The credit history of a customer determines his character which affects the way the customer services his/her credit facility. The age of a customer also affects his/her willingness to service a credit facility. This is due to maturity of the customer since young customers tend to default more than the others. This is because due to their young age, the amount of loan advanced is likely to be diverted to other purposes other than the intended thus affecting the performance of that particular loan.

5.4 Recommendations

5.4.1 Performance of loan portfolio

The study recommends that banks should come up with a strategy to reduce the turnaround time for their credit facilities in order to improve on customer satisfaction which subsequently will reduce the issue of non- performing loans. The banks should also involve customers in the review of their credit products. This could be done through the use of questionnaires or customer survey reports which can be used to find out the needs of such customers in a bid to incorporate them in the credit products in order to satisfy them. The study also recommends that the amount of credit period advanced on customers should be reduced especially to those customers without sufficient collateral.

5.4.2 Interest rates

The study recommends that the commercial banks should be involved in the review of the interest rates charged for loans and also those paid on deposits in order to accurately

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balance the income against the risk involved in their operations for so as to improve on the performance of the loan portfolio and the overall performance of the bank as a whole. The study also recommends that the amount of interest charged on loans should be flexible enough such that customers are able to negotiate on the amount charged on the loans offered to them.

5.4.3 Bank policies and procedures

The study recommends that both customers and employees of the banks should be involved in the review of the banks policies and procedures. The Customer is in a position to communicate what they feel should be done to suit their needs. On the other hand, the employees are involved in the running of the day to day activities of the bank and are in constant interaction with the customers and as such are in a position to tell what is actually need to be incorporated in the policy in order to meet the needs of these customers. The bank should also embrace the credit reference bureau in order to eliminate the possibility of advancing loans to non -credit worthy customers.

5.4.4 Collateral

The study recommends that the banks should reduce the amounts of unsecured loans offered to its customers and look for alternative but secured credit facilities to offer instead. Staff should also be allowed to negotiate on the loan-collateral margin given to the customers and also involved in the setting of the credit policies and procedures since they are the people on the grounds that are well versed with the condition of the collateral offered. The study also recommends that the banks should have an effective and efficient credit and risk management system that will ensure that loans are only issued to those customers who embrace the 5Cs, and also have a close monitoring and debt collection system in order to reduce on the non-performing loans

5.4.5 Ecological factors

The study recommends that the political leadership of a country should allow the banks to be controlled by the regulator (Central Bank) only in order to avoid any political interference which could adversely affect the operations of the financial institutions.

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Commercial banks should also review their policies and procedures and by extension the loan repayment terms according to the prevailing climatic conditions in order to reduce non-performing loans. The bank should also hold regular seminars to educate their clients on the importance of having several sources of income in order to cater for any climatic changes which can have an adverse effect on their loan repayment.

The study also recommends that the banks should embrace KYC (know your customer) policy while lending in order to avoid lending to customers who can easily divert the funds and in the process default on the loan lend leading to a non-performing facility. The credit staff should also relate with the customers such that there are in a position to understand their lifestyle well and make decisions based on the same.

5.5 Suggestions for further study

The study looked into the factors affecting the performance of loan portfolio in commercial banks. Further study is therefore recommended on the characteristics of borrowers and their capacity to credit management.

A further study is also recommended on the factors affecting the performance of the loan portfolio in other lending institutions such micro finances, hire purchase institutions, mortgage firms and by extension the utility companies.

A further study is also recommended on the impact of information technology on the performance of commercial banks.

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APPENDICES

Appendix 1: Questionnaire

PART A: BIO DATA

1. Name (optional)…….
2. Bank and Branch ……..
3. Age: 20-30 yrs. ( ) 30-40 yrs. ( ) 40-50 yrs ( ) over 50yrs ( )
4. Profession……..
5. Terms of service

   Contract ( ) probation ( ) permanent and pensionable ( )
6. Experience in the area of operation

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0-5 yrs ( ) 5-10 yrs ( ) 10-20 yrs ( ) over 20 yrs ( )

Carefully read through each statement and indicate how you feel by ticking the appropriate number on the 5-point scale. If the item is inappropriate for your position tick number 3(neutral).The rating scale is shown at the end of each question as per the following scales.

Scale 5 4 3 2 1

Judgment Strongly agree Agree Neutral Disagree Strongly disagree

SECTION B

The performance of loan portfolio is very crucial to the overall performance of the bank.In view of this, kindly provide your feedback on the questions below by ticking on the appropriate scales given.

	Performance of loan portfolio	**5**	**4**	**3**	**2**	**1**
1	Based on your past experience, the amount of NPLs in the bank is increasing tremendously.					
2	The amount of NPLs in the bank is decreasing tremendously					
3	The amount of NPLs in the bank is on average constant.					
4	The rate of loan default by customers is increasing					
5	The rate of default of loan by customers is decreasing					
6	The rate of default of loans by customers is on average constant					
7	The number of loan credit customers for the bank is increasing					
8	The number of loan credit customers for the					

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	bank is decreasing					
9	Customers are involved in the review of credit products offered by the bank.					

10. In your opinion, how can the performance of loan portfolio for the bank be improved?

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SECTION C

Loan interest obtained from loans constitutes the largest source of income for the bank. In view of this, kindly give your feedback by ticking on the appropriate scales provided.

	Loan interest rates	**5**	**4**	**3**	**2**	**1**
1	The interest rates offered on loans are generally high					
2	The interest rates offered on loans are generally low					
3	The interest rates on loans vary depending on the type of facility offered.					
4	The interest rate is sufficient enough to cater for the banks operational costs on the loans.					
5	The bank is involved in setting the rate of interest offered on its loans.					

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6	The interest rates offered on loans keep fluctuating.					
7	There is increased number of credit customers					
8	There is increased competition from other banks					
9	There is increased number of fixed deposit accounts in the bank.					

10. In your opinion, how can the Bank utilize its interest rate to increase the performance of its loan portfolio?

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SECTION D

The bank operates through policies and procedures. In view of this, kindly give your feedback by ticking on the appropriate scales provided.

	Bank policies and procedures	**5**	**4**	**3**	**2**	**1**

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1	I am involved in the making of goals and objectives for the bank					
2	The goals and objectives are SMART					
3	I am appropriately given direction in the achievement of goals and objectives of the Bank					
4	There is always a review of the banks policies and procedures					
5	Customers are involved in the review of the policies and procedures					
6	The policies and procedures are bureaucratic in nature					
7	The banks policies and procedures are in line with its mission and vision statements					
8	CBK is involved in the review of policies and procedures for the bank					
9	Kenya Bankers Association is involved in the review of policies and procedures in the bank					

10. In your opinion, what else can the bank do on its policies and procedures in order to improve on the performance of its loan portfolio?

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SECTION E

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Collateral is the security offered in exchange of amount lend. In view of this, kindly give your feedback by ticking on the appropriate scales provided.

	Collateral	**5**	**4**	**3**	**2**	**1**
1	All customers obtain secured loans from the bank					
2	The collateral required by the bank is readily available					
3	I am involved in the review of the collateral required to secure a loan					
4	Collateral offered by customers are of good quality					
5	In the event of default, the bank is able to fully recover its loan from the collateral provided					
6	I occasionally liaise with the service providers involved in the valuation and recovery of the collateral offered					
7	I am involved in the determination of loan-collateral margin for the bank					
8	Customers are allowed to negotiate on the amount of loan to borrow against the collateral offered					
9	The bank offers unsecured loans to its customers					

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10.In your opinion, what else can be done on the collateral offered in order to improve on the performance of loan portfolio for the bank?

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SECTION F

Ecological factors include both internal and external factors that affect the performance of the bank. In view of this, kindly give your feedback by ticking on the appropriate scales provided.

	Ecological factors	5	4	3	2	1
1	The political leadership of the country has a direct influence on the Bank's operations					
2	The political climate in the country has an impact on the performance of the bank					
3	The emergence of devolved government has affected the operations of the bank					
4	Change in climatic conditions affects performance of agricultural loans					
5	High default of loans is witnessed during the dry seasons					
6	Loan repayment terms are usually reviewed according to prevailing					

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	conditions					
7	The customers' character has a direct influence on the performance of his/her loan					
8	Customers' attitude affects the performance of loan obtained					
9	I am too friendly with the customers I serve					

10. In your opinion what else do you think should be done to improve the performance of the loan portfolio in the bank?

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NATIONAL COMMISSION FOR SCIENCE,
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Ref. No.
NACOSTI/P/17/61785/15745

Date
10th March, 2017

Elizabeth Nthamba Mutuku
St. Pauls University
P.O. Private Bag - 00217
LIMURU.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Factors affecting the performance of loan portfolio of Commercial Banks in Machakos County,"*** I am pleased to inform you that you have been authorized to undertake research in **Machakos County** for the period ending **9th March, 2018.**

You are advised to report **the County Commissioner and the County Director of Education, Machakos County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Machakos County.

The County Director of Education
Machakos County.

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BOARD OF POSTGRADUATE STUDIES

1st February 2017
National Commission for Science and Technology,
P.O. BOX 30623-00100,
Nairobi.

Dear Sir/Madam,

Re: Recommendation for Elizabeth Nthamba Mutuku to conduct a Masters of Business Administration (MBA) research.

This letter confirms the above named person is a second (final) year student of the MBA Programme at St. Paul's University.

The final year consists of a major research work leading to a dissertation comprising 20,000 words. The student's selected topic is '*Factors affecting the performance of loan portfolio of commercial banks in Machakos County*'.

The research will take place from February 2017 to May 2017.

Kindly grant this student the required permit.

Yours Faithfully,

Dr. Sammy Githuku
Director, Postgraduate Studies

Name of bank	Credit officers	Credit managers	Branch managers
Cooperative bank	2	1	1
Family bank	2	1	1
Kenya commercial	2	1	1
Barclays bank	2	1	1
Standard chartered	2	1	1
Equity bank	2	1	1
NIC bank	2	1	1
Credit bank	2	1	1
Sidian bank	2	1	1
National bank	2	1	1
Commercial bank of africa	2	1	1
Chase bank	2	1	1
TOTAL	**24**	**12**	**12**

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