

**CREDIT MANAGEMENT PRACTICES AND LOAN PERFORMANCE OF  
COMMERCIAL BANKS IN KENYA**

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**D58/CTY/PT/24784/2013**

**A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL  
FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF A  
DEGREE OF MASTER OF SCIENCE (FINANCE) OF KENYATTA  
UNIVERSITY**

**SEPTEMBER 2021**

**DECLARATION**

This thesis is my own original work and has not been presented for a degree in any other university or for any other award. No part of this thesis should be reproduced without authority of the author and/or Kenyatta University.

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**DEDICATION**

This thesis is dedicated to my parents Mr. George Mundia and Mrs. Priscilla Mundia who laid down a great foundation in my life that has kept me strong and focused to date; to my siblings Mercy, Catherine and Nancy who have always encouraged me. Special dedication to my husband Grishon Gikima and our two children Esther Njucha and Ethan Njoroge for their encouragement, moral and financial support while undertaking this thesis. To the almighty God I will forever be grateful for His blessings without which it would be impossible to accomplish anything.

**ACKNOWLEDGEMENT**

I thank God for the grace in the achievement of writing this thesis. Special thanks to my supervisors Dr. Lucy Wamugo Mwangi (PhD) and Dr. Stephen M.A Muathe (PhD) for their time, insight and dedication as they guided me in writing this thesis. I thank Kenyatta University for giving me an opportunity to study. I also thank my respondents for without them this thesis would not be complete. May the Almighty God bless you all.

## TABLE OF CONTENTS

<b>Declaration .....</b>	<b>ii</b>
<b>Dedication.....</b>	<b>iii</b>
<b>Acknowledgement.....</b>	<b>iv</b>
<b>List of Tables.....</b>	<b>viii</b>
<b>List of Figures .....</b>	<b>ix</b>
<b>Operational Definition of Terms .....</b>	<b>x</b>
<b>Abbreviation and Acronyms .....</b>	<b>xii</b>
<b>Abstract .....</b>	<b>xiii</b>
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background to the Study .....	1
1.1.1 Loan Performance .....	2
1.1.2 Credit Management Practices.....	3
1.1.3 Central Banks Regulations .....	7
1.1.4 Commercial Banks in Kenya.....	8
1.2 Statement of the Problem .....	8
1.3 General Objective .....	10
1.3.1 Specific Objectives .....	10
1.4 Research Hypothesis .....	11
1.5 Significance of the Study.....	11
1.6 Scope of the Study.....	12
1.7 Organization of the Study.....	13
<b>CHAPTER TWO: LITERATURE REVIEW .....</b>	<b>14</b>
2.1 Introduction .....	14
2.2 Theoretical Review.....	14
2.2.1 Asymmetric Information Theory.....	14
2.2.2 The 5 C's Model for Credit .....	15
2.2.3 Credit Risk Theory .....	16
2.3 Empirical Literature Review .....	17
2.3.1 Debt Collection Policy and Loan Performance .....	17
2.3.2 Client Appraisal and Loan Performance .....	19
2.3.3 Lending Policy and Loan Performance .....	21

2.3.4 Credit Management Practices, Central Bank Regulations and Loan Performance.....	22
2.4 Summary of Literature Review and Research Gaps.....	26
2.5 Conceptual Framework .....	33
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>36</b>
3.1 Introduction .....	36
3.2 Research Design .....	36
3.2.1 Research Philosophy .....	36
3.3 Target Population .....	37
3.4 Sampling Procedure and Sample Size.....	37
3.5 Data Collection Instruments .....	37
3.5.1 Operationalization and Measurement of Study Variables.....	38
3.5.2 Validity Tests.....	39
3.5.3 Reliability Tests.....	39
3.6 Data Collection Procedure.....	40
3.7 Data Analysis.....	41
3.7.1 Diagnostic Tests .....	43
3.8 Ethical Considerations.....	44
<b>CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION.....</b>	<b>46</b>
4.1 Introduction .....	46
4.2 Response Rate .....	46
4.3 Descriptive Statistics .....	47
4.3.1 Debt Collection Policy .....	47
4.3.2 Client Appraisal.....	49
4.3.3 Lending Policy.....	50
4.4 Loan Performance .....	51
4.5 Diagnostic Tests .....	53
4.5.1 Normality Test.....	53
4.5.2 Multicollinearity .....	54
4.5.3 Autocorrelation.....	55
4.5.4 Test for Heteroscedasticity .....	56
4.6 Credit Management Practices and Loan Performance .....	58

4.6.1 Effect of Debt Collection Policy on Loan Performance.....	60
4.6.2 Effect of Client Appraisal on Loan Performance .....	61
4.6.3 Effect of Lending Policy on Loan Performance.....	62
4.7 Moderating Effect of the Central Bank Regulations .....	62
<b>CHAPTER FIVE:SUMMARY, CONCLUSION AND RECOMMENDATIONS</b>	
.....	<b>68</b>
5.1 Introduction .....	68
5.2 Summary.....	68
5.3 Conclusions .....	69
5.4 Limitations of the Study .....	70
5.5 Recommendations of the Study.....	70
5.6 Suggestions for Further Research.....	71
<b>REFERENCES .....</b>	<b>73</b>
<b>APPENDICES.....</b>	<b>79</b>
Appendix I : Letter to the Respondent .....	79
Appendix II: Questionnaire .....	80
Appendix III: Commercial Banks Loan Advances and Non-Performing Loans .....	84
Appendix IV: Commercial Banks Average Four Year Non-Performing Loans .....	86
Appendix V: Secondary Data Collection Sheet .....	88
Appendix VI: Gradate School Research Proposal Approval .....	89
Appendix VII: NACOSTI Research Authorization .....	91
Appendix VIII: Research Permit.....	92
Appendix IX: List of Commercial Banks in Kenya .....	93

## LIST OF TABLES

Table 2.1: Research Gaps .....	27
Table 3.1: Operationalization and Measurement of Study Variables.....	38
Table 3.2: Reliability Results .....	40
Table 4.1: Response Rate .....	46
Table 4.2: Debt Collection Policy .....	47
Table 4.3: Client Appraisal.....	49
Table 4.4: Lending Policy .....	50
Table 4.5: Non-Performing Loans.....	50
Table 4.6: Normality Test.....	50
Table 4.7: Test for Multicollinearity .....	54
Table 4.8: Test for Autocorrelation .....	55
Table 4.9: Model Summary for Credit Management Practices and Loan Performance .....	58
Table 4.10: ANOVA for Credit Management Practices and Loan Performance .....	59
Table 4.11: Coefficients for Credit Management Practices and Loan Performance.	59
Table 4.12: Model Summary for Moderating Effect of the Central Bank Regulations .....	62
Table 4.13: ANOVA for Moderating Effect of the Central Bank Regulations.....	63
Table 4.14: Coefficients for Moderating Effect of the Central Bank Regulations....	64

**LIST OF FIGURES**

Figure 2.1: Conceptual Framework.....	35
Figure 4.1: Non Performing Loans.....	52
Figure 4.2: Test of Heteroscedasticity.....	57

## OPERATIONAL DEFINITION OF TERMS

**Central Bank Regulations** The regulations relate to policies, practices or restrictions that are put in place. In this study, central bank regulations are proxied by commercial bank requirements on loan performance and bank credit risk management practices.

**Collateral** These are securities pledged for loan payment to commercial banks.

**Credit Risk** Risk that the borrower will not be able to commit to the set payment arrangement.

**Credit Management Practices** These are the debt collection practices, client appraisal practices and lending practices adopted by commercial banks to minimize the risk exposure emanating from non-timely and default in repayment of loans advanced to customers.

**Client Appraisal** This is the process of determining the credit worthiness of the borrower. In this study, client appraisal was proxied by the ability of the borrower to pay debt, character assessment of the borrower, collateral characteristics, CRB credit score and use of the funds.

**Debt Collection Policy** This is the process of recovering loans by commercial banks which have not been paid. In this study, debt collection policy was proxied by collection

enforcements, guarantor payments and continuous monitoring and control.

**Lending Policy**

These are the commercial banks set rules and regulations that must be adhered to during the processing of loans. In this study, lending policy was proxied by credit limits, credit terms and documentation.

**Loan Default**

This is when the loan repayment plans or schedules is not fully adhered to.

**Loan Performance**

It is the extent to which loans advanced by the commercial banks are paid as per the loan agreement without delay or default. In this study, loan performance was measured by non-performing loans.

**Non-performing loan**

It is a loan held by commercial banks that is in default and the borrowers are not repaying as per the terms of the repayment.

**Performing Loan**

This is a loan which both the principal and interest payments are not more than 90 days overdue and which continued payment of the loan is anticipated.

**Return on Investment**

It is the benefit to the investor resulting from investing in a commercial bank.

**ABBREVIATION AND ACRONYMS**

<b>ANOVA</b>	Analysis of Variance
<b>CBK</b>	Central Bank of Kenya
<b>CRB</b>	Credit Reference Bureau
<b>CRM</b>	Credit Risk Management
<b>IMF</b>	International Monetary Fund
<b>MFI</b>	Micro-Finance Institution
<b>NPL</b>	Non-Performing Loans
<b>ROE</b>	Return on Equity
<b>SACCO</b>	Savings and Credit Cooperative Society
<b>SPSS</b>	Statistical Packages for Social Scientists
<b>UAE</b>	United Arab Emirates
<b>VIF</b>	Variance Inflation Factor

## ABSTRACT

Commercial banks in Kenya as per the World Bank report were recording higher non-performance in loans than the standard globally in spite of Kenya having the most stable and developed banking system in East and Central Africa region. Commercial banks non-performing loans for five years from 2015 to 2018 averaged eleven percent which was higher than the recommended rate of six percent. In Kenya, banks' non-performing loans remain higher than the recommended rate which could be due to inadequate credit management practices. The study therefore aimed at examining the effect of credit management practices on loan performance of commercial banks in Kenya. Specifically, the study sought to establish the effect of debt collection policy, client appraisal and lending policy on the loan performance of commercial banks in Kenya. The study also determined the moderating effect of the central bank regulations on the relationship between credit management practices and loan performance. The underpinning theories of the study were Asymmetric Information theory, 5Cs model for credit and Credit risk theory. The study used explanatory research design and the research philosophy adopted was positivism. The target population was 44 commercial banks in Kenya using census approach. Both primary and secondary data were used, where primary data was collected through structured questionnaires and related to credit management practices while secondary data was obtained from review of existing bank loan records in relation to loan amount advanced and non-performing loans for a period of four years from 2015-2018. The data collected was analyzed using both descriptive and inferential statistics with the help of SPSS version 22. Descriptive statistics used included mean, frequencies and standard deviation. Multiple regression analysis was used to test the study hypothesis. The study found out that debt collection policy and lending policy had a significant effect on loan performance of commercial banks in Kenya. However, client appraisal had no significant effect on loan performance of commercial banks in Kenya. The study further found that Central Bank regulations had no significant moderating effect on the relationship between credit management practices and loan performance. Therefore, the study concluded that the current level of loan performance by the commercial banks may be largely attributed to the efficiency of the credit management practices that are put in place. The study faced limitations whereby some of the respondents were reluctant to take part in the research and also questionnaire administration was a challenge. This was controlled by sorting permission from relevant bodies prior to commencement of the study and using pick and drop method when administering the questionnaires. The study recommended that commercial banks to regularly evaluate and update credit management practices framework that are capable of ensuring that all credit risks are identified and recorded from departmental level to the institution at large. The study further recommended that Central bank of Kenya to continuously assess and update credit management practices and the central bank regulations. The Government through regulating bodies should thus establish credit policies that regulate traditional and emerging credit practices among financial institutions.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Commercial banks constitute a major component of the financial institutions in any particular country. Therefore, changes in the performance of this sector have adverse implications to the country's economy (Bohnstedt, 2000). Commercial banks collect money as deposits which are then lent to borrowers in form of loans. Actual or perceived failure of a bank to pay the depositors money on request may cause bank panic and therefore insolvency (Saunders & Cornett, 2005). The banks utilize deposits to generate interest revenues making credit amounts the main component of commercial banks assets and source of the credit risk (Basel III, 2017).

Credit risk occurs upon failure by the debtor to fulfill their obligations in repayment of the loans (Lalon, 2015). It encompasses both the prospective and current risks to earnings resulting from the failure of the obligator to meet the specified contract terms agreed (Kargi, 2011). This necessitates the banks to put in place measures for identifying, monitoring, measurement, and control of risks from the credits and adequate compensation is made in case of incurring of risks (Lalon, 2015).

Non-performing loans remain to be the highest detrimental factor to development of the financial sector (Doriana, 2015). World Bank (2018) report indicated that there was low performance of commercial banks in Kenya having a relatively high non-performing loan rates than the globally set standards at 14.92% and five years average of 11.07%. This raises great concern and the reason why the study was undertaken.

### 1.1.1 Loan Performance

How loans perform presents a huge proportion of the credit risk of a bank as it accounts for more than 10 times of the equity (Barth *et. al.*, 2001). The volume of money issued as loans is referred to as loan portfolio to different borrowers as different loan products. The loan products could be in form of individual loans, corporate loans, salary loans or group guarantee loans. Loan performance accesses the rates of payment, number of borrowing clients, security pledged and rate of arrears recovery (Basel, 2006).

Performance of loans is determined by the percentage of NPLs to total loans (Petersen & Raghuram, 2008). Non-performing loans (NPLs) is the sum of money borrowed upon which scheduled payments have not been made for at least 90 days (Bank for International Settlements, 2016). Performing loans on the other hand is a loan which both the principal and interest payments are not more than 90 days overdue and which continued payment of the loan is anticipated (Petersen & Raghuram, 2008). Hence, banks and other financial institutions focus on reducing NPLs due to the risk that results in the principal loans and interests not being recovered (Otieno & Nyagol, 2016).

Commercial banks in Kenya have recorded higher NPLs than the standard globally (World Bank, 2018). According to Montana (2012), non-performing loans have continued to record sharp upward growth over the years despite the increasing efforts to curb NPLs. Non-performing loans have been increasing over the years. For instance, statistics in Kenya showed an increase to 9.02% in 2016, 11.38% in 2017 and 14.92% in 2018 (Central Bank of Kenya, 2018). In 2018, the NPLs in the banks

were 14.92% and four years average from 2015 to 2018 of 11.07% which was higher than the recommended rate of 6% an indication of high credit risks (World Bank, 2018).

### **1.1.2 Credit Management Practices**

Risk is termed as the occurrence of an event which affects an organization's objectives by provoking an unexpected future outcome (Petersen & Raghuram, 2008). Risk is associated with the uncertainty of the outcomes of an event, capturing the probability of a loss and its magnitude (Berg, 2010). Risk management may be examined from combining the probability and rate of occurrence of the event (Schmid, 2010). After the worldwide financial crisis that occurred in 2008/2009, Basel III (2017) guidelines reviewed credit management models by adopting global credit management practices and having regular assessment of credit risk among the peer banks and counterparts. As a result of Basel III (2017) requirements, the banking sector is required to maintain sound financial management practices and adopt aggressive credit management practices aimed at reducing non-performing loans (Basel, 2017).

Debt collection is defined as a process of pursuing loans which have not been repaid. Few customers have been established to complete their payments while others don't pay at all (Kariuki, 2010). This has resulted in the formulation of policies that an organization should adhere for effective credit policies which may include debt collection policy to avoid non-performing loans. The debt collection policies aim to stimulate the non-payers to pay therefore avoiding non-performing loans (Auren, 2003). This is because lack of stringent debt collection policy leads to overdue collection amounts and hence NPLs (Gakure *et.al*, 2012).

Central bank of Kenya in 2005 issued guidelines where banks were required to have debt collection policies procedures which included collection enforcements, guarantor payments and continuous monitoring and control of loans (CBK 2015). In 2016, further guidelines were issued on the adequacy and enforceability of collateral or guarantees for strict adherence and compliance by commercial banks in Kenya (CBK, 2016). NPLs increase with debt collections going far more into the future. The need to reduce non-performing loans has seen commercial banks aim at reducing the collection period by adopting stringent collection policy (Otieno & Nyagol, 2016). The effectiveness of the debt policy will be based on the minimization or elimination of defaults on loan repayment. Though Kenya has a well-developed commercial banking sector compared to most of Africa, it still faces challenges of loan administration and collection of loans (Otieno & Nyagol, 2016).

Client appraisal is a process undertaken mainly to determine the acceptance or rejection of a proposal for credit by the clients. This involves an evaluation of the repayment capacity of the borrowers (Gakure *et.al*, 2012). The primary objective is to ensure the loans are issued only to credit worthy customers. Client appraisal process involves evaluating the capability of the borrower and any specific risks associated (Auren, 2003). The process entails gathering of adequate information concerning the customer prior to granting the credit services. Hence, through proper client appraisals, the loans are granted to the right customers through securing the relative incomes of the banks.

Central bank of Kenya in an attempt to address deficiencies in credit management issued guidelines to be followed by commercial banks. Credit management guidelines

were issued in 2005 where commercial banks were required to have client appraisal policy (CBK, 2005). Following the guidelines in 2015, client appraisal policy was further reviewed to include credit referencing bureau review by commercial banks before credit could be advanced. This led to more advanced client appraisal technique among commercial banks and review of lending and debt collection policies (CBK, 2015).

Client appraisal is therefore crucial in any credit management that highly determines the level of non-performing loans. Lack of adequate client appraisal guidelines and exclusive use of qualitative methods of loan assessment results in loans not been repaid on time (Mathara, 2007). The recognition of the importance of client appraisal system has led to commercial banks adopting more comprehensive client appraisal method, both qualitative and quantitative (Ombaba, 2013). During the process of appraisal terms, all aspects of the customers and expected stream of future cash flows are assessed.

Client appraisal yearns to assess the reasonability or correctness of the cost estimates and expected expenses against the revenues projected (Gennaioli, Andrei & Robert, 2012). It includes estimating the cost of machinery, price of selling, project costs and financing means (Plosser, Kovner & Hirtle, 2016). Through appraisals, bad credit may be steamed out through proper and early identification. However, Auronen (2003) argues that information asymmetry is essential for ensuring the desired effects are achieved thus reducing the chances of default greatly.

Lending in commercial banks ought to be effectively carried out as it is the basis for having a sound developing economy (Gennaioli, Andrei & Robert, 2012). In this

regard, lending policies enables the banks to offer the credit to worthy customers using specified guidelines. The recognition of the importance of lending policy on non-performing loans has led to banks constantly updating their lending policies to fit the changing environment (Kibor, 2015).

Following the collapse of numerous commercial banks out of inadequate credit risk management in 2016, CBK issued further guidelines on lending policy and classification of non-performing loans (Central Bank of Kenya, 2016). Lending policies needed to be commensurate with the size and complexity of the institution and be able to present a clear position on the commercial banks' exposure. Lending policies were also required to ensure transparency in the transactions relating to lending. Insider loans to directors and related parties were also required to be disclosed (Central Bank of Kenya, 2018).

The lending policies guide the bank on issuing out loans to customers and ensuring proper credit management (Kithinji, 2010). These should be aligned with the general bank plans and factors such as existing credit policies and prevailing country's economy status. Prior to the establishment of the lending policies, banks mainly issued out credit to anyone who expressed interest to borrow. This resulted in large volumes of bad credit leading the banks to be more cautious thereafter (Abor, 2004). It thus sensitizes on the importance of monitoring and providing the necessary steps that are related to lending both to individuals and corporates (Crowley, 2007). This has seen the Central Bank of Kenya to issue guidelines with each bank being required to prepare Credit Policies Guidelines (CPGs) for guiding decisions pertaining to lending (CBK, 2017).

### **1.1.3 Central Banks Regulations**

The banking sector operates on a legal framework established by the Central Bank of Kenya. These regulations are meant to guide supervision and monitoring of deposit taking institutions such as banks and setting out requirements for their risk taking (Brownbridge, 2002). The regulations are essential contributor to minimizing and preventing financial related issues. The aim of the implemented regulations and guidelines is to assist the banking sector as well as other financial firms to be key players and ensuring longevity. The returns accrued are therefore higher as well as significant contribution to the economy (Ndungu, 2010).

Central Bank regulations are essential in establishing a well monitored and well set out rules for operation of financial activities with easy supervisions (Barth, Caprio and Levine, 2001). Lack of appropriate regulation is undesirable as it may lead to bank failures and systemic instability (Brownbridge, 2002). In Kenya, Central Bank regulations take the form of prudential guidelines to reduce the risks that bank creditors are faced with whilst ensuring the bank's asset and capital adequacy (Plosser, Kovner & Hirtle, 2016).

Following financial crisis in 2008, Central Banks across the world have required adoption of stringent credit management. The level of disclosure of non-performing loans has also been enhanced. The criteria of categorizing loans as non-performing loans have been adopted by Central Bank in Kenya among other federal banks globally in line with Basel III requirements. Commercial banks are now more than in the past required to analyze risks facing credit and constantly evaluate the risk facing the loans (Kairaria, 2014).

### **1.1.4 Commercial Banks in Kenya**

Commercial banks are financial institutions that collect money as deposits which are then lent to borrowers in form of loans. In Kenya, the commercial banks dominate the financial system whereby they act as intermediates between the deficits units of the economy and the surplus ones. Currently 44 banks are licensed and regulated by the Central Bank of Kenya (CBK, 2018). The Kenyan banking sector has undergone many regulatory and financial reforms in the past. Such reforms have brought in important changes to the banking sector as well as inspiring foreign banks to enter the Kenyan market (Otieno & Nyagol, 2016). The banking sector is governed by the Banking Act and including Prudential Guidelines. Commercial banks in Kenya are required by the Central Bank of Kenya to submit audited annual reports, which include their financial performance and in addition disclose various financial risks in the reports including liquidity risk, credit risk as well as management of credit risk.

Effective practices of credit control involve reporting and reviewing to ensure credit risk is well identified, assessed, controlled and informed responses are well in place by commercial banks. When the loan is issued after being approved by the bank's officials, the loan is usually monitored on a continuous basis so as to keep track on all the compliance issues/terms of credit by the borrower (CBK, 2017).

### **1.2 Statement of the Problem**

The performance of loans remains a detrimental factor on the overall returns of the commercial banks sector (World Bank, 2016). This is attributed to the fact that high levels of non-performing loans imply there is reduced ability of the commercial banks

to lend subsequently affecting the overall operations of the firms (Doriana, 2005). The reported levels of NPLs in Kenya are over 11%, higher than the recommended 6% rate, which raises immense concerns. In 2018, banks NPLs to total loans were 14.92% and five years average of 11.07% (World Bank, 2018). Between the year 2017 and 2018 the NPLs to total loans ratio increased from 11.38 percent to 14.92 percent (Central Bank of Kenya, 2018).

In Kenya, the recent collapse of some commercial banks shows that the successful utilization of the credit management practices is yet to be realized (Kinyua, 2017). According to Obiero (2013), 37.8 % of banks collapsed due to poor lending practice between 1984 and 2013. Taking the case of Chase Bank which was placed under receivership in 2016 due to insolvency as a result of huge non performing loans and Central Bank of Kenya Prudential Guidelines on capital adequacy of minimum core capital to total risk weighted assets. In August 2015, Dubai Bank was liquidated by the Kenya Deposit Insurance Corporation (KDIC) for failure to meet its financial obligations and in October 2015 the Central Bank of Kenya put Imperial Bank under statutory management due to unsafe and unsound credit management practices (CBK, 2016).

Further, studies undertaken on credit management practices and loan performance have not been conclusive. For instance Oretha (2012) investigated the effect of CRM practices on the financial performance of Liberian banks but did not examine how the credit management practices affected loan performance. Gakure *et al* (2012) conducted a study on the effects of Credit Risk Management techniques on performance of unsecured bank loans employed by commercial banks in Kenya

whereby his focus was only on unsecured loans. Otieno and Nyagol (2016) conducted a study on the effect of credit management on the financial performance of microfinance banks whereby he was limited only to microfinance banks.

Past studies had adopted different methodologies in relation to the data and research design. Most studies including Chikamai and Mutua (2018), Makori and Sile (2017) and Muasya (2013) used descriptive research design using only primary data. However, this study used an explanatory research design. This shows eminent gaps in not only the scope but also the methodology which this study aimed at addressing. Since, loan non-performance continues to be a major challenge to commercial banks in Kenya, this study focused on the effect of credit management practices on loan performance of commercial banks in Kenya.

### **1.3 General Objective**

To determine the effect of credit management practices on loan performance of commercial banks in Kenya.

#### **1.3.1 Specific Objectives**

- i. To examine the effect of debt collection policy on loan performance of commercial banks in Kenya.
- ii. To analyze the effect of client appraisal on loan performance of commercial banks in Kenya.
- iii. To determine the effect of lending policy on loan performance of commercial banks in Kenya.

- iv. To examine the moderating effect of the Central Bank Regulations on the relationship between credit management practices and loan performance of commercial banks in Kenya.

#### **1.4 Research Hypothesis**

The study was guided by the following hypothesis

H<sub>01</sub>: Debt collection policy has no significance on the loan performance of commercial banks in Kenya.

H<sub>02</sub>: Client appraisal has no significant effect on the loan performance of commercial banks in Kenya.

H<sub>03</sub>: Lending policy does not significantly affect loan performance of commercial banks in Kenya.

H<sub>04</sub>: Central Bank Regulations have no moderating effect on the relationship between credit management practices and loan performance of commercial banks in Kenya.

#### **1.5 Significance of the Study**

To investors, this study will avail information on the influence of returns on their investments. The investors will be in a position to project the extent of performance of loans based on the credit risk practices implemented by banks. NPLs affects financial performance of commercial banks. Financial performance of commercial banks affects the level of investors returns in terms of earning per share.

To commercial banks and financial sector, this research will provide an insight into the credit risk attributes which may need to be incorporated in their loan awards

process and the factors that determine success of administration of loans. The management of commercial banks will understand the measures that they need to put in place to improve performance of loans. The bank loans have the capacity to improve performance of commercial banks if appropriately administered.

To the general public, the study will lead to improved performance of loans. This will improve bank's ability to offer more loans to the public and therefore improve the performance of their firms. Further, credit access will improve and in turn lead to improved performance of the economy at large. Improved economic performance will reduce level of poverty and improve security levels and other social problems.

Researchers and Scholars will find this study important in facilitating an increase in the information related to the area of concern. Further, the research will be used by scholars as a reference for future research as well as for academic purposes. The study will make recommendations of the areas in which researchers may consider for future studies. The recommendations when used together with the empirical studies by this study will form strong basis for future research.

### **1.6 Scope of the Study**

The research focused on three credit management practices namely; debt collection policy, client appraisal and lending policy. Central Bank regulations were used as a moderating variable. The study was based on all 44 commercial banks operating within Kenya. All the commercial banks were studied to ensure that the results apply generally to the banking sector in Kenya and hence more reliability of the data. The study targeted all heads of credit of the commercial banks operating in Kenya since

they are directly involved with the credit management practices in the banks hence the most conversant with the study topic. Secondary data was collected for a period of four years between 2015 and 2018. This period was considered most appropriate since it has seen a number of banks put under receivership as a result of huge NPLs.

### **1.7 Organization of the Study**

The first chapter comprises of the background of the study, statement of the problem, the research objectives as well as research hypothesis together with significance of the study, scope of the study and organization of the study. Chapter two presents a review of the relevant theories to the study, empirical literature review and develops a conceptual framework for the study.

Chapter three discusses the research methodology including the research design, target population, sampling procedure, data collection instruments, data collection procedure, data analysis and ethical considerations. Chapter four presents the findings obtained, analysis and interpretation while Chapter five provides a summary, conclusions and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses the available literature pertaining to the study which includes the theoretical literature as well as the empirical literature. Further the chapter outlines the conceptual framework showing the association between the variables of the study.

#### **2.2 Theoretical Review**

This section presents the theories relevant to credit management; their proposition and implications to the study. The study specifically was anchored on three main theories namely asymmetric information theory, 5 C's model for credit and credit risk theory.

##### **2.2.1 Asymmetric Information Theory**

This theory was proposed by Akerlof, (1970). The theory holds that in accessing lending applications, there is existence of information asymmetry (Binks, & Ennew, 1997). The theory describes conditions in which all the necessary information may not be availed to all the parties undertaking a particular transaction. The information asymmetry is perceived to pose problems and difficulties for the financial institution in terms of monitoring entrepreneurial behavior, moral hazard and errors attributed to poor lending decisions (Denis, 2010).

Asymmetric information theory relates to the study in that there exists information gap between the commercial banks and the loan borrowers. There is information that the loan borrowers may have that commercial banks don't have. This calls for credit

management practices on administration of loans to reduce credit risk effects. With credit information sharing among commercial banks, banks may determine the credit worthiness of the applicants for careful lending to customers (Eppy, 2005). Through reducing information asymmetry between the borrowers and lenders, good lending practices will be enhanced translating to minimized default rates (Binks, & Ennew, 1997).

The proposition of the theory is that through information symmetry in credit transactions, the loan performance of the banks will be significantly improved due to the ability of the commercial banks to accurately make informed credit decisions. The credit managers will have better determination of the borrowers' credit worthiness and either charge higher interest that corresponds to the risk or decline the credit request. In this regard, credit management practices are expected to reduce the number of NPLs through enhanced credit quality of the customers thus minimizing credit risk exposure translating in improved loan performance in the banks.

### **2.2.2 The 5 C's Model for Credit**

According to Baiden (2011), The 5 C's Model for Credit was introduced as a framework through which financial institutions build the policy for their credit transactions. The 5 C's details the five important factors that commercial banks will use in administration of credit which are expected to lead to improved performance of loans (Mac Donald *et al.*, 2006). This includes; character of the applicant, capacity of repayment, collateral as form of security, capital and the prevailing economic condition (MacDonald *et al.*, 2006; Baiden, 2011). The 5 C's Model for Credit thus provides an assessment upon which lenders use for both current and future borrowers.

Character entails the level of commitment portrayed by the borrower in fulfilling the loan obligations. Capacity entails the ability of the borrower to make regular payments and settle the loan obligation fully without any major constraints. Capital on the other hand describes the wealth position of the borrower measured by the capital adequacy and market standing (Denis, 2010). Collateral acts as a security to loan issued in case of any defaults. While economic condition focuses on the outside environment which the lenders have no control over but influence the loan recovery (MacDonald *et al.*, 2006).

The importance of the theory to the study is through providing a guideline through which client appraisal is undertaken by the banks to reduce the non-performing loans. Hence, client appraisal is theorized to be a crucial risk management practice which enables the banks to only lend to credit worthy customers who have the ability to easily repay the loans. Through taking into consideration all these 5 C's Model for Credit, cases of default loan repayment will be minimized hence resulting in improvement of bank loan performance.

### **2.2.3 Credit Risk Theory**

Credit Risk Theory was proposed by Melton, (1974) which provides a foundation through which financial institutions are able to not only measure but also manage credit risk exposure. The theory views default of loans to an embedded put option which is available to the borrower when the circumstances are economically favorable for the borrower to exercise their option to default. Crosby *et al.*, (2003) further adds that currently the main credit risk analysis methods include structural approach, appraisal form and information completeness approach as per Credit Risk Theory.

The importance of the theory to the study is that it describes the procedures in credit risk management by providing an option-theoretic framework which may be individualized for specific borrowers and used as a basis for modeling the default occurrence. The theory affirms that credit management practices is dynamic and has a standard approach to managing and mitigating the risk. It provides a framework which may be utilized in assessing any particular credit risk being faced by the bank hence resulting in improved performance of the loans in commercial banks.

### **2.3 Empirical Literature Review**

This section explores empirical studies in view of the study variables done both locally and globally, including debt collection policy, client appraisal, lending policy and Central Bank's regulations.

#### **2.3.1 Debt Collection Policy and Loan Performance**

Chikamai and Mutua (2018) examined the effect of debt policy on profitability of SACCOs in Kakamega County. The research used a descriptive research design. The findings of the study were that there was a significant positive relationship between debt policy and loan performance. The research recommended that in order to recover cash lost the management should take key issues on customer assessment and evaluation. The study was however done among SACCOs in Kakamega County and not commercial banks in Kenya. Whereas commercial banks and SACCOs offer related financial services, they operate under different regulations and have different structures. The current study targets at assessing the effect of debt collection policy on loan performance of commercial banks in Kenya.

Muturi (2016) investigated on debt collection policy on performance of loans in deposit taking SACCOs in Kenya. Using exploratory research design approach, the study found that credit policy, cost policy, repayment of loans and credit worthiness positively influenced loan performance. The study was however done among SACCOs and not commercial banks which have different structures thus its findings are not usable in commercial banks in Kenya. The current study was done among Commercial Banks and aimed at ascertaining whether the same exists in the commercial banks in Kenya.

Muasya (2013) researched on loan losses and debt collection practices employed. Using a descriptive research design, the results were that the most effective method of curbing loan losses was implementation of a strict debt collection policy supported by tight lending policies that will ensure better loan repayments. The study however failed to take into consideration how collection policy has influenced the risk of NPLs which is a crucial practice in determining how loans perform. The current study examined how debt collection policy has affected performance of loans of commercial banks in Kenya.

Oretha (2012) studied debt collection practices and performance of Liberian commercial banks. The study used qualitative research design and found out that better collection policies enhance the loan recovery which is a determinant of better financial profitability. The study however did not look at how debt collection practices affect loan performance but instead looked at banks performance at large in Liberia. The current study looked at how debt collection policy affects loan performance taking the case of commercial banks in Kenya.

Byusa and Nkusi, (2012) investigated on the impact of credit policy on performance of the financial industry in Rwanda. The study adopted exploratory research design and established that the Rwandan financial sector banks had been faced by a persistent increase in the levels of NPLs. Results of the study were that NPLs are a main contributor to the decreased performance among commercial banks though the study did not examine loan performance but overall bank performance and also was done in Rwanda which might have different economic structures. The current study purely focused on the loan performance of commercial banks in Kenya.

Owusu (2008) investigated the management of credit policies, taking a case of rural banks situated in Accra Ghana. Descriptive research design was used and established that debt collection policy was not fully utilized in credit management practices. The study however did not assess the impact of debt collection policy on loan performance and it was based in rural banks in Accra Ghana which has different economic and social structures. This study looked at the impact of debt collection policy on loan performance of commercial banks in Kenya.

### **2.3.2 Client Appraisal and Loan Performance**

Aliija and Muhangi (2017) investigated on management of the loan appraisal process and profitability of MFIs in Uganda taking MFIs in Fort portal municipality in Western Uganda as a case study. The research employed descriptive research design and found that loan performance of MFIs was influenced by client appraisal. The research was however conducted in Uganda MFIs which use different regulations from regulations in the commercial banks in Kenya. The current study focused on the effect of client appraisal on loan performance of commercial banks in Kenya.

Makori and Sile (2017) examined on practices of credit appraisal and its impact on Deposit Taking SACCO's in the county government of Nairobi. The researcher used descriptive research design. It was found that client appraisal influence profitability in a positive way. The study recommended that SACCO management should implement effective practices for credit appraisal with an aim of ensuring increased profitability. Nevertheless, the study was done only on SACCOs and not commercial banks hence the results are not generalized. The current study focused on banks in Kenya and focused on loan performance.

Sindani (2012) investigated the credit appraisal techniques and performance taking Micro Finance institutions in Meru, Kenya as the target group. The study used a census survey of 70 credit officers in Meru town and determined that proper client appraisal had a high effect on the repayment of the loans. The study however only focused on MFI in Meru which may not be an actual representation of the financial institutions in the country. The current study looked at all Commercial Banks in Kenya.

Orua (2009) studied loan applicant appraisal and loan performance taking the case of MFIs in Kenya. The study used descriptive research design. It was found that debts impacted differently on the loan performances. While the study clustered loan categories based on repayment period, it did not cluster the loans based on riskiness where practices on risky customers will be different from less risky customers. The study was done on MFIs in Kenya which are significantly different from commercial banks. The current study focused on client appraisal on loan performance of commercial banks in Kenya.

### **2.3.3 Lending Policy and Loan Performance**

Kibor (2015) investigated on lending policy and performance of loans in banks located in Nakuru Town. The study used a descriptive research design and determined that lending policies significantly influenced how the loans performed. However, the study failed to determine the role played by lending policies in the reduction of NPLs in the commercial banks and also focused on Nakuru Town of which the results of the study may not be generalized to all commercial banks in Kenya. This was addressed by the current study.

Ayodele, Thomas, Raphael and Ajayi (2014) investigated on lending policy and bank's profitability in Nigerian banks. The study adopted survey research design. It was found that having a good credit policy is essential in minimizing the occurrences of default loans. The study did not focus on loan performance rather focused on bank's performance in Nigeria which was a general overview of performance. The current study focused on loan performance of commercial banks in Kenya.

Gennaioli, Andrei and Robert (2012) studied the match between the size of the loan and repayment of loans. Descriptive research design was adopted. It was revealed that efficiencies in loan sizes should encompass the capacity of the borrowers in repayment and performance. However, the study did not examine other aspects of lending policy on performance of loans of the banking sector and thus the results were not conclusive. The current study examined the broader aspects of credit management practices including lending policy and their effect on loan performance.

Dawkin (2010) examined the micro finance institutions profitability in relations to lending. Through descriptive research design, the research found that collection efforts were effective in the firms. The research targeted on microfinance institutions which may be different from commercial banks and did not explore the credit management practices adopted and how they affect loan performance. The current study focused on commercial banks in Kenya and explored the credit management practices adopted by commercial banks and how they affect the loan performance.

#### **2.3.4 Credit Management Practices, Central Bank Regulations and Loan Performance**

Kinyua (2017) studied the effects of credit risk management practices on loan performance of commercial banks in Nyeri County. Descriptive research design was adopted and the study established that all commercial banks had a well written credit policy which is strictly and consistently followed. The study was however done in Nyeri County and not commercial banks in Kenya hence the results were not generalized. The current study examined the effect of credit management practices and loan performance of commercial banks in Kenya.

Balgova, Nies and Plekhanov (2016) investigated influence of NPLs on economic performance. Longitudinal design was used. The study established that reducing non-performing loans has an unambiguously positive medium-term impact on the economy. The study failed to examine how credit management practices affected loan performance. However, the study confirmed the negative consequences of NPLs in an economy and hence the need to manage the same. The current study determined how credit management practices affect loan performance.

Otieno and Nyagol (2016) investigated on CRM practices and financial performance. Descriptive research design was adopted by the study. The research results were that the parameters of credit management had a significant negative correlation with the performance measures. The research did not explore how credit management practices affected loan performance but rather looked at performance in general of which the results can only be applied on performance. However, the study confirmed the importance of managing credit risks on performance. The current study explored how credit management practices affect loan performance.

Plosser, Kovner and Hirtle (2016) studied the impact of supervision on bank performance. Using a matched sampling approach, the study found that the top banks were least volatile, had less risky loan portfolios and further engaged in more conservative practices. The findings thus confirmed the importance of bank regulations even though the study did not relate bank supervision to loan performance. The study related supervision to bank performance and also paid attention to one aspect; the central bank regulations, which the results may not be generalized to other aspects. The current study related bank supervision to performance of loans and looked at other aspects of central bank regulations.

Ahmed and Malik (2015) examined on loan performance and CRM taking empirical evidence from Pakistan. Multiple regression analysis was used. The study found that client appraisal and credit terms had a significant positive influence on the loan performance whereas collection policy and credit risks had a positive but insignificant influence on how the loans performed. The study was based in Pakistan which has different social and economic structures from those in Kenya. The current study

looked at the specific practices affecting loan performance of commercial banks in Kenya.

Kairaria (2014) investigated the relationship between capital adequacy requirements on creation of credit facilities in Kenya. Causal research design was used. The study revealed that introduction of capital adequacy mandatory requirement negatively affected the profitability of the banking sector. The study however did not assess the impact of capital adequacy requirement on loan performance which was addressed by the current study.

Ofonyelu and Alimi (2013) studied how the bank's risk on borrowers affected NPLs. The study used descriptive research design. The study found that NPLs could be reduced through credit analysis which involves analytical manipulation. While the study confirmed the importance of credit management in managing loans, the study did not document the specific components affecting how loans performed which is crucial in assessing the effect of loan performance. The specific components relating to credit management were examined in the current study.

Gakure *et.al* (2012) examined on credit management techniques and banks performance of unsecured loans. The study used descriptive research design. The study indicated that credit management techniques had a positive effect on the banks performance. Although the study did not examine the various credit management techniques and their effect on loans, the study confirmed the importance of credit management among commercial banks in meeting banks objectives. The current study examined credit management techniques and their effect on loans performance.

Moti, (2012) conducted a study on the efficiency of credit management system on the performance of loans in the MFIs in Kenya. The study adopted a descriptive research design and research analysis was undertaken using inferential analysis. It was found that credit management practices had only minimal effect on the loan performance. The study did not use both secondary and primary data and hence affecting reliability of the findings and also was done on micro finance sector which may not be generalized to other sectors in Kenya. The current study therefore used both secondary and primary data and studied the loan performance of commercial banks in Kenya.

Aigbogun (2011) studied prudential guidelines and profitability of the banking sector in Nigeria. Descriptive research design was used. Findings showed that there was increased need for bank supervision from the regulatory bodies. The bank's prudential guidelines had helped to check the mismatch between banks' reported and actual profits and also ensured early detection of fraud, distress and deterioration of banks credit portfolio. The study was however done in Nigeria which is different from the Kenyan banking sector. The study did not also relate prudential guidelines to loan performance. The current study was done in Kenya and prudential guidelines mediated the relationship between Loan performance and credit management practices.

Ismail (2011) examined the impact of prudential guidelines and deregulation on the Nigerian banking industry. Using a descriptive research design, the study revealed that while the giant banks were positively affected by the regulation and returned them to profitability and sanity, small banks performance reduced. The guidelines also made banks to classify their loans as performing and non-performing by reducing their

risk of incoming bad debts. The study was done in Nigeria which is different from the Kenyan banking sector. The study therefore confirms the importance of prudential guidelines in terms of reporting performing and non-performing loans and thus the reason for incorporating the same as a moderating variable.

#### **2.4 Summary of Literature Review and Research Gaps**

Loan performance among commercial banks in Kenya continues to deteriorate threatening the ability of the commercial banks in meeting the important role they play in the economy. Credit management practices have proven to be an important tool in ensuring that the loan process is successful in the financial institutions (Jamaat & Asgari, 2010). This is due to minimized risks, maintained risk exposure and shielding of the financial institutions from credit risks. Theoretically, credit management practices is supported in ensuring an efficient credit functioning and profitability of the financial institutions. However, the findings obtained from the empirical studies have been contradicting and inconclusive.

The findings obtained show that there is inconclusiveness on the type of credit management practices adopted by the commercial banks. Though to some extent, some studies show that credit management practices have a positive impact and they are inconclusive on the exact influence on the performance of the loans. Additionally, the studies have been done mostly in the third world countries with the literature in Kenya being not extensive. It's against this backdrop that this study was necessitated. The study aimed to investigate credit management practices and loan performance of commercial banks in Kenya.

**Table 2.1: Research Gaps**

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Chikamai and Mutua (2018)	Effect of debt policy on financial performance of SACCOs in Kakamega county	Descriptive research design	Debt policy significantly affected financial performance	The study was however done among SACCOs in Kakamega County and not commercial banks in Kenya which operate under different regulations and have different structures	The current study targets at assessing the effect of debt collection policy on loan performance of commercial banks in Kenya.
Muasya (2013)	Relationship between Debt collection practices and loan losses	Descriptive research design	Adopting stringent credit collection policies and lending policies will enhance loan performance .	The study however failed to take into consideration how collection policy has influenced the risk of NPLs which is a crucial practice in determining how loans perform.	The current study examined how debt collection policy has affected performance of loans of commercial banks in Kenya.

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Byusa and Nkusi (2012)	Credit policy on performance of Rwandan Commercial banks	Exploratory research design	Rwandan Financial sector banks were faced by a persistent increase in high non-performing loans.	the study did not examine loan performance but overall bank performance and also was done in Rwanda which might have different economic structures	The current study purely focused on the loan performance of commercial banks in Kenya.
Owusu (2008)	Credit management policies in Rural banks in Accra Ghana.	Descriptive research design	Banks lacked credit collection policies thus hampering loans recovery.	The study however did not assess the impact of debt collection policy on loan performance and it was based in rural banks in Accra Ghana which has different economic and social structures	This study looked at the impact of debt collection policy on loan performance of commercial banks in Kenya.

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Aliija and Muhangi (2017)	Effect of loan appraisal process management on credit performance in MFIs in Uganda	Descriptive research design	Client appraisal was a viable strategy for mitigating credit risk.	The research was conducted in Uganda MFIs which use different regulations from regulations in the commercial banks in Kenya.	The current study focused on the effect of client appraisal on loan performance of commercial banks in Kenya.
Makori and Sile (2017)	Effect of credit appraisal practices and credit monitoring on profitability of SACCOs in Nairobi county	Descriptive research design	Credit appraisal practices had a significant effect on the financial profitability of SACCOs	The study was done only on SACCOs and not commercial banks hence the results are not generalized.	The current study focused on banks in Kenya and focused on loan performance.
Orua (2009)	Relationship between loan applicant appraisal and Loan performance of MFIs	Descriptive research design	Short and long term debts impacted differently on loan performance .	The study was done on MFIs in Kenya which are significantly different from commercial banks.	The current study focused on client appraisal on loan performance of commercial banks in Kenya.

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Kibor (2015)	Lending policy and loan performance in banks in Nakuru Town.	Descriptive research design.	There exists a significant relationship between lending policy and loan performance	The study failed to determine the role played by lending policies in reduction of NPLs in commercial banks in Nakuru Town	The current study focused on all commercial banks in Kenya.
Gennaioli, Andrei and Robert (2012)	Match between size of the loan and loan repayment	Descriptive research design.	Efficiencies in loan sizes should encompass borrowers capacity in repayment and performance	The study did not examine other aspects of lending policy on performance of loans of the banking sector and thus the results were not conclusive.	The current study examined the broader aspects of credit management practices including lending policy and their effect on loan performance.
Otieno and Nyagol (2016)	CRM practices and financial performance	Descriptive research design	Parameters of CRM practices had a significant correlation with performance measures	Did not explore how credit management practices affected loan performance	The current study explored how credit management practices affect loan performance

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
				of which the results can only be applied on performance	
Plosser, Kovner and Hirtle (2016)	Impact of supervision on bank performance	Descriptive research design.	Top banks were least volatile and had less risky loan portfolios	The study related supervision to bank performance and also paid attention to one aspect central bank regulations which the results may not be generalized to other aspects.	The current study related bank supervision to performance of loans and looked at other aspects of central bank regulations.
Ahmed and Malik (2015)	Credit management and loan performance	Descriptive research design	Client appraisal and credit terms had a significant influence on the loan performance	The study was based in Pakistan which has different social and economical structures from those in Kenya	The current study looked at specific practices affecting loan performance of commercial banks in Kenya.

<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Ofonyelu and Alimi (2013)	Credit management and non-performing loans	Descriptive research design.	Non-performing loans could be reduced through credit analysis	The study did not document the specific components affecting how loans performed which is crucial in assessing the effect of loan performance .	The specific components relating to credit management were examined in the current study.
Moti (2012)	Efficiency of credit management system on loan performance	Descriptive research design	Credit management practices was found to have minimal effect on loan performance	The study did not use both secondary and primary data and hence affecting reliability of the findings and also was done on micro finance sector which may not be generalized to other sectors in Kenya	The current study therefore used both secondary and primary data and studied the loan performance of commercial banks in Kenya.

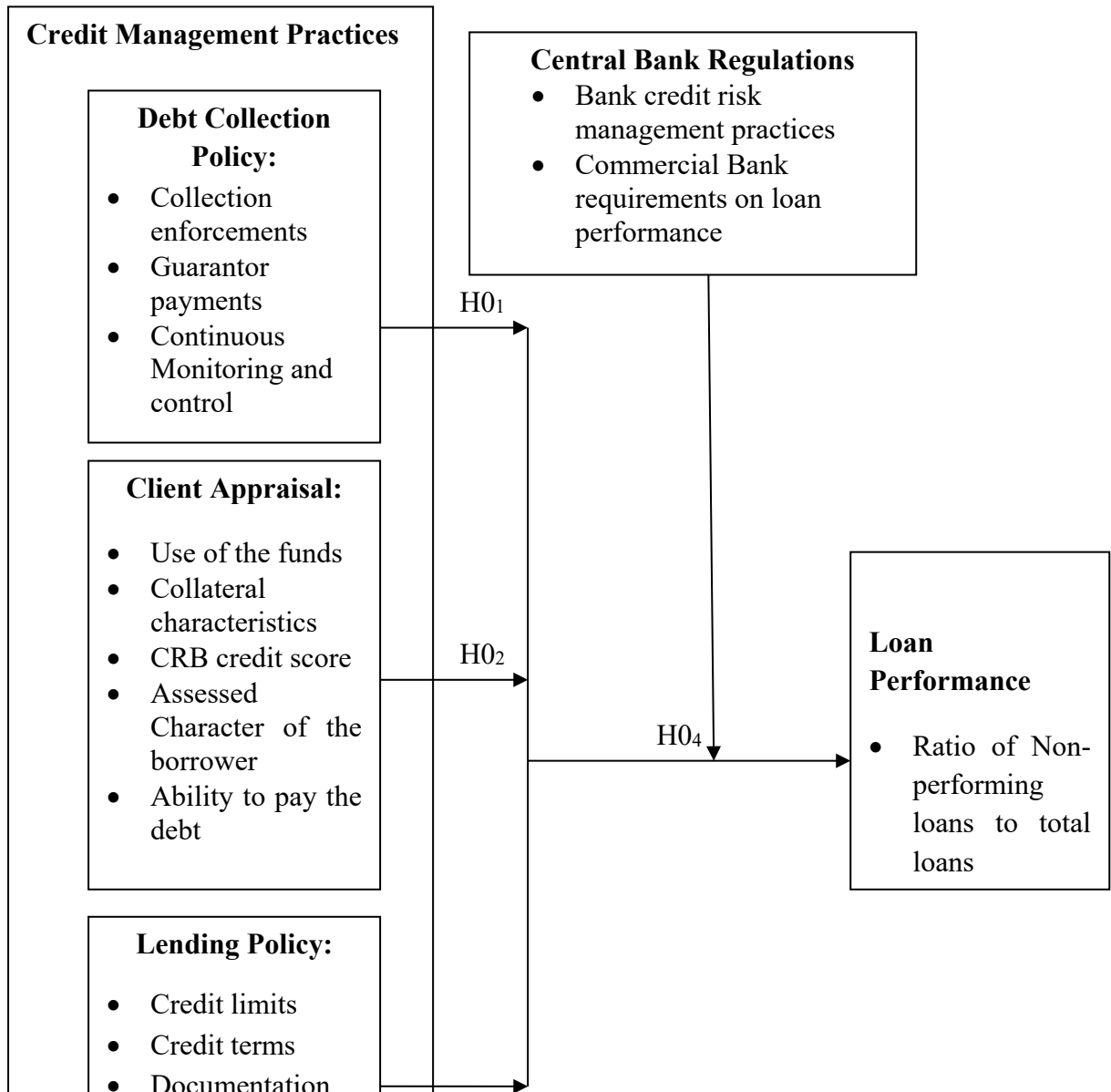
<b>Author &amp; Year</b>	<b>Title</b>	<b>Methodology</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>How the current Study has filled the Gaps</b>
Aigbogun (2011)	Prudential guidelines and performance of commercial banks in Kenya	Descriptive research design.	There was increased need for bank supervision from the regulatory bodies	The study was however done in Nigeria and not in Kenya and whether these findings would be the same wasn't established	The current study was done in Kenya and related prudential guidelines to loan performance.

*Source: Study Literature Review (2019)*

## **2.5 Conceptual Framework**

The conceptual framework outlines the relationship between variables to be used in the analysis (Orodho, 2004). In this study, a conceptual framework is used as the study model to guide the relationship of the variables under study to keep the research work focused on the objectives of the study.

**Independent Variables      Moderating Variable      Dependent Variable**



H0<sub>3</sub>H0<sub>3</sub>**Figure 2.1: Conceptual Framework***Source: Author (2019)*

As shown by Figure 2.1, independent variables for the study are the debt collection policy, client appraisal and lending policy. The debt collection policy is conceptualized by the collection enforcements, guarantor payments on borrowers default and continuous monitoring and control of loans. Client appraisal is conceptualized by use of the funds, collateral characteristics, CRB credit score, assessed character of the borrower and ability to pay the debt. Lending policy is conceptualized by Credit limits, Credit terms and documentation. The dependent variable for the study is the loan performance that is measured by the amount of NPLs to total loans. The conceptual framework further proposes a moderating role of the central bank regulations which have laid down controls and regulatory mechanisms to ensure a sound financial system including; disclosure of NPLs, minimum reserve requirement, central bank discount rate and market operations.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the methodology which was employed by the researcher in conducting the study. Specifically, it constitutes the research design, study population, sampling methods, data collection instruments, data collection procedure and the data analysis techniques.

#### **3.2 Research Design**

The study adopted explanatory research design. Explanatory research design focuses on determining the relationship between elements and what causes the existing association. Explanatory research design is based on structuring the study's objectives so as to determine the causal association between elements or variables under investigation. Explanatory research design is also used in assessing and analysis of a particular issue or problem so as to provide explanation on the existing association between variables or elements under investigation (Cooper & Schindler, 2003). The present study adopted the explanatory research design since it sought to determine causal relationship between credit management practices (debt collection policy, client appraisal and lending policy) and dependent variable (loan performance).

##### **3.2.1 Research Philosophy**

The study adopted positivism philosophy because the events of interest were objective and the researcher was independent. The appropriateness of this research philosophy

is because it increases the predictive understanding of phenomena through evidence of formal propositions and quantifiable measures of variables (Eriksson and Kovalainen, 2015). The researcher is independent from the banking sector and thus was purely objective on the concepts operationalization and measurement. This study was therefore premised on the positivism research philosophy as it tested several quantitative hypotheses generation and testing.

### **3.3 Target Population**

The target population for this study was all the 44 commercial banks with branches in Kenya (Appendix VI). The study targeted all the 44 heads of credit department located at the commercial banks head offices. This population was chosen as they are directly involved with the credit management practices in the banks hence the most conversant with the study topic.

### **3.4 Sampling Procedure and Sample Size**

The study employed a census approach where all the managers heading credit department were studied. No sampling was done since the population was considered manageable. Where the population is small and manageable, the entire population is to be used so as to enable comprehensive representation of all the study elements (Mugenda & Mugenda, 2003).

### **3.5 Data Collection Instruments**

The study used both primary data and secondary data where primary data for the study was collected using a close-ended questionnaire. Questionnaires were used due to the

ability to easily administer and collect accurate data. The questions were also convenient and cost of administration was also low. Further, the researcher used secondary data using secondary data collection sheet from the existing banks financial records in relation to the number of loans advanced and amounts of non-performing loans. Secondary data was collected for a period of four years from 2015-2018.

### 3.5.1 Operationalization and Measurement of Study Variables

The dependent variable was loan performance; the independent variables were the credit management practices while the moderating variable was the Central Bank Regulations. The measurement and operationalization is shown in Table 3.1.

<b>Variable</b>	<b>Type</b>	<b>Operationalization</b>	<b>Measurement</b>	<b>Hypothesized Direction</b>
Loan Performance	Dependent	Default Rate	Ratio of NPLs to total loans.	Positive/Negative
Debt Collection Policy	Independent	<ul style="list-style-type: none"> <li>•Collection enforcements</li> <li>•Guarantor payments</li> <li>•Continuous Monitoring and control</li> </ul>	Composite index of collection enforcements, guarantor payments, continuous monitoring and control.	Positive/Negative
Client Appraisal	Independent	<ul style="list-style-type: none"> <li>• Use of the funds</li> <li>•Collateral Characteristics</li> <li>• CRB credit score</li> <li>• Assessed character of the borrower</li> <li>• Ability to pay the debt</li> </ul>	Composite index of use of the funds, collateral characteristics, CRB credit score, assessed character of the borrower and ability to pay the debt.	Positive/Negative

Lending Policy	Independent	<ul style="list-style-type: none"> <li>• Credit limits</li> <li>• Credit terms</li> <li>• Documentation</li> </ul>	Composite index of credit limits, credit terms and credit documentation.	Positive/Negative
Central Bank Regulations	Moderating	<ul style="list-style-type: none"> <li>•Bank credit management practices</li> <li>•Commercial bank requirements on loan performance</li> </ul>	Composite index of Bank credit management practices and Commercial bank requirements on loan performance.	Positive/Negative

**Table 3.1: Operationalization and Measurement of Study Variables**

*Source: Author, 2019*

### 3.5.2 Validity Tests

Validity entails the degree to which the research instrument measures what it is intended for (Golafshani, 2003). In this study, validity was assessed through content validity which was improved by expert judgement. Amendments to the questionnaire such as removal of bias and in appropriate questions were then done. This was through reconstruction to be in accordance of the study objectives.

### 3.5.3 Reliability Tests

Reliability is the degree to which the research instrument is able to yield consistent outcome after repeated tests (2009). Prior to the actual study, the questionnaire was pretested (Silverman, 2010). Cronbach alpha was then used to gauge the reliability of the questionnaires and internal consistency of the data collection instruments. A score

above 0.7 was considered acceptable in view of Yin (2009). The reliability results obtained are presented in Table 3.2 below

**Table 3.2: Reliability Results**

<b>Variable</b>	<b>No of Items</b>	<b>Cronbach's Alpha</b>	<b>Remarks</b>
Debt Collection Policy	6	0.865	Reliable
Client Appraisal	5	0.704	Reliable
Lending Policy	6	0.728	Reliable
Central Bank Regulations	2	0.722	Reliable

*Source: Pilot Data, 2019*

Debt collection policy had a Cronbach alpha of 0.865, client appraisal 0.704, lending policy 0.728 and central bank regulations 0.722. All the variables had a Cronbach alpha of greater than 0.7 and thus they were measured in a reliable way.

### **3.6 Data Collection Procedure**

Primary data for the study was collected using a close-ended questionnaire. The researcher personally administered the questionnaires to ensure that the respondents are accorded all the guidance sought in filling their responses. The researcher sought permission from the bank head office through email requests. Calls were then made to credit section and appointments booked. The researcher explained the objective of the study and dropped questionnaires to head of credit section. Follow-ups were done and filled questionnaires collected after two weeks.

Further, the researcher used secondary data from the existing banks financial records in relation to the amount of non-performing loans. The data was obtained from bank published financial statements and Central Bank of Kenya published data. Secondary data was collected for a period of four years from 2015-2018.

### 3.7 Data Analysis

Data collected was sorted, classified, coded into coding sheets and analyzed with the aid of SPSS Version 22. Data collected was quantitative in nature. Quantitative data was analyzed using descriptive and inferential statistics. Measures of central tendencies including means, frequencies and standard deviations were utilized in calculation of the summarized data. Inferential statistical measures included multiple regression analysis to test the relationship between the research variables.

The study adopted multiple linear regression equations as depicted below;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \dots\dots\dots \text{Equation 3.1}$$

Where;

**Y** = Dependent variable: Average Loan Performance

**$\alpha$**  = the model intercept

**$\beta_1 - \beta_3$**  = Coefficient of independent variables

**$X_1$**  = Debt Collection Policy Practices

**$X_2$**  = Client Appraisal Practices

**$X_3$**  = Lending Policy Practices

A moderating variable refers to a variable that can affect the strength of the association between the dependent variable and an independent variable (Fairchild & MacKinnon, 2009). A moderating variable can enhance or even reduce the strength of an association between independent variables and dependent variable. It can also change the direction of an association from negative to positive or from positive to negative (Baron & Kenny, 1986). The current study used regression analysis (stepwise technique) to determine the moderating effect of the Central Bank Regulations on the relationship between credit management practices and loan performance of commercial banks in Kenya.

The statistical overall model used for analysis will be as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_z X + \beta_{1z} X_1 Z + \beta_{2z} X_2 Z + \beta_{3z} X_3 Z + \varepsilon$$

..... *Equation 3.2*

Where;

**Y** = Dependent variable: Average Loan Performance

**$\alpha$**  = Model intercept

**$\beta_1 - \beta_3$**  = Coefficient of independent variables

**$X_1$**  = Debt Collection Policy

**$X_2$**  = Client Appraisal

**$X_3$**  = Lending Policy

**z** = Hypothesized moderator (Central Bank Regulations);

**$\beta_z$**  = The coefficient of  **$X_z$**

**X** = Credit Management Practices

**Z** = Interaction term between Central Bank Regulations and each of the independent variables for **i=1, 2, 3**;

**ε** = Error term

### **3.7.1 Diagnostic Tests**

Diagnostic tests done on the data included normality tests, multicollinearity, autocorrelation and heteroscedasticity.

#### **3.7.1.1 Test for Normality**

Multiple regression analysis assumes that data is normally distributed or else the results will not be reliable. Normality was tested using the degree of kurtosis and skewness where values not in the range of +/-2 indicated lack of normality on data (Golafshani, 2003). If there were independent variables which were not normally distributed, normalization would have been done using the log of 10. However, all the study variables were found to be normally distributed and thus normalization was not needed.

#### **3.7.1.2 Test for Multicollinearity**

Multicollinearity is deemed to exist when predictors in a model are either moderately or highly correlated (Creswell, 2008). VIF (Variance Inflation Factor) and degree of

tolerance were used to test presence of multicollinearity where it would be in place if VIF of less than 10 and Tolerance of greater than 0.1 was not achieved (Talavera, 2003). Multicollinearity prevails when there is a strong correlation between the independent variables and hence results of regression analysis are as a result of the correlation between the independent variables (Martz, 2013). Multicollinearity if found in the data would have been corrected by removing the highly correlated variables. However, multicollinearity was not found to be a problem in the data and thus no variables were dropped from the regression analysis.

#### **3.7.1.3 Test for Autocorrelation**

In this study, Durbin-Watson test was used to test autocorrelation which should be within the critical  $1.5 < d < 2.5$  (Dancey & Reidy, 2014). Serial correlation if found to be present would have been corrected using bias-corrected estimates of autocorrelation, adjusted T-tests and expanding confidence interval coverage. However, serial correlation was however not found in the study data.

#### **3.7.1.4 Test for Heteroscedasticity**

Heteroscedasticity occurs where there is no constant error term variance in Ordinary Least Squares analysis (Pallant, 2010). To test heteroscedasticity, scatter plots of the residuals between the predictive values of dependent variable and independent variables. If heteroscedasticity found to exist, box-cox transformation would have been used to make the dependent variable approximate to a normal distribution. However, heteroscedasticity was not found in the study data.

### **3.8 Ethical Considerations**

The researcher ensured that the respondents were willing to take part in the study without any undue coercion. A letter of authority was obtained from the institution and other relevant authorities before undertaking the study, an introduction letter was provided to the respondents detailing the main objective of the study, the study findings sought by the respondents and maximum confidentiality was upheld.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter describes the findings obtained from the study, the data analysis and interpretations on the effect of credit management practices on loan performance of commercial banks in Kenya. The data is summarized in form of frequencies, mean, standard deviations and presented in tables. Inferential statistics which include multiple regression analysis has been employed in determining the relationship between the study variables. The chapter further finalizes with a discussion of the study's findings.

#### 4.2 Response Rate

The target group of interest was all the heads of credit department for each bank at the head offices from the commercial banks in Kenya. The results are shown in Table 4.1 below.

**Table 4.1: Response Rate**

<b>Status</b>	<b>Frequency</b>	<b>Percent</b>
Responded	41	93%
Not Responded	3	7%
Total	44	100%

*Source: Survey Data, 2019*

A total of 44 questionnaires were administered to commercial banks. Out of the total administered questionnaires, 41 of them were dully filled and returned back translating to a response rate of 93% as shown by Table 4.1 above. This response rate

is considered to be very good in attainment of the objectives of the study (Mugenda and Mugenda, 2008). The response rate was attributed to the target population where heads of credit departments were available and adequate time and follow up on the questionnaires. In a related study, Kisala (2014) studying the influence of credit risk management practices on the loan performance of MFIs in Kenya recorded a response rate of 100 percent. Balgova *et al.*, (2016) also recorded a response rate of 95 percent.

### 4.3 Descriptive Statistics

#### 4.3.1 Debt Collection Policy

Five point Likert scale was used where 1 was to a very small extent, 2 small extent, 3 moderate extent, 4 large extent and 5 to a very large extent in rating debt collection policy practices. The descriptive statistics obtained relating to debt collection policy are presented in Table 4.2 below.

**Table 4.2: Debt Collection Policy**

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
There exists an operational credit collection policy at the bank	3.68	1.524
Late repayments are allowed with prior approval and charges	3.37	1.199
Collection enforcements are done in-discriminatory according to the policy	2.41	1.341
Guarantor payments are sought when borrowers are in default as per policy	2.73	1.141
There are no exceptions to the lending policy	2.49	1.227
There is continuous monitoring and control of loans advanced	3.02	1.235

<b>Mean Score</b>	<b>2.95</b>	<b>1.279</b>
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*Source: Survey Data, 2019*

The data from the likert scale was analysed using mean and standard deviation. The arithmetic mean, which is also known as average, is the sum of all the values divided by the number of values. In the interpretations of the mean, a mean between 0 and 1.5 was interpreted as very small extent, 1.5 to 2.5 was interpreted as small extent, 2.5 to 3.5 was interpreted as moderate extent, 3.5 to 4.5 was interpreted as large extent and 4.5 to 5 was interpreted as very large extent. In standard deviation, high values standard deviation show high variability in the responses while low values show low variability.

The response in table 4.2 above show that to a large extent, there exists operational credit collection policy at the banks having a mean of 3.68 and standard deviation of 1.524. To a moderate extent, late repayments are allowed with prior approval and charges (mean of 3.37 and standard deviation of 1.199), there is continuous monitoring and control of loans advanced (mean of 3.02 and standard deviation of 1.235) and guarantor payments are sought when borrowers are in default as per policy (mean of 2.73 and standard deviation of 1.141). While to a small extent, there are no exceptions to the lending policy (mean of 2.49 and standard deviation of 1.1227) and collection enforcements are done in-discriminatory according to the policy (mean of 2.41 and standard deviation of 1.341).

Overall, Debt Collection Policy was established to be adopted in the commercial banks in mitigation of credit risk to a moderate extent with a mean of 2.95 and standard deviation of 1.279. This shows that though debt collection policy has the

potential of shortening the recovery of issued loans and minimizing defaulting of loans, the practice was fairly utilized in the commercial banks.

#### 4.3.2 Client Appraisal

Five point Likert scale was used where 1 was to a very small extent, 2 small extent, 3 moderate extent, 4 large extent and 5 to a very large extent in rating client appraisal practices. Table 4.3 below shows the descriptive statistics obtained.

**Table 4.3: Client Appraisal**

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
The bank considers the condition of the loan including logical need for the funds, business sense and proven business idea	3.22	1.37
Nature, value, marketability and quality of collateral in advancing loans	3.44	1.074
The bank determines the credit score of the borrowers using information from credit referencing bureau among other sources	3.02	1.313
The bank gathers information to assess the character of the borrow during credit appraisal	3.12	1.166
The bank assesses borrower's ability to pay the debt and makes a decision strictly based on set criteria.	3.59	1.095
<b>Mean Score</b>	<b>3.28</b>	<b>1.204</b>

*Source: Survey Data, 2019*

As shown in table 4.3 above, to a large extent, the bank assesses borrower's ability to pay the debt and makes a decision strictly based on set criteria having a mean of 3.59 and standard deviation of 1.095. To a moderate extent, there is nature, value, marketability and quality of collateral in advancing loans (mean of 3.44, standard deviation of 1.074), banks gather information to assess the character of the borrow during credit appraisal (mean of 3.12, standard deviation of 1.166), banks consider the condition of the loan including logical need for the funds, business sense and proven business idea (mean of 3.22, standard deviation of 1.37) and banks determine

the credit score of the borrowers using information from credit referencing bureau among other sources (mean of 3.02, standard deviation of 1.313).

Overall, client appraisal as a credit management practice in the commercial banks was adapted to a moderate extent having an average mean of 3.28 and standard deviation of 1.204. This shows that there is still improvement required in the formulation and implementation of client appraisal practices in the commercial banks in ensuring that there is improved loan performance.

### 4.3.3 Lending Policy

Five point Likert scale was used in rating the lending policy practices where 1 was to a very small extent, 2 small extent, 3 moderate extent, 4 large extent and 5 to a very large extent. The descriptive statistics obtained are presented in Table 4.4 below.

**Table 4.4: Lending Policy**

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
The bank employs an elaborate lending policy that fits into the borrowers profile to improve loan performance	3.22	1.589
The lending policy clearly specifies credit limits which are strictly adhered to	3.07	1.191
Credit terms are precisely defined in the lending policy and guides the lending by the bank	3.05	1.322
The bank requires customers to have deposits against which loans are advanced	4.17	0.834
There exists minimum documentation required to be obtained before advancing loan	4.24	0.888
The bank offers loans based on flexible interest rates	3.61	1.302
<b>Mean Score</b>	<b>3.56</b>	<b>1.188</b>

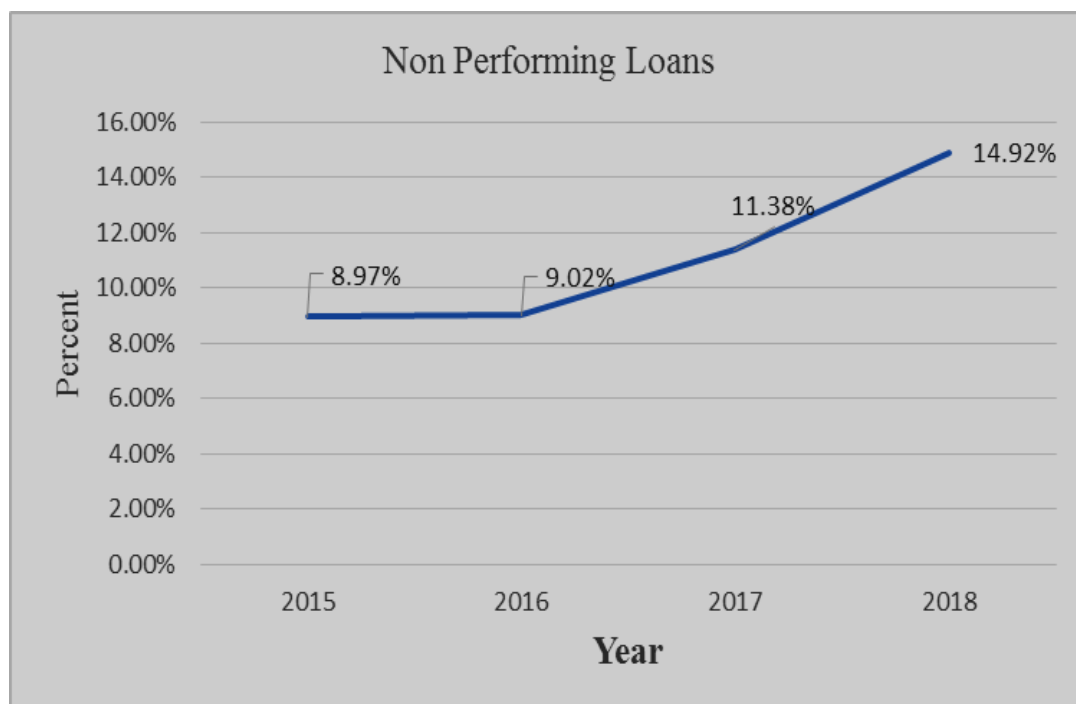
*Source: Survey Data, 2019*

As shown by Table 4.4 above, to a large extent, there exists minimum documentation required to be obtained before advancing loan (mean of 4.24, standard deviation of 0.888), banks require customers to have deposits against which loans are advanced (mean of 4.17, standard deviation of 0.834) and banks offer loans based on flexible interest rates (mean of 3.61, standard deviation of 1.302). While to a moderate extent, banks employ an elaborate lending policy that fits into the borrowers profile to improve loan performance (mean of 3.22, standard deviation of 1.589), lending policy clearly specifies credit limits which are strictly adhered to (mean of 3.07, standard deviation of 1.191) and credit terms are precisely defined in the lending policy and guides the lending by the bank (mean of 3.05, standard deviation of 1.322).

Overall, the lending policies were employed to a large extent in management of credit risk and improving loan performance in the commercial banks having an average mean of 3.56 and standard deviation of 1.188. Thus, commercial banks in Kenya had lending policies meant to improve loan performance.

#### **4.4 Loan Performance**

The study aimed at establishing the level of loan performance of the commercial banks using secondary data. Secondary data review of non-performing loans to total loans indicated that non-performing loans were on the rise in Kenya. The trends in loan performance are presented in figure 4.1 below.



**Figure 4.1: Non Performing Loans**

*Source: Survey Data, 2019*

In 2015, the total non-performing loans to total loans were 8.97%, 9.02% in 2016, 11.38% in 2017 and 14.92% in 2018. Over the four years period, non-performing loans increased by 66% from 8.97% to 14.92%. This implied that commercial banks loans performance was deteriorating at a fast rate. The distribution of non-performing loans on the studied commercial banks is presented in Table 4.5 below.

**Table 4.5: Non-Performing loans**

Non-Performing Loans	Frequency	Percent
Less than 5	9	21%
5% to 10%	14	33%
10% to 15%	10	23%
15% to 20%	3	7%
20% to 30%	6	14%
Over 30%	1	2%
<b>Total</b>	<b>43</b>	<b>100%</b>

*Source: Survey Data, 2019*

The results in table 4.5 above indicate that majority of the commercial banks at 33% had non performing loans of 5-10 percent followed by 23% of the banks that had 10-15 percent non-performing loans to total loans. 14% of the commercial banks had non-performing loans of 20-30 percent. Cumulatively, at least 46% of the commercial banks had non-performing loans of over 10 percent. This indicates that commercial banks in Kenya for the period studied continued to record high non-performing loans.

#### 4.5 Diagnostic Tests

Diagnostic tests on the assumptions of regression analysis were done to ensure that the quality of quantitative assessment is valid. Diagnostic tests done on the data included normality tests, multicollinearity, autocorrelation and heteroscedasticity.

##### 4.5.1 Normality Test

Normality test was undertaken to ensure that the study variables are normally distributed. Skewness which is the extent to which a distribution of values deviates from symmetry around the mean was used to test normality of the data while Kurtosis which is a measure of the "peakedness" or "flatness" of a distribution was used in testing the normality of the study variables. The normality test results are presented by Table 4.6 below.

**Table 4.6: Normality Test**

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Debt Collection Policy	41	-0.062	0.369	-0.821	0.724

Client Appraisal	41	-0.075	0.369	-0.699	0.724
Lending Policy	41	-0.594	0.369	-0.184	0.724
Loan Performance	41	-0.963	0.369	0.48	0.724
Central Bank Regulations	41	-0.062	0.369	-0.21	0.724

*Source: Survey Data, 2019*

For all the variables, skewness and kurtosis statistics were within +/-2 and hence the data was normality distributed therefore an indication that the normality assumption of linear regression analysis was met. Further, no normalization process was required since the data was normally distributed. In a related study, Kinyua (2017) studying the effects of credit management practices on financial performance of commercial banks used Kurtosis and Skewness statistics and made similar conclusions

#### **4.5.2 Multicollinearity**

Multicollinearity tests was conducted on the regression model so that incorrect conclusions about the relationship between dependent variable and independent variables to be avoided. Variance Inflation Factor (VIF) and tolerance degree were used to indicate presence of multicollinearity test. The findings obtained are presented by Table 4.7 below.

**Table 4.7: Test for Multicollinearity**

<b>Variable</b>	<b>Tolerance</b>	<b>VIF</b>
Debt Collection Policy	0.293	3.415
Client Appraisal	0.375	2.667

Lending Policy	0.209	4.788
Central Bank Regulations	0.318	3.14

*Source: Survey Data, 2019*

As shown in table 4.7 above, the debt collection policy had tolerance of 0.293 and VIF of 3.415, client appraisal tolerance 0.375 and VIF of 2.667, lending policy tolerance of 0.209 and VIF 4.788 and central bank regulations tolerance of 0.318 and VIF of 3.14. This shows that all the research variables had tolerance of greater than 0.1 and VIF less than 10.

The findings implied that there was no multicollinearity problem. Therefore, it indicated that the obtained relationship was not as a result of independent variables being related and there was no need of dropping any of the variables. Similar findings and conclusion about multicollinearity was made by Jamaat and Asgari (2010) undertaking a study on credit management practices among commercial banks.

#### **4.5.3 Autocorrelation**

Autocorrelation is an assumption of regression analysis where the residuals are purely random and that the residuals would not correlate with anything else, including with each other at different time points. Durbin-Watson test was used to test autocorrelation. The findings obtained for the auto correlation test are presented by Table 4.8 below

#### **Table 4.8: Test for Autocorrelation**

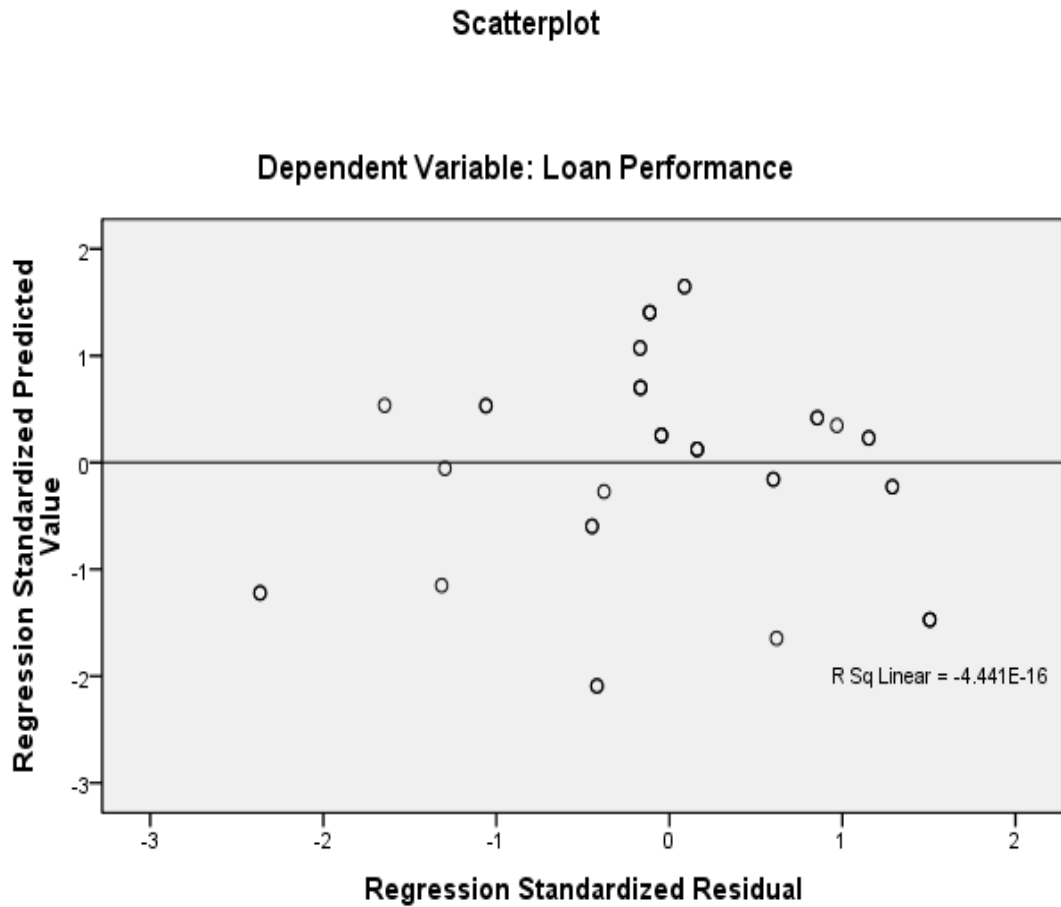
<b>Variables</b>	<b>Durbin- Watson</b>
Predictors: (Constant), Lending Policy, Client Appraisal, Debt Collection Policy, Central Bank Regulations Dependent Variable: Loan Performance	1.637

*Source: Survey Data, 2019*

The Durbin Watson obtained as shown by Table 4.8 above is 1.637 which is within the critical  $1.5 < d < 2.5$ . This implied that there was no linear serial correlation in the multiple regression model. The results were therefore not affected by serial correlation problem mainly due to the fact that the study used cross sectional data. In a related study, Kinyua (2017) studying the effects of credit management practices on financial performance of commercial banks obtained a Durbin Watson of 1.7 and inferred similar conclusion.

#### **4.5.4 Test for Heteroscedasticity**

To test for heteroscedasticity, scatter plots of the residuals between the predictive values of dependent variable and independent variables. The findings are presented in Figure 4.2 below.



**Figure 4.2: Test of Heteroscedasticity**

*Source: Survey Data, 2019*

The scatter plots of the residuals indicate no specific pattern of the residuals and thus the issue of heteroscedasticity did not exist. If heteroscedasticity was to be found to exist, box-cox transformation would have been used to make the dependent variable approximate to a normal distribution. Since heteroscedasticity was not existent in the study data, no further action was undertaken. The study data was therefore appropriate for analysis using ordinary least squares regression method. Muturi (2016) also used scatter plot of the residuals to test for heteroscedasticity and made similar conclusion.

#### 4.6 Credit Management Practices and Loan Performance

To establish the relationship that exists between credit management practices and loan performance, multiple regression analysis was computed. The independent variables were the various constructs of credit management practices namely debt collection policy, client appraisal, lending policy and the dependent variable was the loan performance of the commercial banks. The model summary results are presented in Table 4.9 below.

**Table 4.9: Model Summary for Credit Management Practices and Loan Performance**

<b>R</b>	<b>R Square</b>	<b>Adj R<sup>2</sup></b>	<b>Std. Error</b>
.823a	0.677	0.651	4.78081

*a. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy*

*b. Dependent Variable: Loan Performance*

**Source: Survey Data, 2019**

The results of the regression analysis as shown by Table 4.9 above shows that credit management practices that include debt collection policy, client appraisal and lending policy had a strong effect on loan performance of commercial banks in Kenya (Adjusted  $R^2 = 0.651$ ). Credit management practices studied explained 65.1% of the variations in loan performance. This implies that only 34.9% of the variation in the loan performance at the commercial banks is explained by factors other than those investigated by the study. Thus, improved credit management practices techniques will lead to improved loan performance.

The study further undertook ANOVA analysis to establish the validity and effectiveness of the models in explaining the relationship between credit management

practices and loan performance of commercial banks. The study model ANOVA results are presented in Table 4.10 below.

**Table 4.10: ANOVA for Credit Management Practices and Loan Performance**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	1773.955	3	591.318	25.871	.000a
Residual	845.677	37	22.856		
Total	2619.632	40			

*a. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy*

*b. Dependent Variable: Loan Performance*

**Source: Survey Data, 2019**

The results in Table 4.10 above indicated a  $p\text{-value} < 0.05$  and  $F_{(3, 37)} = 25.871$ . This meant that there is a significant relationship between credit management practices and loan performance. The F-statistic meant that credit management practices were a good predictor of variations in loan performance and were able to predict changes in the loan performance at any particular time. The model coefficient is shown by Table 4.11 below.

**Table 4.11: Coefficients for Credit Management Practices and Loan Performance**

	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
	<b>Beta</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	-14.609	3.762		-3.883	0.000
Debt Collection Policy	2.898	1.288	0.355	2.25	0.031

Client Appraisal	-2.021	1.386	-0.204	-1.458	0.153
Lending Policy	6.785	1.524	0.663	4.453	0.000

*a. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy*  
*b. Dependent Variable: Loan Performance*

**Source: Survey Data, 2019**

From the study coefficients, the model developed is

$$Y = -14.609 + 2.898X_1 + -2.021X_2 + 6.785X_3 + \epsilon$$

Where: Y is Average Loan Performance, X<sub>1</sub> is Debt Collection Policy, X<sub>2</sub> is Client Appraisal and X<sub>3</sub> is Lending Policy.

#### **4.6.1 Effect of Debt Collection Policy on Loan Performance**

The results in Table 4.11 above indicated that debt collection policy ( $\beta_1 = 2.898$ ,  $P < 0.05$ ) affected the loan performance of the commercial banks significantly. This implied that an improvement in debt collection policy will result to an improvement in loan performance. These results agree with Chikamai and Mutua (2018) argument that there was a significant positive relationship between debt collection policy and loan performance.

The findings also agree with Muturi (2016) findings that debt policy and repayment of loans and credit worthiness had a positive impact on the loan performance. Also Oretha (2012) who studied CRM practices and financial performance of banks in Liberia established the same significant effect of debt collection policies on loan performance. The findings are also in line with Otieno and Nyagol, (2016) who depicts that the need to reduce non-performing loans has seen commercial banks aim

at reducing the collection period by adopting stringent collection policy. Owusu (2008) also established that debt collection policy was not fully utilized in credit management practices.

#### **4.6.2 Effect of Client Appraisal on Loan Performance**

From table 4.11 above client appraisal had no significant effect on loan performance of commercial banks in Kenya ( $\beta_2=-2.021$ ,  $p\text{-value}=0.153$ ). This implied that improving client appraisal when debt collection policy and lending policy was in place would not significantly improve loan performance. These findings differ with those of Aliija and Muhangi (2017) findings that client appraisal had a positive effect on loan performance of MFIs.

These findings are also contrary to Makori and Sile (2017) findings that client appraisal has a significant effect on performance of loans and also Ahmed and Malik (2015) who found client appraisal and credit terms had a significant positive influence on the loan performance whereas collection policy and credit risks had a positive but insignificant influence on how the loans performed. In addition, Muturi (2016) found that the existing client appraisal policies were not sufficient enough in providing information on loan repayment schedules, credit worthiness and catering for the overhead costs. Sindani (2012) determined that proper client appraisal had a high effect on the repayment of the loans while Orua (2009) found that debts impacted differently on the loan performances.

### **4.6.3 Effect of Lending Policy on Loan Performance**

The results in table 4.11 above indicated that lending policy affected the loan performance of the commercial banks significantly ( $\beta_3 = 6.785, P < 0.05$ ). This implied that an improvement in lending policy will result to an improvement in loan performance. These findings agree with Kibor (2015) findings that lending policies significantly influenced how the loans performed. Gennaioli, Andrei and Robert (2012) revealed that efficiencies in loan sizes should encompass the capacity of the borrowers in repayment and performance. Dawkin (2010) found that collection efforts were effective in the firms.

### **4.7 Moderating Effect of the Central Bank Regulations**

The study sought to examine the moderating effect of the Central Bank Regulations on the relationship between credit management practices and loan performance of commercial banks in Kenya. To achieve this, multiple regression analysis using path analysis technique was conducted. In the first step, regression analysis was done where the various credit management practices were regressed against loan performance.

In the second step, Central bank regulations and the interaction terms between debt collection policy, client appraisal, lending policy and Central bank regulations were regressed against loan performance. The model summary findings are presented in Table 4.12 below.

#### **Table 4.12: Model Summary for Moderating Effect of the Central Bank Regulations**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823 <sup>a</sup>	.677	.651	4.78081
2	.895 <sup>b</sup>	.802	.760	3.96663

*a. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy*

*b. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy, Central Bank Regulations, Debt Collection Policy and Central Bank Regulations, Client Appraisal and Central Bank Regulations, Lending Policy and Central Bank Regulations*

The Adjusted R squared for the relationship between debt collection policy, client appraisal, lending policy and loan performance was 0.651, which implied that 65.1% of the loan performance can be explained by debt collection policy, client appraisal and lending policy.

However, in the second model, in Table 4.12 above, which constituted of debt collection policy, client appraisal, lending policy, central bank regulations, debt collection policy and central bank regulations, client appraisal and central bank regulations, lending policy and central bank regulations, the adjusted r-squared was 0.760. The introduction of central bank regulations in the second model led to an increase in adjusted r-squared from 65.1% to 76% showing that central bank regulations positively moderates the relationship between credit management practices and loan performance of commercial banks in Kenya.

**Table 4.13: ANOVA for Moderating Effect of the Central Bank Regulations**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1773.955	3	591.318	25.871	.000 <sup>b</sup>
	Residual	845.677	37	22.856		
	Total	2619.632	40			
2	Regression	2100.405	7	300.058	19.071	.000 <sup>c</sup>

Residual	519.226	33	15.734
Total	2619.632	40	

*a. Dependent Variable: Loan Performance*

*b. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy*

*c. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Lending Policy, Central Bank Regulations, Debt Collection Policy and Central Bank Regulations, Client Appraisal and Central Bank Regulations, Lending Policy and Central Bank Regulations*

From the findings, the F-calculated for the first model, as shown in Table 4.13 above was 25.871 and for the second model was 19.071. Since the F-calculated for the two models were more than the F-critical, 2.87 (first model) and 2.29 (second model), the two models were good fit for the data and hence they could be used in predicting the moderating effect of the Central Bank Regulations on the relationship between credit management practices and loan performance of commercial banks in Kenya.

**Table 4.14: Coefficients for Moderating Effect of the Central Bank Regulations**

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

1	(Constant)	-14.609	3.762		-3.883	.000
	Debt Collection Policy	2.898	1.288	.355	2.250	.031
	Client Appraisal	-2.021	1.386	-.204	-1.458	.153
	Lending Policy	6.785	1.524	.663	4.453	.000
2	(Constant)	14.123	7.566		1.867	.071
	Debt Collection Policy	5.727	5.115	.702	1.120	.271
	Client Appraisal	-11.112	4.948	-1.124	-2.246	.032
	Lending Policy	3.545	4.091	.347	.866	.392
	Central Bank Regulations	-9.450	3.089	-1.201	-3.059	.004
	Debt Collection Policy and Central Bank Regulations	-.834	1.586	-.539	-.526	.602
	Client Appraisal and Central Bank Regulations	2.568	1.372	1.701	1.871	.070
	Lending Policy and Central Bank Regulations	1.217	1.474	.839	.826	.415

*a. Dependent Variable: Loan Performance*

*b. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Policy Lending*

*c. Predictors: (Constant), Debt Collection Policy, Client Appraisal, Policy Lending, Central Bank Regulations, Debt Collection Policy and Central Bank Regulations, Client Appraisal and Central Bank Regulations, Lending Policy and Central Bank Regulations*

The results in Table 4.14 above show that with introduction of Central Bank Regulations and the interactions terms, the effect of debt collection policy on loan performance, became insignificant ( $\beta_1X=5.727$ ,  $p\text{-value}=0.271$ ). The interaction term between debt collection policy and central bank regulation was insignificant ( $\beta_{1X*Z}=-0.834$ ,  $p\text{-value}=0.602$ ). However, the effect of central bank regulations on credit management practices was significant ( $\beta_1Z = -9.45$ ,  $p\text{-value}=0.004$ ). The results therefore meant that while central bank regulations were significant predictors of loan performance among commercial banks in Kenya, debt collection policy practices did not vary with the central bank regulations. This inferred that central bank regulations did not moderate the relationship between debt collection policy and loan

performance.

The results also show that introducing the moderating variable (central bank regulations) in the regression model, the effect of client appraisal on loan performance became significant ( $\beta_2X=-11.112$ ,  $p\text{-value}=0.032$ ). The interaction between client appraisal and central bank regulation was not significant ( $\beta_2X= 2.568$ ,  $p\text{-value}= 0.07$ ). Therefore client appraisal practices did not vary with the Central Bank Regulations. This inferred that Central Bank Regulations did not moderate the relationship between client appraisal and loan performance.

The results further show that by introducing the moderating variable (central bank regulations) in the regression model, the effect of lending policy on loan performance became insignificant ( $\beta_3X=3.545$ ,  $p\text{-value}=0.392$ ). The interaction term between lending policy and central bank regulation was insignificant ( $\beta_3Z=1.217$ ,  $p\text{-value}=0.415$ ). This inferred that central bank regulations did not moderate the relationship between lending policy and loan performance. By substituting the beta values as well as the constant term, model emanating from the regression model was as follows:

$$Y= 14.123 + 5.727X_1 - 11.112X_2 + 3.545X_3 - 9.450Z - 0.834X_1Z + 2.568X_2Z + 1.217X_3Z + \varepsilon$$

Where; Y = Dependent variable: Average Loan Performance;  $X_1$  = Debt Collection Policy;  $X_2$  = Client Appraisal;  $X_3$ =Lending Policy; and Z is the hypothesized moderator (Central Bank Regulations)

The results show that central bank regulations did not moderate the relationship between credit management practices and loan performance. The findings do not

relate to those of Ismail (2011) who found that while the giant banks were affected by the regulation and returned them to profitability and sanity, small banks performance reduced. The findings are contrary with those of Plosser, *et al.*, (2016) who found Central bank regulations were crucial in determining the risk management practices and Kariara (2014) also found that central bank regulations impacted on credit management practices adopted by commercial banks. Aigbogun (2011) studying prudential guidelines and performance of commercial banks in Nigeria concluded that there was increased need for bank supervision to check the mismatch between banks' reported and actual profits and also ensured early detection of fraud, distress and deterioration of banks credit portfolio.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents summary of key findings, conclusions and recommendations reached thereafter for policy and practice.

#### 5.2 Summary

Commercial banks in Kenya continue to record high non-performance in loans than the standard globally in spite of Kenya having the most stable and developed banking system in East and Central Africa region. To understand the cause of the non-performing loans problem, the study sought to establish the effect of credit management practices on loan performance of commercial banks in Kenya.

The study found out that debt collection policy and lending policy had a significant effect on the loan performance of commercial banks in Kenya. This was confirmed by significant coefficients. This therefore implied that a unit increase in these variables translated to increased loan performance among the commercial banks. Client appraisal was found to have insignificant effect on loan performance of commercial banks in Kenya. This implied that improving client appraisal when debt collection policy and lending policy were in place would not significantly improve loan performance. The results of the regression analysis showed that credit management practices studied explained significant variations in loan performance.

This implied that only a small portion of variation in the loan performance at the commercial banks was explained by factors other than those investigated by the study.

The study also sought to determine the moderating effect of Central Bank regulations on the relationship between credit management practices and loan performance. Consequently, when Central Bank Regulations was introduced as a moderating variable in the regression analysis between credit management and loan performance, the resultant interaction terms were not significant. Therefore the moderating effect of Central Bank Regulations on the relationship that exists between credit management and loan performance was not confirmed.

### **5.3 Conclusions**

The study concluded that debt collection policy has a significant effect on the loan performance of the commercial banks in Kenya. This implies that an improvement in debt collection policy would lead to an improvement in the loan performance of the commercial banks. The study further concluded that client appraisal has an insignificant effect on the loan performance of commercial banks in Kenya. This shows that an improvement in client appraisal would not necessarily improve the loan performance of the commercial banks. The study also concluded that lending policy has a significant effect on the loan performance of the commercial banks in Kenya. This implies that an improvement in leading policy would lead to an improvement in the loan performance of the commercial banks.

The moderating effect of Central Bank Regulations on the relationship between credit management practices and loan performance of commercial banks in Kenya was not

confirmed. The study concluded that the Central Bank Regulations affected loan performance of commercial banks but credit management practices did not vary with central bank regulations.

#### **5.4 Limitations of the Study**

The researcher was faced with some limitations during the study. To begin with, some of the respondents were reluctant or unwilling to take part in the research. This was due to them doubting the relevance or authenticity of the study. To mitigate this, the researcher sought permission from relevant bodies prior to commencement of the study and assured the respondents that the findings of the study were to be used solely for academic purposes. The researcher obtained a letter of data collection from Kenyatta University and a permit to collect data from NACOSTI. Questionnaire administration was a challenge since the study targeted heads of credit department, who are part of the management team in the banks. Due to strict schedules of these heads of departments, time for filling the questionnaires was hardly available. This limitation was addressed by use of drop and picking method when administering questionnaire.

#### **5.5 Recommendations of the Study**

The study recommends that all the commercial banks in Kenya should regularly evaluate and update practices relating to debt collection policy, client appraisal and lending policy that are capable of ensuring that all credit risks are identified and recorded from departmental level to the institution at large. This is vital more so because of technological innovations in the banking sector like mobile lending that

may limit commercial banks' ability to evaluate and manage credit management using traditional methods.

The study also recommends that commercial banks should improve on their internal control system for conducting ongoing assessment of the bank's debt collection policy, client appraisal practices and lending policy. Additionally, the commercial banks should establish proper credit appraisal methods in order to mitigate credit risk. Proper customer credit worthiness system should also be put in place based on their ability to repay back their credit and customer's loyalty.

The study recommends that the Central Bank of Kenya to continuously assess and update the best practices relating to central bank regulations. Monitoring of the compliance by commercial banks to the prudential guidelines will also be vital. This will ensure compliance by the banks on improved credit management by commercial banks and thus improving loan performance.

### **5.6 Suggestions for Further Research**

The study made several suggestions for further researcher on areas which emerged during the study and required further research. The study can be improved by incorporating more variables in future studies in order to establish their effect on loan performance. Hence, the study may be replicated through addition of further predictors of the credit management risk to assess how the variables affect credit risk management or credit management practices among commercial banks in Kenya and consequently loan performance and financial performance at large.

The study also suggested that a further study be carried out to determine the impact of credit management practices and loan performance on other financial institutions including deposit taking micro finance institutions in Kenya and deposit taking SACCOs in Kenya. This will enable comparison and generalization of the findings.

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**APPENDICES****Appendix I : Letter to the Respondent**

Dear respondent,

In fulfillment of the university requirements as a student at Kenyatta University pursuing a Master of Science degree in Finance, I am required to carry out a thesis on **Credit Management Practices and Loan Performance of Commercial Banks in Kenya.**

Kindly spare your time to fill this questionnaire to facilitate this thesis and be assured that it will only be used purely for purposes and will be treated with utmost confidentiality.

Please answer the questions with sincerity and to the best of your knowledge.

Thanks in Advance

**Yours sincerely,**

**Irene M. Mburu**

**Reg No. D58/CTY/PT/24784/2013**

## Appendix II: Questionnaire

The study is meant to establish the **Effect of Credit management Practices on loan performance of Commercial Banks in Kenya**. Please answer the questions with sincerity and to the best of your knowledge by ticking appropriately. Information obtained will be used for academic purpose only and will be treated with utmost confidentiality.

### PART A: BACKGROUND INFORMATION

1. How long have you worked for the Commercial Bank?

- a) Less than a year                      ( )
- b) 1-3 years                                ( )
- c) 3-5 years                                ( )
- d) 5-8 years                                ( )
- e) 9 yrs. & above                        ( )

2. What is the size of your bank?

- Small                                      ( )
- Medium                                    ( )
- Large                                        ( )

3. What is the category of your commercial bank?

- Local bank locally owned              ( )
- Local bank foreign owned              ( )

Local bank foreign and locally owned ( )

International bank locally owned ( )

International bank foreign owned ( )

International bank foreign and locally owned ( )

**PART B: CREDIT MANAGEMENT PRACTICES AND LOAN PERFORMANCE**

Please indicate the extent to which the following practices are applicable to your commercial bank. Please use a scale of **5 –Very Large Extent, 4 – Large extent, 3 – Moderate Extent, 2 – Small Extent, 1 – Very Small Extent**

**1. Debt Collection Policy and Loan Performance of commercial banks in Kenya**

<b>Debt Collection Policy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There exists an operational credit collection policy at the bank					
Late repayments are allowed with prior approval and charges					
Collection enforcements are done in-discriminatory according to the policy					
Guarantor payments are sought when borrowers are in default as per policy					
There is continuous monitoring and control of loans advanced					

## 2. Client Appraisal and Loan Performance of commercial banks in Kenya

<b>Client Appraisal</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The bank considers the condition of the loan including logical need for the funds, business sense and proven business idea					
Nature, value, marketability and quality of collateral in advancing loans					
The bank determines the credit score of the borrowers using information from credit referencing bureau among other sources					
The bank gathers information to assess the character of the borrower during credit appraisal					
The bank assesses borrower's ability to pay the debt and makes a decision strictly based on set criteria.					

## 3. Lending Policy and loan Performance of commercial banks in Kenya

<b>Lending Policy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The bank employs an elaborate lending policy that fits into the borrowers profile to improve loan performance.					
The lending policy clearly specifies credit limits which are strictly adhered to					

Credit terms are precisely defined in the lending policy and guides the lending by the bank					
The bank requires customers to have deposits against which loans are advanced					
There exists minimum documentation required to be obtained before advancing loan					
The bank offers loans based on flexible interest rates					

*End*

*Thank you for your time*

**Appendix III: Commercial Banks Loan Advances and Non-Performing Loans**

Bank	Gross Loans-2015	Gross Loans-2016	Gross Loans-2017	Gross Loan-2018	NPL-2015	NPL-2016	NPL-2017	NPL 2018
African Banking Corporation Ltd	13,513	15,538	15,022	16,371	885	2,677	2,840	3,535
Bank of Africa (K) Ltd	39,236	41,075	37,480	33,589	2,412	9,744	10,794	10,571
Bank of Baroda (K) Ltd	29,002	32,263	38,089	43,943	1,065	2,364	3,392	2,666
Bank of India	12,438	17,973	19,354	20,771	71	364	272	435
Barclays Bank of Kenya Ltd	128,204	148,846	176,349	177,224	4,554	5,336	11,472	12,615
Citibank Kenya	24,541	27,683	28,242	38,080	881	1,768	805	1,724
Cooperative Bank of Kenya Ltd	181,370	212,711	241,395	247,232	7,982	8,189	11,273	18,714
Commercial Bank of Africa Ltd	92,667	107,683	105,082	107,038	3,770	4,723	7,450	7,798
Consolidated Bank of Kenya Ltd	10,766	10,155	10,317	9,882	2,811	1,958	2,038	2,481
Credit Bank Ltd	5,887	7,388	8,361	10,171	586	515	676	877
Development Bank of Kenya Ltd	9,332	9,094	10,083	10,710	1,322	1,870	2,594	2,310
Diamond Trust Bank (K) Ltd	95,258	128,266	141,702	156,843	1,199	3,656	5,520	11,901
Equity Bank Kenya Ltd	192,973	229,394	221,039	221,698	7,469	6,832	15,457	14,758
Family Bank Ltd	39,681	57,975	53,485	46,928	2,847	3,515	7,015	9,478
First Community Bank Ltd	9,990	11,532	11,926	10,995	1,518	2,777	3,853	4,399
Guaranty Trust Bank (Kenya) Ltd	12,851	12,826	13,418	13,746	472	570	994	1,421
Ecobank Kenya Ltd	24,116	30,902	27,393	21,456	2,461	2,444	5,359	8,287
Habib Bank A.C. Zurich	3,443	5,329	5,361	5,680	84	116	158	592
Guardian Bank Ltd	10,295	9,926	9,604	10,303	787	1,029	787	1,122
Gulf African Bank Ltd	14,068	15,864	16,686	20,144	1,033	1,398	1,617	1,962
HFC Ltd	46,260	54,624	56,786	52,630	4,163	4,097	6,193	8,212
I&M Bank Ltd	91,163	104,302	104,302	126,983	1,913	5,072	5,072	17,669

Bank	Gross Loans-2015	Gross Loans-2016	Gross Loans-2017	Gross Loan-2018	NPL-2015	NPL-2016	NPL-2017	NPL 2018
Jamii Bora Bank Ltd	6,464	10,767	10,497	9,929	602	778	2,141	2,106
KCB Bank Ltd	257,399	324,284	373,031	411,666	13,368	19,289	28,333	34,182
M-Oriental Commercial Bank Ltd	5,078	5,582	7,109	7,741	552	831	856	809
NIC Bank PLC	97,984	111,286	112,509	118,459	5,969	13,195	12,650	13,265
Sidian Bank Ltd	11,214	13,317	14,488	12,330	776	1,608	2,459	2,596
Stanbic Bank (K) Ltd	89,797	103,535	118,483	135,443	3,370	4,858	7,013	10,359
Standard Chartered Bank (K) Ltd	128,768	122,905	132,497	139,406	10,752	14,698	15,038	17,621
National Bank of Kenya Ltd	68,093	72,842	68,616	68,153	7,237	11,762	29,987	27,658
Middle East Bank (K) Ltd	3,719	4,009	4,015	3,242	1,116	1,093	1,193	1,438
Prime Bank Ltd	35,060	41,617	40,170	39,763	666	989	1,855	2,252
Transnational Bank Ltd	6,609	7,339	7,026	7,365	529	733	891	1,595
Paramount Bank Ltd	5,389	6,485	6,243	6,345	1,063	815	778	778
UBA Kenya Bank Ltd	785	2,790	3,127	3,309	52	58	69	152
Victoria Commercial Bank Ltd	10,979	13,124	15,293	18,887	-	-	-	17
Spire Bank Ltd	11,555	10,400	8,319	6,867	3,028	3,388	1,322	2,349
SBM Bank (Kenya) Ltd	10,467	-	-	6,680	811	-	-	3,917
DIB Bank Kenya Ltd	4,208			291	2,314	-	-	-
Mayfair Bank Ltd				235		-	-	-
Habib Bank Ltd	4,707	4,271	4,339		342	434	816	
Imperial Bank Ltd	31,827	2,165,329	2,286,525		2,020	147,331	211,231	
Giro Commercial Bank Ltd	7,786	9,389	9,287		250	185	196	

*Source: Central Bank of Kenya*

**Appendix IV: Commercial Banks Average Four Year Non-Performing Loans**

<b>Bank</b>	<b>2015 (%)</b>	<b>2016 (%)</b>	<b>2017 (%)</b>	<b>2018 (%)</b>	<b>Average_NPL</b>
African Banking Corporation Ltd	6.55	17.23	18.91	21.59	16.07
Bank of Africa (K) Ltd	6.15	23.72	28.80	31.47	22.54
Bank of Baroda (K) Ltd	3.67	7.33	8.91	6.07	6.49
Bank of india	0.57	2.03	1.41	2.09	1.52
Barchays Bank of Kenya Ltd	3.55	3.58	6.51	7.12	5.19
Citibank N.A. Kenya	3.59	6.39	2.85	4.53	4.34
Cooperative Bank of Kenya Ltd	4.40	3.85	4.67	7.57	5.12
Commercial Bank of Africa Ltd	4.07	4.39	7.09	7.29	5.71
Consolidated Bank of Kenya Ltd	26.11	19.28	19.75	25.11	22.56
Credit Bank Ltd	9.95	6.97	8.09	8.62	8.41
Development Bank of Kenya Ltd	14.17	20.56	25.73	21.57	20.51
Diamond Trust Bank (K) Ltd	1.26	2.85	3.90	7.59	3.90
Equity Bank Kenya Ltd	3.87	2.98	6.99	6.66	5.12
Family Bank Ltd	7.17	6.06	13.12	20.20	11.64
First Community Bank Ltd	15.20	24.08	32.31	40.01	27.90
Guaranty Trust Bank (Kenya) Ltd	3.67	4.44	7.41	10.34	6.47
Ecobank Kenya Ltd	10.20	7.91	19.56	38.62	19.08
Habib Bank A.C. Zurich	2.44	2.18	2.95	10.42	4.50
Guardian Bank Ltd	7.64	10.37	8.19	10.89	9.27
Gulf African Bank Ltd	7.34	8.81	9.69	9.74	8.90
HFC Ltd	9.00	7.50	10.91	15.60	10.75
I&M Bank Ltd	2.10	4.86	4.86	13.91	6.43
Jamii Bora Bank Ltd	9.31	7.23	20.40	21.21	14.54

<b>Bank</b>	<b>2015 (%)</b>	<b>2016 (%)</b>	<b>2017 (%)</b>	<b>2018 (%)</b>	<b>Average NPL</b>
KCB Bank Ltd	5.19	5.95	7.60	8.30	6.76
M-Oriental Commercial Bank Ltd	10.87	14.89	12.04	10.45	12.06
NIC Bank PLC	6.09	11.86	11.24	11.20	10.10
Sidian Bank Ltd	6.92	12.07	16.97	21.05	14.26
Stanbic Bank (K) Ltd	3.75	4.69	5.92	7.65	5.50
Standard Chartered Bank (K) Ltd	8.35	11.96	11.35	12.64	11.07
National Bank of Kenya Ltd	10.63	16.15	43.70	40.58	27.77
Middle East Bank (K) Ltd	30.01	27.26	29.71	44.36	32.84
Prime Bank Ltd	1.90	2.38	4.62	5.66	3.64
Transnational Bank Ltd	8.00	9.99	12.68	21.66	13.08
Paramount Bank Ltd	19.73	12.57	12.46	12.26	14.25
UBA Kenya Bank Ltd	6.62	2.08	2.21	4.59	3.88
Victoria Commercial Bank Ltd	-	-	-	0.09	0.02
Spire Bank Ltd	26.21	32.58	15.89	34.21	27.22
SBM Bank (Kenya) Ltd	7.75	-	-	58.64	16.60
DIB Bank Kenya Ltd	54.99	-	-	-	13.75
Mayfair Bank Ltd	-	-	-	-	-
Habib Bank Ltd	7.27	10.16	18.81	-	9.06
Imperial Bank Ltd	6.35	6.80	9.24		
Giro Commerical Bank Ltd	3.21	1.97	2.11		

*Source: Study Data obtained from Commercial Banks Published Financial Statements*



## Appendix VI: Graduate School Research Proposal Approval



### KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 57530

#### Internal Memo

FROM: Dean, Graduate School

DATE: 19<sup>th</sup> November, 2018

TO: Mburu Muthoni Irene  
C/o Accounting and Finance  
Department

REF: D58/CTY/PT/24784/2013

SUBJECT: APPROVAL OF RESEARCH PROPOSAL  
=====

This is to inform you that Graduate School Board, at its meeting of 11<sup>th</sup> October, 2018 approved your Research Proposal for the M.Sc Degree Entitled, "Credit Risk Management Practices and Loan Performance of Commercial Banks in Kenya".

You may now proceed with data collection, subject to clearance with the Director General, Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking forms per semester. The form has been developed to replace the progress report forms. The supervision Tracking Forms are available at the University's website under Graduate School webpage downloads.

Thank you.

JULIA GITU  
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Accounting and Finance

#### Supervisors:

1. Dr. Lucy Wamugo  
Department of Accounting and Finance  
Management  
Kenyatta University
2. Dr. Stephen Muathe  
C/o Department of Business Administration  
Kenyatta University

## Appendix VII: NACOSTI Research Authorization



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349,3310571,2219420  
Fax: +254-20-318245,318249  
Email: dg@nacosti.go.ke  
Website : www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/11244/27431**

Date: **7<sup>th</sup> March, 2019**

Irene Muthoni Mburu  
Kenyatta University  
P.O. Box 43844-00100  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Credit risk management practices and loan performance of commercial banks in Kenya*," I am pleased to inform you that you have been authorized to undertake research in **all Counties** for the period ending **7<sup>th</sup> March, 2020**.

You are advised to report to the **County Commissioners and the County Directors of Education, all Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

  
**DR. MOSES RUGUTT, PHD, OGW**  
**DIRECTOR GENERAL/CEO**

Copy to:

The County Commissioner  
All Counties.

The County Director of Education  
All Counties.

**Appendix VIII: Research Permit**

**THIS IS TO CERTIFY THAT:**  
**MS. IRENE MUTHONI MBURU**  
**of KENYATTA UNIVERSITY, 12650-20100**  
**NAKURU, has been permitted to conduct**  
**research in All Counties**  
**on the topic: CREDIT RISK**  
**MANAGEMENT PRACTICES AND LOAN**  
**PERFORMANCE OF COMMERCIAL BANKS**  
**IN KENYA**  
**for the period ending:**  
**7th March, 2020**

**Permit No. : NACOSTI/P/19/11244/27431**  
**Date Of Issue : 7th March, 2019**  
**Fee Received :Ksh 1000**



**Applicant's Signature** \_\_\_\_\_  
**Director General**  
**National Commission for Science, Technology & Innovation**

**Appendix IX: List of Commercial Banks in Kenya**

1. KCB Bank Kenya Ltd
2. Standard Chartered Bank (K) Ltd
3. Equity Bank Kenya Ltd
4. Barclays Bank of Kenya Ltd
5. Co – operative Bank of Kenya Ltd
6. Commercial Bank of Africa Ltd
7. Diamond Trust Bank (K) Ltd
8. NIC Bank PLC
9. Stanbic Bank Kenya Ltd
10. I & M Bank Ltd
11. National Bank of Kenya Ltd
12. Chase Bank Ltd
13. Citibank N.A. Kenya
14. Bank of Baroda Ltd
15. Family Bank Ltd
16. Bank of Africa Kenya Ltd
17. Prime Bank Ltd
18. Ecobank Kenya Ltd
19. HFC Ltd
20. Imperial Bank Ltd
21. Bank of India
22. Gulf African Bank Ltd
23. African Banking Corporation Ltd
24. Guaranty Trust Bank (Kenya) Ltd

25. Mayfair Bank Ltd
26. Sidian Bank Ltd
27. Victoria Commercial Bank Ltd
28. SBM Bank (Kenya) Ltd
29. Jamii Bora Bank Ltd
30. Development Bank of Kenya Ltd
31. Spire Bank Ltd
32. DIB Bank Kenya Ltd
33. Guardian Bank Ltd
34. First Community Bank
35. Consolidated Bank of Kenya Ltd
36. Transnational Bank Ltd
37. Paramount Bank Ltd
38. Habib Bank A.G. Zurich
39. M-oriental Commercial Bank Ltd
40. Middle East Bank (K) Ltd
41. Credit Bank Ltd
42. Charterhouse Bank Ltd
43. UBA Kenya Bank Ltd
44. Giro Commercial Bank

**Source: CBK, (2019) Available at <https://www.centralbank.go.ke/>**