

**RISK MANAGEMENT AND PERFORMANCE OF UNSECURED LOANS IN
COMMERCIAL BANKS IN NANYUKI TOWN, KENYA**

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DECLARATION

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

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I confirm that the work in this project was done by the candidate under my supervision.

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DEDICATION

I dedicate this project work to my wife Anne, my daughters Claire and Angela for standing by me throughout my studies.

A special thanks to my mother Ruth and my late father David who encouraged, supported and sacrificed allot to ensure I got the best education.

God bless you abundantly.

.

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ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
CRM	Credit Risk Management
I.T	Information Technology
NPL	Nonperforming loans
SPSS	Statistical Package for Social Sciences
PAR	Portfolio at Risk

OPERATIONAL DEFINITION OF TERMS

Commercial bank	Financial institution that provides various financial service, such as accepting deposits and issuing loans
Credit risk	The degree to which it is likely that a borrower or debtor may not repay a loan or debt
Guarantor	A person or a business that agrees to be responsible for another person's or business' debt in a loan agreement
Information technology	Use of computers, storage, networking and other physical devices, infrastructure and processes to manage risk.
Performance of loans	Quality of the bank's loan portfolio
Risk analysis	Process of defining and analyzing the risks in lending to a borrower
Risk management	Practice of mitigating losses by understanding the adequacy of a bank's capital and loan loss reserves at any given time
Risk monitoring	The tracking and reporting of exposures to risk to external stakeholders
Risk reporting	Disclosure by a bank of the of exposures to risk to external stakeholders
Unsecured loan	A loan that is issued and supported only by the borrower's creditworthiness, rather than by any type of collateral.

ABSTRACT

Banks have to manage more types of risks in order to maximize the shareholders' wealth. Kenyan banks have witnessed increasing non-performing loans. The liberalization of interest rate controls, the privatization of publicly owned banks, and the expansion on the variety of financial instruments, provided new business opportunities for banks but they also increased the need for proper risk management systems to be put in place in order to control the risks and uncertainties deriving from these changes. Evidence shows that non-performing unsecured loans are on the rise. The gross non-performing loans (NPLs) increased by 6.6 percent in the first quarter of 2017. The study focused on the effect of risks management on performance of unsecured loans in banks. The objectives of the study were to establish the effect of information technology on performance of unsecured loans; examine the effect of risk analysis on the performance of unsecured loans; assess the effect of risk monitoring on the performance of unsecured loans and find out the effect of risk reporting on the performance of unsecured loans. The study was anchored in the information asymmetry, technological determinism, modern portfolio, contingency theory and theory of constraints. The current study used a descriptive cross sectional research design. Commercial banks in Nanyuki town were targeted. Branch managers and departmental heads were the respondents in the study. The study used purposive sampling where all 12 banks and 60 respondents were involved in the study. A self-administered questionnaire was used to collect data. Descriptive statistics such as frequencies, percentages, mean and standard deviation were used to organize findings. Regression analysis was conducted to determine the statistical significance of the attempted prediction between risk management and performance of unsecured loans among commercial banks. The tests were performed the help of SPSS software at 95% confidence level. Findings were presented in form of tables and figures. The study found that that information technology was used in risk management to a large extent and participating banks conducted risk analysis to a large extent. The findings showed gaps in risk monitoring while risk reporting was conducted to a very large extent. Regression analysis showed that there was a strong positive correlation ($r=0.837$) between risk management on performance whereby 68.4% of performance of unsecured loans in commercial banks in Nanyuki town, Kenya could be attributed to risk management. There was statistically significant relationship ($F(4,7) = 4.394$, $P=0.004$) between risk management on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Among the variables, information technology ($p=0.044$), risk analysis ($p=0.006$) and risk monitoring ($p=0.016$) were statistically significant. The findings showed that risk analysis ($\beta=0.920$) was the most affecting followed by risk monitoring ($\beta=0.488$), information technology ($\beta=0.044$), and risk reporting ($\beta=0.156$) in that order. The study concluded that risk management is vital to performance of unsecured loans in commercial banks. This relationship is driven by utilization of information technology, risk analysis and risk monitoring which enable the bank assess and predict risk and therefore employ corrective and mitigation strategies to avoid default. The researcher recommended that commercial banks should make greater investments in information technology in risk management especially in the area of data mining. Commercial banks should also seek to utilize scenario analysis more in risk analysis as it is a good credit risk assessment tool.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Gallati (2003) characterizes risk as a condition in which there exists a presentation to hardship, or a condition in which there exists a probability of deviation from a coveted result that is normal or sought after. Ghosh (2012) characterizes risk in banks as a potential misfortune that may happen because of some hostile occasions, for example, monetary downturns, unclear changes in financial and exchange strategy, negative developments in loan costs or remote trade rates, or declining value costs.

Risk management can be viewed as a dynamic, vital, and incorporated process that envelops both the estimation and the relief of risk, with a definitive objective of boosting the estimation of a bank, while limiting the risk of insolvency (Schroeck, 2002). Rejda (2008) characterizes risk management as the procedure through which an association distinguishes hardships exposures confronting it and chooses the most proper strategies for treating such exposures. Bessis (2002) describes risk management as the entire arrangement of risk management procedures and models allowing saving money establishments to set up various risk-based methods and practices.

The procedure of risk management includes the key steps of identifying risk, risk examination and appraisal, risk review checking, and risk treatment or control (Bikker and Metzmakers, 2005; Buttiner, 2001). Though a risk in straightforward terms can be estimated utilizing standard deviation, a few risks might be hard to quantify requiring more unpredictable strategies for risk estimation. Great risk management is not just a guarded component, yet additionally a hostile weapon for commercial banks and this is deeply determined by the nature of governance and management.

A challenge in risk management is how to treat the risk because of various types of risk treatment option which include accept risks, avoid, outsource, share, or transfer (Schanfield & Helming 2008). One technique for managing risk is to keep away from the risk by not continuing with the movement prone to create the risk. Risk evasion should just happen when control measures do not exist or do not lessen the risk to an adequate level. Part or a large portion of a risk might be exchanged to another gathering with the goal that they share duty. Components for risk exchange

incorporate contracts, protection, associations and business co-operations. After risks have been declined or exchanged, remaining risk might be held on the off chance that it is at an acceptable level

1.1.1 Risk Management in Banking

Banks need to keep on checking the most appropriate ways of managing risk keeping in mind the end goal to expand the investors' shares. The most essential classes of risks incorporate credit risk, interest rate risk, liquidity risk and operational risk. Credit risk emerges when a bank can't get back the cash from advances or ventures (Fernando & Sriyalatha, 2015). Financing cost risk emerges when the market estimation of a bank resource, advance or security falls when loan fees rise. The dissolvability of the bank would be weakened when the bank can't fulfill its certification to pay a settled add up to contributors in light of the diminishing in the approximation of the points of interest caused by increase in financing cost. Liquidity risk develops when the bank can't meet the solicitations of benefactors and necessities of borrowers by changing assets into cash or get stores when required with insignificant misfortune. Furthermore, to wrap things up, operational hazard emerges out of powerlessness to control working costs, particularly noninterest costs, for example, pay rates and wages (Blessis, 2002)

Jenkins (2010) explains that majority of the risk management concerns confronted today by banks can be connected to the impacts of deregulation and globalization. The progression of credit cost controls, the privatization of transparently asserted banks, and the advancement on the combination of money related instruments, gave new business chances to banks yet they additionally expanded the requirement for appropriate hazard administration frameworks to be set up with a specific end goal to control the dangers and vulnerabilities getting from these progressions. Kearney (2015) demonstrates that the credit emergency and resulting worldwide subsidence appear to shows that the keeping money segment has neglected to watch out for its center business of overseeing hazard. As per the creator, if the banks had taken care of hazard administration, at that point there would not have been the surge on the US market of shoddy here and now loan cost contracts.

Abdou, English and Adewunmi (2014) indicates that UK banks have effective risk management frameworks that assistance to stop potential electronic risk and diminish the misfortunes caused from risks related with e-banking. Outcomes likewise affirmed

that UK banks are conforming to the 14 BCBS risk standards and are very much overseen regarding their security controls for e-banking. In Cyprus, Jenkins (2010) found that exclusive 43% of the banks in North Cyprus knew about Basel II, while the rest have no learning about it. Indeed, even after noteworthy money related emergencies between 2000-2001 numerous banks still do not have internal auditors and don not lead coordinated risk management. Fernando and Sriyalatha (2015) in a survey of Sri Lankan banks discovered that there was a distinction amongst national and remote saves money concerning comprehension of hazard and hazard administration, practices of hazard distinguishing proof, practices of hazard appraisal and investigation, chance checking and controlling and in the act of credit chance examination aside from chance administration hones. Banks in Bahrain are found to have a reasonable comprehension of hazard and hazard administration, and have effective hazard ID, chance evaluation examination, chance observing, credit chance investigation and hazard administration hones. What's more, credit, liquidity and operational hazard are observed to be the most vital dangers confronting both traditional and Islamic banks (Abu Hussain & Al-Ajmi, 2012).

Onyiriuba (2015) indicates that the problem of risk management in African banks has confounded financial system regulations and the internal control systems of banks. It has particularly lowered bank administration and controllers. Along these lines, credit chance holds industry partners for recover. The African money related framework keeps on battling with the beast of credit hazard emergency in what gives off an impression of being a losing fight. Esterhuysen (2013) shows that South African banks are having incredible challenges to locate a solitary meaning of operational hazard and this is causing issues in recognizing operational dangers in South Africa. Owojori *et al.* (2011) showed that in Nigeria, usually for investors to disregard a few dangers and even overlook administrative rules intended to alleviate such dangers. A decent number of banks have fizzled and some are trouble, in view of administration's poor state of mind towards hazard, especially credit default chance.

1.1.1.1 Information Technology

Most recent advancement in technology, which consolidates the accomplishments of synthetic brainpower, numerical arithmetic, insights, has empowered to propose new encouraging ways to deal with risk evaluation and data bolster (Chornous and Ursulenko, 2013). IT-upgraded strategies for risk management and enhancements in credit-scoring and information mining methods may (mostly) move the basic

leadership from a branch manager to the parent bank (Felici and Pagnini, 2008). Benson (2017) indicates that IT is not just valuable to take a gander at authentic information in a source and employments of assets proclamation, yet it is likewise critical to gauge the business borrower's future sources and employments of assets and its announcement of budgetary position. Advances like the Internet enable buyers to decide dealers' expenses or enable them to get a few offers. Customers pay bring down costs along these lines expanding their buyer overflow. A borrower could audit financing costs and credit results of a few banks previously settling on their getting choice (Riggins & Weber, 2016).

1.1.1.2 Risk Analysis

A bank distinguishes measures and evaluates the risks it is presented to with the plan to oversee them (Ljubić *et al.*, 2015). Banks ought to distinguish and evaluate the operational hazard natural in every single material item, exercises, procedures and frameworks and its powerlessness to these dangers. Having a proficient hazard appraisal frameworks improves the probability of banks achievement, decreases plausibility of bank disappointments and limits the vulnerability of the general budgetary execution to keeping banks from agony unsatisfactory misfortunes (Wahome, 2010). The issue of credit chance administration, and additionally doing a quantitative evaluation and examination of the credit hazard and rating of borrowers, is applicable to all banks engaged with loaning to people and legitimate substances (Konovalova *et al.*, 2016).

1.1.1.3 Risk Monitoring

Banks should now have a keen attention to the need to distinguish, measure, screen and control various risks for survival as well as their progress (Oloo, 2009). Risk monitoring c can be utilized to ensure that hazard administration rehearses are in line and legitimate hazard checking additionally encourages bank administration to find botch at beginning period (Al-Tamimi & Al-Mazrooei, 2007). Kodithuwakku (2015) shows that to screen the credit chance all the more intently, banks are doing thorough credit investigation of counterparties and different items. Banks are additionally overhauling their estimating capacities to figure chance in focused on economic situations. Furthermore, controllers have been urging banks to screen their credit chance intently.

1.1.1.4 Risk Reporting

A developing interest for better announcing of business dangers has risen in ongoing decades. This relies upon the conviction that improved perception of business risks by money related masters and diverse customers of corporate declaring should incite better stewardship of associations and to a more proficient distribution of assets (Johnson, 2010). The Enhanced Disclosure Task Force (2012) sets out seven standards for hazard revelations. Divulgences ought to be clear, adjusted and justifiable, revelations ought to be extensive and incorporate all the bank's key exercises and dangers. Revelations should introduce applicable data and ought to reflect how the bank deals with its dangers. Divulgences ought to be reliable after some time, practically identical among banks and gave on a convenient premise. Harle *et al.* (2016) reports that while administrative necessities have officially done much to enhance the nature of the information utilized as a part of hazard reports and their convenience, less consideration has been given to the configuration of reports or how they could be put to better use for settling on choices Johnson (2010) demonstrates that because of the absence of an institutionalized system, outer hazard announcing is to date rather conflicting, even between organizations working in similar markets and inside a similar industry.

1.1.2 Unsecured Loans

An unsecured loan is an advance that is issued and secured just by the borrower's ability to pay back, as opposed to by a security or a collateral. CBK (2012) views the following products as forms of unsecured lending: credit card; overdrafts; commercial papers, personal loans; and financing provided to small and medium enterprises. Mbucho and Senaji (2015) indicate that unsecured loan for example, a charge card advance, have low installment commitments with the goal that wrongdoing rates and in this way default rates are generously not as much as what one would anticipate. To be sure banks of unsecured advances look to get considerable additions from charging high financing costs on remarkable adjusts after the base installment commitments have been made.

Variables like credit chance, distinguishing proof, credit risk investigation, credit chance observing, and credit approvals or sanctions positively affect the performance of unsecured loans. Business banks could embrace hazard shirking technique where they neglect to totally go out on a limb yet this makes these banks to be less dynamic in unsecured loaning (Gweyi, 2013). Oballa (2017) demonstrates that execution of

unsecured bank credit portfolio in Kenya has indicated fundamentally high and tenacious disappointments inside the banks and other money related establishments because of poor observing procedure throughout the years. These disappointments in any case, are not one of a kind to Kenya as most creating nations where obtained reserves are not reimbursed as concurred has prompted crumbling of the greater part of the monetary foundations.

1.1.3 Commercial Banks in Kenya

Banking industry in Kenya as of now comprises of 44 commercial banks, one mortgage finance organization, 9 micro-finance banks, 7 representative offices of foreign banks,, 94 foreign exchange agencies, 7 money remittance providers and 2 credit reference departments (Central bank of Kenya, 2015). Of the aggregate business banks, 13 of them are more than half foreign owned. Toward the end of 2014 Q3, the number of bank customer deposits and advance records remained at 26,603,385 and 4,068,304, individually (KPMG, 2015).

Central Bank of Kenya (2012) issued an arrangement of reconsidered and new prudential rules material to establishments authorized under the Banking Act in Kenya. Among the rules that were amended was the rule on capital adequacy. The need to change the rule on capital adequacy was to a great extent driven by the worldwide administrative change activities aimed at reinforcing bank administrative eras to address shortcomings that were uncovered amid the 2008/2009 worldwide monetary emergency. To include, the capital adequacy rule was reexamined to address the presentation of capital charge for market risk and presentation of capital charge for operational risk. The guideline came into effect on January 2014. Since then few studies have been conducted to assess the effect of the newly improved risk management on performance of banks. This study therefore seeks to determine the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.1.4 Level of Performance of Unsecured Loans in Commercial Banks

A report by CBK (2016) showed that gross loans increased from KShs 2.17 trillion in December 2015 to KShs 2.29 trillion in December 2016. The ratio of gross non-performing loans to gross loans increased from 6.8 percent in December 2015 to 9.2 percent in December 2016. The increase in non-performing loans in 2016 was mainly attributable to a challenging business environment. There was no significant growth in

the loan book compared to the previous year. Most institutions put on hold loans disbursement so as to recover and reduce the outstanding non-performing loans. CBK (2017) reports that Total banking sector lending increased by 2.3 percent from KSh 2,327.4 billion in the fourth quarter of 2016 to KSh 2,381.3 billion in the first quarter of 2017.

Kenya introduced the law to cap interest rates in the third quarter of 2016, with the move aimed at deepening access to credit especially among small borrowers. The rates were capped at 4 percent above the Central Bank Rate which currently stands at 10 percent (Mwaniki, 2017). Banks, therefore, are currently charging borrowers a maximum of 14 percent, down from between 18 and 28 percent. The result, however, is that commercial banks are reeling from the effects of the reduced earnings as the law leads to unintended outcomes, including layoffs and slow credit growth (Xinhua, 2017).

The law capping interest rates slashed Sh13 billion of commercial banks' interest income from customer loans between January and March, 2017. CBK (2016) shows that banks earned Sh69.26 billion in interest from customer loans in the first three months of the year, down 16.4 per cent from Sh82.87 billion in the first quarter of 2016. The fall in interest earnings, which constituted 62 per cent of operating income for banks during the quarter, led to a Sh3 billion falls in the banks' net profit to Sh25.7 billion. Equity Group Holdings Ltd., Kenya's greatest bank by market value, posted a 6 percent decrease in first-quarter profit as its CEO cautioned government-imposed caps on business loaning rates risk devastating the business (Juma, 2018).

CBK (2016) indicates that bank lending has grown by an average of four per cent for about a half a year since August 2016 when the government signed the law of capping interest rates. CBK has also been tough on banks to correctly classify loans, which has grown non-performing loans to Sh228 billion by February 2017. According to Guguyu (2017), the slip in profitability and growth in non-performing loans was largely occasioned by numerous factors that have negatively affected the banking sector as a whole. The current study sought to establish the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.2 Statement of the Problem

The advancement of the banking sector in Kenya in 1992 signified the start of exceptional competitiveness among the business banks, before then competition in the banking industry was not felt most in east and central Africa thus most Banks did not extend huge amounts of unsecured credit (Makena, Ngare, Mulindwa & Wairia, 2017). A portion of the advances were "political loans" conceded with practically zero credit appraisal; different loans were advanced to internal staff, all of which in this way moved toward becoming non-performing (Wanyama, Yegon & Kemboi, 2014). As per Aduda, Magutu and Wangu (2012), the low quality credits prompted abnormal amounts of non-performing advances and in this way disintegrated profits of banks through advance provisioning some of which appeared out rightly political.

Numerous banks that fall in the late 1990's were as a result of the poor management of credit risks which was depicted in the elevated amounts of nonperforming advances (Central Bank Supervision Report, 2005). More recently, Kenyan banks have seen expanding non-performing advances. The gross non-performing credits (NPLs) expanded by 6.6 percent from KSh 212.6 billion as at the end of the fourth quarter of 2016 to KSh 226.6 billion at the end of the first quarter of 2017; the increase in non-performing loans signaled an increase in risks (CBK, 2017). Nanyuki town is one of the towns that has been affected by non-performing unsecured loans and low profitability. This has led to downsizing of many banks and closure of Nanyuki branches such as Bank of Africa and National Bank of Kenya. Available studies such as Afande (2015), Geitangi (2015), Soi (2015) and Wachira (2017) have failed to address issues on information technology, risk analysis, monitoring and reporting. Thus the study sought to determine the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.3 Objective of the Study

The study was guided by the following objectives

1.3.1 General Objective

To determine the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.3.2 Specific Objectives

The specific objectives of the study will be:

- i. To establish the effect of use of information technology on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- ii. To examine the effect of risk analysis on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- iii. To assess the effect of risk monitoring on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- iv. To find out the effect of risk reporting on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.4 Hypotheses

- H₀₁** There is no significant effect of information technology on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- H₀₂** There is no significant effect of risk analysis on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- H₀₃** There is no significant effect of risk monitoring on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.
- H₀₃** There is no significant effect of risk reporting on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

1.5 Significance of the Study

The findings of this study add to the existing knowledge on the best way to organization and actualize a credit risk management procedure to reinforce unsecured loan performance in Nanyuki. The findings of the study will therefore be beneficial to bank managers and heads of risk department in Nanyuki and other areas in Kenya in identifying pitfalls in risk management and how they affect performance. Customers of commercial banks in Nanyuki will benefit in getting to know the risk management practices put in place to shield their deposits and investments from various risks. Regulatory bodies such as CBK may use the findings of the study to identify pitfalls in risk management among banks and therefore give guidelines to enhance banks ability to manage risks. Researchers conducting studies in risk management may use the findings as reference material.

1.6 Scope of the Study

The study focused on the effect of risks management on performance of unsecured loans in banks. Specifically the study focused on risk management. Non-performing

loans is used as a measure for performance. Only banks in Nanyuki were considered. Managers and heads of department were the respondents in the study. Data was collected using questionnaires. The study was conducted in 2018. The study covered on the performance of unsecured loans.

1.7 Limitations of the Study

The main limitation in this study was the descriptive survey design adopted. This design only allows for association but not causation analysis. In addition data was collected at one point in time and may not therefore reflect certain changes in the banking sector which take several years to be felt. The data collected was information about the previous financial years (2014/15 and 2015/16) since the current financial positions and practices for the current financial year may not have been computed therefore, any changes since the previous financial year may not have been picked up in the study. Majority of information collected was self-reported and therefore may suffer from errors committed by the respondents such as exaggeration.

1.8 Organization of the Study

This project comprises of five chapters. Chapter one introduces the problem under investigation by giving a brief background, stating the problem, identifying its objectives and guiding questions, giving limitation and delimitation of the study, outlining the basic assumption of the study and describing the organization of the study. The second chapter provides the literature review related to loan performance as affected by the four study variables. The summary of literature review, theoretical and conceptual framework of the study are also presented in this chapter. The third chapter deals with research methodology which comprises research design, target population, procedure, research instrument, instrument validity and reliability, data collection and analysis. Chapter four presents the findings of the study along with the discussion are presented in this chapter. It includes the response rate, socio-demographic characteristics of respondents and findings on the five study variables. The summary of findings, conclusions and recommendations are presented in chapter five. In a addition, suggestions for further researcher are highlighted.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter undertakes a survey of literature on risk management and its role on performance of unsecured loans. The literature review is done under two main captions. First, the study provides a survey of theoretical literature with the view of bringing to the fore the various theories related to risk management and loan portfolio performance. This is followed by the empirical literature review which presents past findings on the said topic to help identify gaps. A conceptual framework detailing the variables and their indicators is also presented.

2.2 Theoretical Review

The study is anchored in the information asymmetry, technological determinism, modern portfolio, contingency theory and theory of constraints.

2.2.1 Information Asymmetry Theory

The theory of asymmetric data was created in the 1980s as a conceivable clarification for regular marvels that standard general equilibrium financial matters couldn't clarify. Izquierdo and Izquierdo (2007) explain asymmetric information portrays a circumstance where one gathering in an exchange has progressively or better data analyzed than another. This regularly occurs in exchanges where the dealer knows more than the purchaser, despite the fact that the turnaround can occur also. Possibly, this could be a hurtful circumstance since one gathering can exploit the other party's absence of information.

The data asymmetry issue happens ex post when just borrowers, however not banks, can watch real returns after task fruition (Brown, Hillegeist & Lo, 2004). This prompts an ethical danger issue. Moral peril emerges when a borrower takes part in exercises that lessen the probability of a credit being reimbursed. A case of good peril is the point at which firms' proprietors "redirect" stores (lawfully or illicitly) to themselves or to partners, for instance, through misfortune making contracts marked with related firms.

Unbalanced data is an issue in money related markets, for example, acquiring and loaning. In these business sectors the borrower has much better data about his money related state than the loan specialist. The loan specialist experiences issues knowing

whether it is likely the borrower will default (Izquierdo and Izquierdo, 2007). To some degree the moneylender will attempt to defeat this by taking a gander at past record and confirmation of compensation. Be that as it may, this lone gives a constrained data. The outcome is that moneylenders will charge higher rates to make up for the hazard. In the event that there was immaculate data, banks wouldn't have to charge this hazard premium.

The information asymmetry problem is relevant to this study because performance of loans in commercial banks is the dependent variable in the study. The lower the data asymmetry, the lower is the spread charged by the loan specialist. Furthermore, a lower data asymmetry can likewise guarantee the characteristic risks of the agreement are all the more precisely replicated in its spread.

2.2.2 Technological Determinism Theory

Technological Determinism theory states that media innovation decides how people think, feel, act, and how a general public works, it moves starting with one mechanical age then onto the next (Tribal-Literate-Print-Electronic) (Murphie & Potts, 2003). Innovation is the sole or prime precursor reason for changes in the public eye, while human components and social elements are viewed as auxiliary. Numerous investigations center around the evening out of access to ICTs as far as physical access, utilizing innovative determinism hypothesis in their theories and conclusions (Croteau & Hoynes, 2003).. The hole in access could likewise be comprehended as a wonder with three particular angles, including a worldwide partition (alluding to ICT incongruities between nations), a social separation (alluding to the hole in access to ICT between various areas of a country's general public) and a vote based gap (alluding to the distinction between the individuals who do and the individuals who do not utilize the assortment of computerized intends to take part openly life) (Norris, 2001).

As per innovative determinism, advancement and the opening up of business sectors are introduced as being required by the innovation change that goes with shutting the computerized separate. As indicated by Rodrigues, Gald, Rodrigues & Galdi (2017) this infers everybody has a similar potential to utilize innovation and to profit by ICTs, gave that everybody approaches these. In spite of the fact that the previously mentioned creators used mechanical determinism in their exploration, they likewise upheld the hypothesis of social determinism by incorporating financial factors in their

examination. The technological determinism theory recognizes technology such as Information Technology as the main mover of performance and development. Technological determinism (TD), basically, is the possibility that innovation affects our lives. This thought figures conspicuously in the prevalent creative ability and political talk, for instance in the Internet is revolutionizing the economy and society. This theory is therefore relevant in this study which seeks to establish how the use of information technology relates to the performance of loans in commercial banks in Nanyuki town, Kenya.

2.2.3 Modern Portfolio Theory

Modern Portfolio Theory (MPT), a hypothesis put forth by Markowitz (1952) on the idea that hazard unwilling financial specialists can build portfolios to upgrade or augment expected profit based for a given level of market chance, underscoring that hazard is a characteristic piece of higher reward. In its least complex frame, portfolio hypothesis is tied in with finding the harmony between boosting return and limiting danger (Maccheroni, Marinacci, Rustichini & Taboga, 2009).

MPT suggests that the danger of a specific venture containing a portfolio ought to be evaluated based on how its esteem shifts in correlation with the market estimation of the whole portfolio, and not in disengagement (Sabbadini, 2010). Markets process data so quickly while deciding security costs that it is amazingly hard to pick up an aggressive edge by exploiting market abnormalities or wasteful aspects. After some time, less secure speculations give higher returns as remuneration to financial specialists for tolerating more serious hazard. Including high-chance, low associating resource classes to a portfolio can really diminish unpredictability and increment expected rates of return. Detached resource class subsidize portfolios can be intended to convey after some time the most elevated expected returns for a picked level of hazard (Chandra & Shadel, 2007).

According to MPT, a portfolio (a mix of individual speculations) shows hazard and profit qualities based for its creation and the way those parts connect with each other (Low, Faff & Aas, 2016). For each level of hazard, there is an "ideal" resource allotment that is intended to create the best adjust of hazard versus return. The hazard in an arrangement of assorted individual stocks will be not as much as the hazard inborn in holding any of the individual stocks. The hypothesis expect that advantage returns are typically disseminated arbitrary factors, speculators endeavor to expand

monetary market returns, financial specialists are balanced and dodge hazard when conceivable. The hypothesis additionally accept that financial specialists all approach similar wellsprings of data for venture choices, speculators share comparative perspectives on expected returns, assessments and business commissions are not considered. It is likewise accepted that financial specialists are not sufficiently extensive players in the market to impact the cost and speculators have boundless access to get (and loan) cash at the hazard free rate (Mahdavi, 2013).

Modern portfolio theory has markedly affected how speculators see risk, return and portfolio management. Financial specialists who are risk loath require a more prominent return for a given measure of risk than a risk lover. Portfolio theory gives a setting to understanding the connections of deliberate risk and reward. It has molded how institutional portfolios are administered and induced the usage of passive venture methods. This theory is therefore relevant in assessing risk management on performance of loans in commercial banks in Nanyuki town, Kenya.

2.2.4 Contingency Theory

Contingency theory was proposed by Fiedler (1964). The main proponents of the theory are Collier and Mark (2006). Contingency theory is a way to deal with the investigation of authoritative conduct in which clarifications are offered in the matter of how unexpected factors, for example, innovation, culture and the outside condition impact the plan and capacity of associations. The supposition hidden possibility hypothesis is that no single sort of hierarchical structure is similarly relevant to all associations. As per Woods (2009), hierarchical viability is reliant on a fit or match between the kind of innovation, ecological unpredictability, the extent of the association, the highlights of the authoritative structure and its data framework.

Contingency theories were created from the sociological functionalist hypotheses of association structure, for example, the basic ways to deal with authoritative investigations by Woods (2009), Chenhall, (2003), and Reid and Smith (2000). Contingency theory is utilized to depict the connections between the specific situation and structure of interior control viability and hierarchical execution, particularly unwavering quality of money related revealing. Observational investigation recommends that inner examiners who are specific and higher in inward review capacity will accomplish inside control viability examination and that the firm will

profit by the hierarchical adequacy by means of interior control instrument proficiency (Cadez & Guilding, 2008).

Risk management is an indispensable piece of the corporate vital choice. These choices are regularly cutting edge, and the effective usage of a productive hazard administration framework is dependent upon various factors (Kulchmanov *et al.*, 2016). Contingency theory asserts that at the top level of the control system, the basic structures of risk management appear to be common across large organizations. Ewerbring and Klingvall (2016) indicate that putting into considerations that all organizations have diverse structures and that venture risk management (ERM) ought to saturate the whole associations, distinctive ERM utilization will happen inside organizations with various structures. Subsequently, contingency hypothesis ends up significant to assess risk management on performance of loans in commercial banks in Nanyuki town, Kenya.

2.2.5 Theory of Constraints

The Theory of Constraints (TOC) is a general logic created by Goldratt (1997) normally connected to running and enhancing an association. It is a technique for recognizing the most essential restricting element that hinders accomplishing an objective and afterward methodically enhancing that imperative until the point when it is not any more the constraining element (Noreen, Smith & Mackey, 1995). Basically, TOC implies recognizing requirements and overseeing them, bringing about: on-Time In-Full (OTIF) conveyance to clients, disposal of stock-outs over the inventory network, better control over tasks and far less firefighting, diminished process durations and hence inventories, fast reaction culture and less perpetual clashes between colleagues and uncovering extra creation limit with no speculation (Schrageheim, Dettmer & Patterson, 2009).

In order to achieve the goal, Goldratt (1997) plots a five-advance procedure to applying the hypothesis: recognize the procedure's requirements, choose how best to misuse the procedure limitations, subordinate everything else to the above choices, assess the procedure imperative and evacuate the requirement and re-assess the procedure. The piece of a framework that constitutes its weakest connection can be either physical or an arrangement. Goldratt (1997) trains the change operator to get however much capacity as could be expected from an obliging part, without experiencing costly changes or overhauls. The non-limitation parts of the framework

must be changed in accordance with a "setting" that will empower the requirement to work at most extreme viability. "Hoisting" the imperative alludes to making whatever move is important to take out the limitation. This progression is just considered if stages two and three have not been fruitful. Real changes to the current framework are considered at this progression (Noreen *et al.*, 1995).

TOC has many intersections with risk and risk management. The theory of constraints explains how to boost the performance of any process that involves a series of interdependent steps. As mentioned by Oliver (2010) , it provides better tools for risk management and mitigation. TOC is therefore relevant to evaluate risk management on performance of loans in commercial banks in Nanyuki town, Kenya.

2.3 Empirical Review

2.3.1 Information Technology and Performance of Unsecured Loans

Madume (2010) analysed the impact of ICT on the productivity of the Nigerian banking sector using CAMEL and the translog production function. Results showed that bank output such as loans and other assets increase significantly to changes in expenditure on information and communication technologies. The examination demonstrated that expanded profitability in numerous cases prompts enhanced operational proficiency and productivity which are the commendable objectives of any saving money foundation.

Another examination by Romdane (2012) explored the execution of data innovation (IT) interests in an example of 15 Tunisian banks over the period 1998– 2009. The observational discoveries propose that the effect of IT speculations on Tunisian banks' execution is certain. The investigation of the inside determinants of banks' effectiveness levels demonstrates that size and administrative limit emphatically and fundamentally influence the Tunisian banks' cost proficiency, while the offer of non-performing credits speaks to a wellspring of wastefulness.

Tasmin (2012) analyzed the impact of information and communication technology on banks' performance and customer service delivery in the Malaysian banking industry. The study built up that the utilization of ICT can prompt lower costs, yet the impact on productivity stays uncertain, attributable to the likelihood of ICT impacts that emerge because of consistence popularity of gifted work compel, issues of expanding interest to meet client's desire for client benefit conveyance, dependability of the data framework and rivalry in money related administrations.

Barret (2016) inspected the connection between IT chance administration, organization measure, and the money related execution of credit associations in Jamaica. Consequences of the numerous relapse tests affirmed a factually noteworthy connection between IT hazard administration, foundation estimate, and the money related execution of Jamaican credit associations, $F(2, 99) = 46.861$, $p = 0.000$, $R^2 = .486$. Be that as it may, IT hazard administration activities did not give any critical variety ($\beta = .139$, $p = .074$) in budgetary execution.

Dangolani (2011) examined the impact of data innovation in the saving money arrangement of Bank Keshavarzi Iran. The discoveries demonstrated that Information innovation adds to the keeping money framework in three distinctive routes as tails: IT spares the season of the clients and the workers prominently, IT chops down the costs and IT encourages the system exchanges.

Monyoncho (2015) contemplate looked to decide the connection between E-Banking advances and money related execution of business banks in Kenya. The investigation uncovered that current ATM developments offer monetary foundations the chance to change the ATM from a money allocator to a client relationship administration device, improving unwaveringness among all clients. Charge cards are being received by the banks to expand wage, and to lessen credit and liquidity dangers. Versatile managing an account is probably going to impacts affect the gainfulness of business banks as business activities get smoothen and that web saving money offers the accommodation of directing a large portion of the keeping money exchanges during an era that suits the client.

2.3.2 Risk Analysis and Performance of Unsecured Loans

A study by Soi (2015) assessed credit risk management practices on the performance of commercial banks in Kenya. The examination set up that that in perspective of hazard investigation and evaluation as a credit chance administration hone in the bank the use of current ways to deal with chance estimation, especially for credit and general dangers is essential for business banks.

A comparable report by Kamau (2010) studied adoption of risk management by commercial banks in Kenya. It was found that Scenario investigation was the most widely recognized utilized system to quantify chance. Spending imperative, multifaceted nature of hazard administration process and high preparing costs were distinguished as the principle challenges confronting usage of hazard administration.

Kioko (2014) analysed credit risk assessment through credit scoring Models among commercial banks in Kenya. It was discovered that, 60.6% of the banks overviewed utilize credit scoring models amid credit chance appraisal of the different advance candidates while 39.4% do not utilize any credit scoring models using a credit card chance evaluation. The examination set up that different techniques used to evaluate credit chance are credit board and investigation of money related explanations like monetary record and the benefit and misfortune accounts incase of business advances.

Kossa and Pasha (2016) tried to discover how both open and private part banks are performing in chance appraisal and taking care of/overseeing dangers viably to conquer their issues. There was around comparative degree of credit chance introduction between state possessed and private banks for all traits of credit dangers, working effectiveness is great in broad daylight area than private division and better hazard administration condition could found in private banks contrasted with state claimed banks. All banks are affected by numerous components, for example, credit hazard, liquidity chance and operational hazard.

Wahome (2010) examined the hazard appraisal strategies being connected by the business banks in Kenya a well as assess the hazard introduction level of the business banks in Kenya. The result of the investigation showed that Kenyan Banks have set up different methods reasonable to their working condition to keep an eye on hazard that accompanies loaning of credits. The investigation could recognize the reasons for these dangers and how the banks in Kenya are tending to them and the alleviation factors that they have set up to guarantee checks and controls.

Ghani and Mahmood (2015) examined the condition of hazard administration rehearses (RMPs) executed among the microfinance suppliers in Malaysia and its association with the budgetary execution. The examination set up that there is no connection between hazard administration comprehension and hazard appraisal and investigation and execution of budgetary establishments.

Hitimana, Kule and Mbabazize (2016) evaluated chance factors that execution of business banks like credit chance, misappropriation, burglary and among others. The investigation set up that distinctive hazard administration framework which comprise of mandate control framework, preventive control framework and investigator control framework. The investigation uncovered that hazard administration framework has

enhanced Cogeбанque bank's arrival on venture, gainfulness, liquidity, return resource and profit for value and credit returns by 72.7%.

2.3.3 Risk Monitoring and Performance of Unsecured Loans

Mutuku (2016) analyzed the risk management rehearses grasped by Kenyan Commercial Banks and to assess the effect of these risk management hones on their gainfulness of the Kenyan banks. From the exploration it was reasoned that hazard administration rehearses under investigation altogether influenced the money related execution of business keeps money with a special case of capital sufficiency and hazard observing which had a negative impact.

Correspondingly, Ugirase (2013) built up that hazard observing is not an indicator of money related execution or profit for resources. A unit change (1%) in Risk observing prompts a decay of - 0.459 (- 459%) unit change in hazard checking lead to the abatement of benefit of the Commercial banks.

Obwogo *et al.* (2017) tried to set up the impacts of big business hazard administration measures on execution of business banks in Kenya. The investigation uncovered that hazard checking can be utilized to ensure that hazard administration rehearses are in line and legitimate hazard observing likewise encourages bank administration to find botch at beginning period in this way the examination presumes that hazard observing positively affects execution of business banks in Kenya.

Gakure *et al.* (2011) examined the connection between different credit alleviation procedures utilized by banks on unsecured advances and the general bank execution. The investigation set up that hazard observing reasonably influenced the execution of the bank and that controls set up and reactions set up influenced the execution of the bank all things considered.

Mutua (2015) went for examining the impact of relieving credit hazard to the execution of business banks as of now working in Chuka Town in Tharaka Nithi County. There was a positive connection between relief of credit hazard, chance ID and hazard observing and credit endorsements or authorizes by business banks in Chuka Town.

Cheplel (2013) researched the effect of Enterprise Risk Management on budgetary execution of business banks in Kenya and if the execution is decidedly influenced by hazard and control self-appraisal, key hazard pointers, episode administration,

consistence of both interior and outside directions, and activity following. The Kenyan banks were found to see well the need of setting up a companywide chance administration hones and join various practices which incorporate hazard ID evaluation and observing practices.

Mititi (2010) tried to decide the impact of credit chance administration hones on execution of private healing centers in Kenya. The investigation found that larger part of the healing centers had set up chance distinguishing proof, examination and appraisal methodologies and hazard observing systems as credit chance administration hones went for enhancing execution. Be that as it may, most healing facilities had not utilized present credit chance administration techniques utilized by private doctor's facilities in Kenya and could be in danger.

Kauna (2016) evaluated the impact of administration of credit chance practices on execution of the Kenyan banks particular business ones. The investigation found a noteworthy positive connection between credit chance distinguishing proof and credit hazard checking and the money related execution of business banks. The investigation found a positive immaterial connection between credit chance evaluation and monetary execution of business banks. The investigation additionally found a negative irrelevant connection between credit hazard control monetary execution of business banks in Kenya.

2.3.4 Risk Reporting and Performance of Unsecured Loans

Louhichi *et al.* (2015) investigated the impact of the correspondence about potential risk inside yearly reports on firm reputation. The discoveries featured that risk revealing influences emphatically organization reputation. They offer help to authenticity hypothesis as the revelation of risks data is a piece of a social get that ought to be remunerated with great reputation.

Stoel *et al.* (2017) directed an analysis that controls risk announcing position (quantitative versus subjective) crosswise over both vital and operational settings to look at their effect on risk management experts' discernments identified with the preparer of the reports and the basic nature of the data. They locate that subjective (quantitative) report data has a positive (negative) aberrant relationship with administrative discernments in regards to key risk management exercises. However, they do not discover this relationship in the setting where risk reports center around operational risks.

Lipunga (2014) inspected the risk revelation level in yearly reports of the Malawian commercial banks and the impact of productivity on it. The investigation uncovered a high risk divulgence level among the inspected banks. The individual bank score run was in the vicinity of 0.76 and 0.88 with a general score of 0.82. Demonstrating that all things considered 82% of the divulgence things were really unveiled in the yearly reports of the tested banks. Moreover, the divulgence scores in light of the risk revelation classifications fluctuated in the vicinity of 0.61 and 1.00. The class with most minimal score was board and management structure identified with risk management (0.61) trailed by operational risk and different risks (0.69). Capital management scored 0.74, while credit risk, liquidity risk and market risk each scored the most extreme score of 1.00.

Pérignon and Smith (2010) examined both the level of Value-at-Risk (VaR) revelation and the exactness of the uncovered VaR figures for an example of US and universal commercial banks. They surveyed the precision of VaR figures by concentrate the quantity of VaR exceedances and whether genuine day by day VaRs contain information about the instability of resulting exchanging incomes. Not at all like the level of VaR revelation, had the nature of VaR exposure hinted at no change after some time. They found that VaR figured utilizing Historical Simulation contains almost no information about future instability.

Rao and Jirra (2017) examine the effect of corporate governance attributes and bank characteristics on risk disclosure. The result of the study showed that risk disclosure is positively affected by risk committee size, gender diversity in board room, and frequency of risk committee meeting. Moreover, the result of the study also showed that ownership type has a significant negative relationship with risk disclosure.

Siro (2010) investigated the connection between credit chance exposures and firm qualities among the Kenyan business banks. Dominant part of the banks in Kenya are not recorded, anyway among the recorded banks, none recorded a poor rating of credit chance revelations and this underscores the part of controllers in authorizing exposures among recorded firms including banks.

2.4 Summary of Literature and Gaps

The literature review focused on the impact of risk administration on the execution of credits. In particular, extensive literature was reviewed on the effect of information technology, risk analysis, risk monitoring and risk reporting on loan performance.

Reviewed literature suggests that risk management as indicated by the four study variables leads to increased bank performance through increased loan repayment. However, inconsistencies exist among available studies where some studies find significant relationships whereas others find no relationship at all. Majority of the studies reviewed had bank performance as the dependent variable instead of loan performance. Other studies did assess risk management but did not relate with bank or loan performance. A summary of the gaps filled is provided in Table 2.1

Table 2.1 Research Gaps

Authors	Title	Methodology	Findings	Recommendations	Gap	Gap filled
Barret (2016)	Effects of Information Technology Risk Management and Institution Size on Financial Performance	Quantitative correlation study	IT risk management activities did not give any critical variety (beta = .139, p = .074) in money related execution	Research findings may lead to more effective and efficient operations of Jamaican credit unions and improvement in their financial performance,	Relationship between Technology Risk Management and loan portfolio performance was not assessed	This study will seek to establish the effect of information technology on performance of unsecured loans in commercial banks
Romdhane (2013)	Impact of information technology on the Performance of Tunisian banks: a stochastic Frontier analysis with panel data	Data envelopment Analysis (DEA) method and the stochastic frontier analysis (SFA) methods	Estimate and Administrative limit emphatically and fundamentally influence the Tunisian banks' cost Effectiveness, while the offer of non-performing credits speaks to inefficiency.	Banks must Demonstrate expertise and a sufficient learning capacity to cope with the current Global financial crisis and to overcome the problems associated with this Phenomenon.	Relationship between Technology Risk Management and loan portfolio performance was not assessed	This study will seek to establish the effect of information technology on performance of unsecured loans in commercial banks
Monyoncho (2015)	Relationship between banking technologies and financial performance of commercial banks in Kenya	Descriptive statistics (weighted means, standard deviation) Pearson moment correlation Regression analysis	Credit cards are being adopted by the banks so as to increase income, and to reduce credit and liquidity risks.	Commercial banks should continue investing in ICT.	Information technology not assessed in the context of risk management	Information technology will be evaluated as it relates to risk management
Wahome	An investigation of	Descriptive survey	Kenyan Banks have set	There is a requirement	Association	The study will

(2010)	risk assessment techniques applied by commercial banks in Kenya		up different systems appropriate to their working condition to beware of hazard that accompanies loaning of loans.	for the banks to continue refreshing their hazard evaluation strategies in accordance with the changing operational condition and additionally worldwide patterns identified with the saving money industry.	between risk assessment and loan performance was not assessed	seek to establish the role of risk assessment on the performance of unsecured loans.
Kossa and Pasha (2016)	Risk Assessment and Handling in Ethiopian Commercial Banks: A Comparative Study of Public and Private Sectors	Descriptive survey	There exist roughly comparative degree of credit risk presentation between state possessed and private banks for all properties of credit risks, working productivity is great in public than in private sector	It is recommended for banks' management to effectively assess and handle risks during this typical time.	Association between risk assessment and loan performance was not assessed	The study will seek to establish the role of risk assessment on the performance of unsecured loans.
Soi (2015)	Effect of Credit Risk Management Practices on Financial Performance of Commercial Banks in Kenya	Descriptive survey	Bank considers risk identification as a process in credit risk management, that the bank focuses in interest rate risks in the risk identification map and that the bank focuses in foreign exchange risks.	Commercial banks management should understand how they can edge themselves against the eminent dangers of over exposure to credit risk whose importance cannot be understated	Loan portfolio performance not assessed	Loan portfolio performance will be the dependent variable

Mutuku (2016)	The effect of risk management on the financial performance of commercial banks in Kenya	Descriptive survey	Risk management hones under examination altogether influenced the budgetary execution of commercial banks with an exemption of capital adequacy and risk observing which had a negative impact.	Commercial banks should check their risk management strategy, processes and activities and streamline them with worldwide models, for example, the Basel III accords.	Loan portfolio performance not assessed	Loan portfolio performance will be the dependent variable
Mutua (2015)	Effect of mitigating credit risk on performance of commercial Banks in Kenya: a case of Chuka town	Descriptive research design	There was a huge connection between bank execution (as far as return On resource) and credit risk management (as far as risk recognizable proof, Observing and credit sanctions.	It is of great significance that banks put into practice reasonable credit risk management and safeguarding. The benefits of the banks and those of the investors' interests	Loan portfolio performance not assessed	Loan portfolio performance will be the dependent variable
Mititi (2010)	Credit risk management by private hospitals in Kenya	Descriptive survey Primary and secondary data	Dominant part of hospitals had set up chance distinguishing proof, investigation and appraisal methodologies and hazard observing techniques as credit chance administration hones went for enhancing performance.	For doctor's facilities to adequately utilize credit chance methodology, clinics require solid and capable credit chance administration rehearses.	Study conducted in hospitals	Study will be conducted in banks

Siro (2010)	An investigation of the relationship between credit risk disclosure and firm characteristics for Kenyan Commercial Banks	Descriptive research design	Credit chance revelation rehearses shifted surprisingly among various banks as were bookkeeping practices.	There is have to grasp the basel board of trustees, (1999) acknowledge chance exposure rules as this are universal rules went for upholding consistency in the global managing an account industry and lessening bank disappointments around the world.	Credit risk disclosure was the dependent variable	Loan portfolio performance will be the dependent variable
Lipunga (2010)	Risk Disclosure Practices of Malawian Commercial Banks	Risk disclosure index constructed based on the requirements of the Basel II framework,	The results revealed a high risk disclosure level among the sampled banks. The individual bank score range was between 0.76 and 0.88 with an overall score of 0.82.	There should be a strict regulation by the supervisory body to enhance the quantity and quality of risk disclosure by banks.	Relationship between risk disclosure and loan portfolio performance not assessed	This study seeks to find out the effect of risk reporting on the performance of unsecured loans in commercial banks
Kamau (2010)	Adoption of risk management by commercial banks in Kenya	Descriptive research design	Greater part of the banks were found to utilize both subjective and quantitative strategies to quantify chance. Situation investigation was observed to be the most widely recognized utilized method to gauge risk.	There need to upgrade chance administration in the saving money segment keeping in mind the end goal to consent to worldwide gauges to stay focused.	No relationships among variables were conducted	The study will find out the role of risk reporting on the performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

Source: Author, (2017)

2.5 Conceptual Framework

The conceptual framework shows the variables in the study

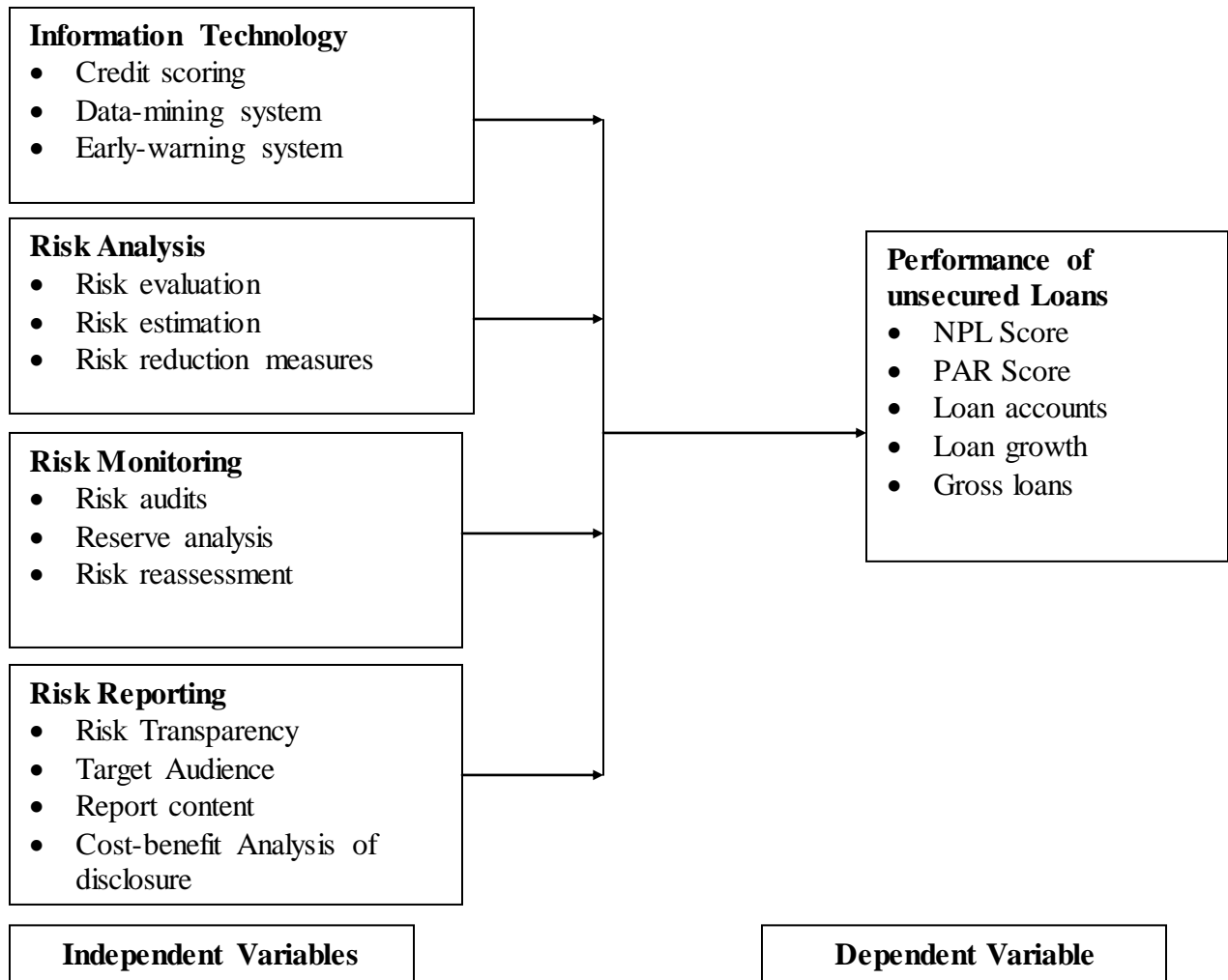


Figure 2.1 Conceptual framework

Source: Author, (2017)

The purpose of the study was to determine the effects of risk management on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The independent variables in the study were information technology, risk analysis, risk monitoring and risk reporting. The dependent variable was loan portfolio performance. The conceptual framework also shows the indicators for each variable.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section deals with methods that were used to carry out this study. It is subdivided into eight subsections namely: research design, target population, sample size and sampling procedures, research instruments, instruments validity, instrument reliability, data collection procedures and data analysis techniques.

3.2 Research Design

Polit, Beck and Hungler (2001) describe the research plan as the specialist's general technique for noting the exploration question or testing the examination speculation. The current study used a descriptive cross sectional research design. Cross-sectional studies are carried out at one time point or over a short period. Descriptive studies are usually the best methods for collecting information that will demonstrate relationships and describe the world as it exists (Creswell, 2005). This design was therefore appropriate as it enabled the researcher describe the relationships between the variables using minimum resources and time.

3.3 Operationalization and Measurement of Variables

The study had 5 variables. The independent variables in the study were information technology, risk analysis, risk monitoring and risk reporting. The dependent variable was loan portfolio performance. Table 3.1 shows the variables and how they were operationalized and measured.

Table 3.1 Operationalization and Measurement of Variables

Variable	Nature of variable	Operationalization	Scale	Indicators	Tests
Performance of unsecured Loans	Dependent	Quality of the bank's unsecured loan portfolio	Ratio	NPL Score PAR Score Loan accounts Loan growth Gross loans	Descriptive statistics Regression analysis
Information Technology	Independent	Extent to which IT tools are used in lending procedures	Nominal	Credit scoring Data-mining system Early-warning system	Descriptive statistics Regression analysis
Risk analysis	Independent	Extent to which risk analysis tools are used in lending procedures	Nominal	Risk evaluation Risk estimation Risk reduction measures	Descriptive statistics Regression analysis
Risk monitoring	Independent	Extent to which risk monitoring is used in lending	Nominal	Risk audits Reserve analysis Risk reassessment	Descriptive statistics Regression analysis
Risk reporting	Independent	Extent to which banks report risks to customers and shareholders	Nominal	Risk Transparency Target Audience Report content Cost-benefit Analysis of disclosure	Descriptive statistics Regression analysis

3.4 Target Population

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions (Saunders, Lewis & Thornhill, 2007). In this study, commercial banks in Nanyuki town were targeted. Nanyuki Town was targeted as it is one of the fastest growing urban areas in Kenya. The entry of major banks and supermarkets to Nanyuki town as opposed to nearby towns such as Nyeri is evidence to this fact. The town is multi-cultural and is the market centre for farms, ranches, game parks and wildlife conservancies in the region (County government of Laikipia, 2017). Nanyuki town has witnessed growth in non-performing unsecured loans which has led to downsizing of many banks and closure of Nanyuki branches such as Bank of Africa and National Bank of Kenya.

There were 12 commercial banks in the town as shown in Table 3.2 (CBK, 2018). Respondents included branch managers and departmental heads. Departmental heads included heads of operations, credit, customer service and SME sections. These persons were assigned duties of loaning and are therefore resourceful persons on matters concerning the study. There were 12 managers and 48 heads of department in the 12 banks in Nanyuki which gives a total of 60 respondents.

Table 3.2 Commercial Banks in Nanyuki

Number	Bank
1	Barclays Bank
2	Sidian Bank
3	Cooperative Bank of Kenya
4	Standard Chartered Bank
5	Equity Bank
6	Family Bank
7	I&M Bank
8	CFC Stanbic Bank
9	KCB Bank
10	NIC Bank
11	Commercial Bank of Africa
12	GT Bank

Source: CBK (2018)

3.5 Sampling Strategy

The study used purposive sampling. According to Creswell (2009), purposive sampling is a sort of sampling in which specific settings, people, or occasions are intentionally chosen for the imperative data they can give that can't be gotten also

from different decisions. It is generally utilized as a part of research for identifying and determination of data rich cases identified with the wonder of interest. Using this technique, all 12 banks and 60 respondents were involved in the study. This is to ensure that the study had a large enough sample for generalisation of findings. In addition, all the banks were located in one area and are close to one another so it was easy for the researcher to collect data without any major cost implications.

3.6 Data Collection Instruments

The study used primary data. Primary data was collected by way of a self-administered questionnaire which was filled by branch managers and departmental heads of the participating banks. Questionnaires were preferred as they are able to collect a large amount of information from a large population in relatively short amount of time. In addition, data collected through questionnaires eases analysis (Burns, 2010). The researcher developed the questionnaires. Majority of the questions were in five-point likert-scale format. Likert scale were preferred because such questions are quick and economical to administer and score and they lend themselves well to item analysis procedures (Dawson, 2009).

3.6.1 Instrument Validity

Validity is the extent to which an instrument measures what it is supposed to (Silverman, 2005). Construct and criterion validity was ensured in the study. Content validity is the degree to which the components inside an estimation technique are applicable and illustrative of the develop that they will be utilized to measure (Haynes *et al.*, 1995). Criterion Validity refers to the degree to which a test correlates with an external criteria that is measured at the same time. This was done through ensuring that questions are formulated from indicators identified in the conceptual framework. The researcher also had the supervisor and a statistician review the questionnaire to certify that the questions yielded valid data.

3.6.2 Instrument Reliability

Reliability is concerned with the consistency of estimation, that is how much the inquiries utilized as a part of an overview suggest a similar kind of data each time they are utilized under similar conditions (Blaxter, Hughes & Tight, 2006). In this study, reliability was established through a pre-test. The pretest was conducted on 2 operations managers and 10 departmental heads of 2 commercial banks in Nyeri. The split half method was employed. This involved splitting the questionnaire into two and

having the same participant fill both. If the two halves of the questionnaire provide similar results this would suggest that the test has internal reliability.

Cronbach alpha was used to measure reliability. Cronbach's alpha determines the internal consistency or normal relationship of items in a survey instrument to measure its reliability (Cronbach, 1951). A usually acknowledged dependable guideline is that an alpha of 0.7 indicates satisfactory dependability and 0.8 or higher indicates good reliability. High reliability (0.95 or higher) is not necessarily desirable, as this indicates the items might be altogether excess (Kimberlin & Winterstein, 2008). The current study recorded an average Cronbach coefficient of 0.77.

3.7 Data Collection Procedures

The researcher got an authorization letter from the school of business, Kenyatta University identifying him as a bona fide student of the institution. This letter was used to apply for a research permit from the National Council of Science and Technology. The researcher contacted the management of the various commercial banks to inform them of the impending study. On an agreed date, the researcher delivered the questionnaires to the individual banks. The researcher gave the respondents a week to fill the questionnaires. This gave the respondents ample time to answer the questions thereby ensuring a high response rate. The researcher left his contacts for any respondent who may need clarification. After 7 working days, the researcher collected the questionnaires. Financial statements of the participating banks were reviewed to collect data on performance of loans.

3.8 Data Analysis

Data was cleaned, scored and coded before being fed into the computer using SPSS software. Descriptive statistics such as frequencies, percentages, mean and standard deviation were used to organize findings. Since all variables had more than one indicator the compute variable function in SPSS was used to come up with one composite score for each of the variables to enable regression analysis. Regression analysis was also be conducted. Regression analysis was conducted to determine the statistical significance of the attempted prediction between risk management and performance of loans among commercial banks, determine the strength of association between performance of loans among commercial banks and the multiple independent variables (information technology, risk analysis, risk monitoring and risk reporting), identify the relative importance of each of the multiple independent variables in predicting the performance of loans among commercial banks and predict the values

of the dependent variable from the values of the multiple independent variables. The model to be used is as stipulated by Ugirase, (2013) as shown below.

$$Y = C + \beta_1 IT + \beta_2 RA + \beta_3 RM + \beta_4 RR + e$$

Where:

Y = Loan portfolio performance

C = Constant

β = Beta values

IT = Information Technology

RA = Risk Analysis

RM = Risk Monitoring

RR = Risk Reporting

e = Error term

The tests were performed the help of SPSS software at 95% confidence level. Findings were presented in form of tables and figures.

3.9 Ethical Considerations

Authorization to conduct the study was sought from the researcher's university and the participating banks. Consent to participate in the study was sought from potential participants before administering the questionnaire. Respondents were not required to indicate their names for confidentiality. Findings were only used for academic purposes.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The findings of the study along with the discussion are presented in this chapter. It includes the response rate, socio-demographic characteristics of respondents and findings on the five study variables. Findings are presented in form of tables and figures.

4.2 Response Rate

A total of 60 questionnaires were distributed to branch managers and departmental heads of commercial banks in Nanyuki town of which 55 were returned. This represents a response rate of 92% which is considered high enough to justify generalizability of findings as it is above the 70% recommended by Mugenda and Mugenda (2010) for descriptive studies.

4.3 Descriptive Statistics

4.3.1 Socio-Demographic Characteristics of Respondents

Socio-Demographic characteristics assessed in the study included gender, age, level of education and working experience. The findings are presented in Table 4.1.

Table 4.1 Socio-Demographic Characteristics of Respondents

Characteristic	Category	Frequency	Percentage	Mean
Gender	Male	36	65%	
	Female	19	35%	
	Total	55	100%	
Age (Years)	22- 26	5	9%	34
	27-31	9	16%	
	32 -35	17	31%	
	Over 35	24	44%	
	Total	55	100%	
Level of education	Bachelors degree	44	80%	
	Postgraduate degree	11	20%	
	Total	55	100%	
Working experience	1-10	28	51%	9
	11-20	27	49%	
	Total	55	100%	

Results in Table 4.1 indicate that majority (65%) of the respondents in the study were male. This shows that there is a gender disparity among the branch managers and departmental heads of commercial banks in Nanyuki town whereby women are

underrepresented. The findings also show that 44% of the respondents were aged above 35 years while those aged between 32 and 35 years accounted for 31% of respondents. The mean age was 34 years. This signifies that branch managers and departmental heads of commercial banks in Nanyuki town are relatively young as majority of them were below the age of 40 years.

Findings in Table 4.1 above show that majority (80%) of the respondents had acquired a bachelor's degree while 20% had acquired a post graduate degree. This is an indication that branch managers and departmental heads of commercial banks in Nanyuki town were highly educated and therefore in a position to comprehend and respond appropriately to the questions in the study. The findings also show that slightly above half of the respondents had a working experience of between 1 and 10 years while those with a working experience of between 11 and 20 years accounted for 49%. The mean working experience was 9 years. This shows that majority of respondents had acquired adequate experience to enable them respond resourcefully to the study questions.

4.3.2 Information Technology

The study sought to establish how banks in the study used information technology in risk management. The findings would enable establish the effect of use of information technology on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings are presented in Table 4.2.

Table 4.2 Information Technology

Statement	N	Min	Max	Mean	SD
The bank uses credit scoring models to assess the credit risk of a borrower and aid in the credit evaluation	55	1	3	1.51	0.505
Credit scoring provides a systematic, comprehensive way in which to assess the borrower's financial data	55	1	2	1.20	0.404
The bank employs data mining techniques in a credit risk analysis database.	55	1	5	2.04	1.037
Data mining can indicate whether the request of lenders can be classified as performing or non-performing loans risk.	55	1	5	2.04	0.981
The bank uses an early warning system in its loan portfolio management	55	1	4	1.96	0.769
The Early Warning systems predicts the deterioration of credit positions as early as possible	55	1	5	1.78	0.686

Results in Table 4.2 show that the average mean (M=1.76, SD=0.730) indicates that a high agreement and convergence of views among the respondents in the items. Majority of respondents indicated that credit scoring models (M=1.51, SD=0.505), data mining techniques (M=2.04, SD=1.037) and early warning systems (M=1.96, SD=0.769) were employed in risk management in their banks. The findings therefore suggests that information technology was used in risk management to a large extent in commercial banks in Nanyuki town, Kenya. This is consistent with Benson (2017) who indicated that IT is not only useful to look at historical data in a source and uses of funds statement, but it is also extremely important to estimate the business borrower's future sources and uses of funds and its statement of financial position. The findings are also consistent with Chornous and Ursulenko (2013) argument that latest technology, which combines the achievements of artificial intelligence, numerical mathematics, statistics, has enabled to suggest new promising approaches to risk assessment and information support.

4.3.3 Risk Analysis

The study sought to assess risk analysis practices of participating commercial banks. The findings would enable examination of the effect of risk analysis on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings are presented in Table 4.3.

Table 4.3 Risk Analysis

	N	Min	Max	Mean	SD
The bank conducts risk evaluation to measure the probability that loss will occur	55	1	2	1.31	0.465
Rating the risk of each loan in timely credit evaluations is fundamental	55	1	2	1.38	0.487
Scenario analysis was the most common used technique to measure risk	55	1	5	3.41	1.388
The bank uses various models to estimate risk	55	1	3	1.84	0.656
Quantitative credit risk estimation models measure of client's probability of default	55	1	3	1.72	0.866
The banks evaluates credit risk of credit applicants by using standardized methods	55	1	4	1.95	1.070
Risk analysis limits the uncertainty preventing the bank from suffering unacceptable losses	55	1	3	1.97	0.434
The bank employs various risk reduction measures	55	1	2	1.26	0.439
Risk reduction measures are subject to the severity of risk envisaged	55	1	5	2.31	1.049

Findings in Table 4.3 show that there was a high agreement (M=1.91, SD=0.762) on the items tested relating to risk analysis in lending. The findings show that majority of participating banks conducted risk evaluation (M=1.31, SD=0.465), risk estimation (M=1.72, SD=0.866) risk reduction (M=1.26, SD=0.439). The findings therefore show that commercial banks in Nanyuki town, Kenya conducted risk analysis to a large extent. This finding is in agreement with Ljubić *et al.* (2015) who indicated that banks should identify and assess the operational risk inherent in all material products, activities, processes and systems and its vulnerability to these risks. The finding is also in agreement with Wahome (2010) who established that having an efficient risk assessment systems increases the likelihood of banks success, reduces possibility of bank failures and limits the uncertainty of the overall financial performance to preventing banks from suffering unacceptable losses.

4.3.4 Risk Monitoring

The study sought to find out risk monitoring practices of banks in the study. The findings would be used to assess the effect of risk monitoring on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings are presented in Table 4.4

Table 4.4 Risk Monitoring

	N	Min	Max	Mean	SD
Risk audits are performed to link internal auditing to the bank's overall risk management framework.	55	1	4	2.31	1.049
Credit Audit examines compliance with extant sanction and post-sanction processes laid down by the bank from time to time.	55	1	5	2.97	1.388
The bank carries out reserve analysis to assess to monitor the bank's risk management activities	55	1	5	4.00	0.208
The bank sets reserve levels by performing an analysis of potential loan losses in its portfolio.	55	1	5	3.41	1.388
The bank carries out risk reassessment to identify new risks and reassessing current ones	55	1	5	3.21	1.136
Risk reassessment is conducted to find out any mistakes in risk analysis	55	1	5	2.97	0.425
Proper risk monitoring also helps bank management to discover mistake at early stage	55	1	2	1.46	0.829
Average				2.90	0.918

The results in Table 4.4 indicate a mean of 2.90 ± 0.918 which signifies a moderate agreement and divergence of views regarding risk monitoring practices of banks in the study. This suggests that risk monitoring was conducted to a moderate extent among the participating banks. Although majority of respondents agreed that proper risk monitoring also helps bank management to discover mistake at early stage, reserve analysis (M=4.00, SD=0.208), setting reserve levels (M=3.41, SD=1.388) and risk reassessment (M=3.21, SD=1.136) were not highly observed. The findings therefore suggests gaps in risk monitoring in commercial banks in Nanyuki town, Kenya. This is in tandem with Oloo (2009) argument that banks should have a keen awareness of the need to identify, measure, monitor and control various risks for survival as well as their progress. The findings are also in tandem with Al-Tamimi and Al-Mazrooei (2007) who indicated that risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover mistake at early stage. The findings are however in contrast to Kodithuwakku (2015) finding that to monitor the credit risk more closely, banks are carrying out rigorous credit analysis of counterparties and various products.

4.3.5 Risk Reporting

The study also assessed risk reporting practices of participating banks in order to find out the effect of risk reporting on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings are presented in Table 4.5

Table 4.5 Risk Reporting

	N	Min	Max	Mean	SD
The bank reports its business risks to shareholders	55	1	3	1.47	0.608
There is risk transparency, both in terms of internal risk reporting as well as external disclosure	55	1	2	1.36	0.637
Disclosures are comprehensive and include all the bank's key activities and risks.	55	1	4	2.42	1.357
Disclosures present relevant information and reflect how the bank manages its risks.	55	1	4	2.67	1.037
Disclosures are consistent over time, comparable among banks and provided on a timely basis.	55	1	3	1.39	0.627
Disclosures are provided on a timely basis.	55	1	2	1.38	0.972
Banks' directors are sometimes reluctant to disclose additional information	55	1	5	2.96	0.637
Risk reporting leads to better stewardship of the	55	1	4	2.05	0.870

The results in Table 4.5 indicate an average mean 1.96 ± 0.843 denotes a high agreement among the respondents on the statements put to them regarding risk reporting. This suggests that risk reporting was conducted to a very large extent. The findings show that majority of banks reported their business risks to its shareholders and customers (M=1.47, SD=0.608), there was risk transparency (M=1.36, SD=0.637). The findings also show that disclosures were comprehensive (M=2.42, SD=1.357), relevant (M=2.67, SD=1.037), consistent (M=1.39, SD=0.627) and timely (M=1.38, SD=0.972). This finding is in agreement with Johnson (2010) that a growing demand for better reporting of business risks has emerged in recent decades based on the belief that improved understanding of business risks by investors and other users of corporate reporting should lead to better stewardship of companies and to a more efficient allocation of resources. The finding is however in disagreement with Harle *et al.* (2016) who reported that while regulatory requirements have already done much to improve the quality of the data used in risk reports and their timeliness, less attention has been given to the format of reports or how they could be put to better use for making decisions .

4.3.6 Performance of Loans

Performance of loans was assessed by checking on non-performing loans, portfolio at risks, number of loan accounts, gross loans and loan growth.

4.3.6.1 Non-Performing Loans

The average non-performing loans (%) were noted over the study period. The findings are presented in Table 4.6.

Table 4.6 Non-Performing Loans

NPL (%)	Frequency	Percentage	Mean
1% - 5%	7	58	5.8%
6% -10%	2	17	
11% - 15%	2	17	
> 16%	1	8	
Total	12	100	

The results in Table 4.6 show that slightly above half (58%) of the participating banks had an average non-performing loan percentage of between 1% and 5%. The mean NPL average was 5.8%.

4.3.6.2 Portfolio at Risk

The average portfolio at risk (PAR) was also assessed over the study period. The findings in Figure 4.1 show that 42% of the banks had an average portfolio at risk of less than 10% while those who had a PAR score between 11% and 20%. The mean PAR was 12.8%.

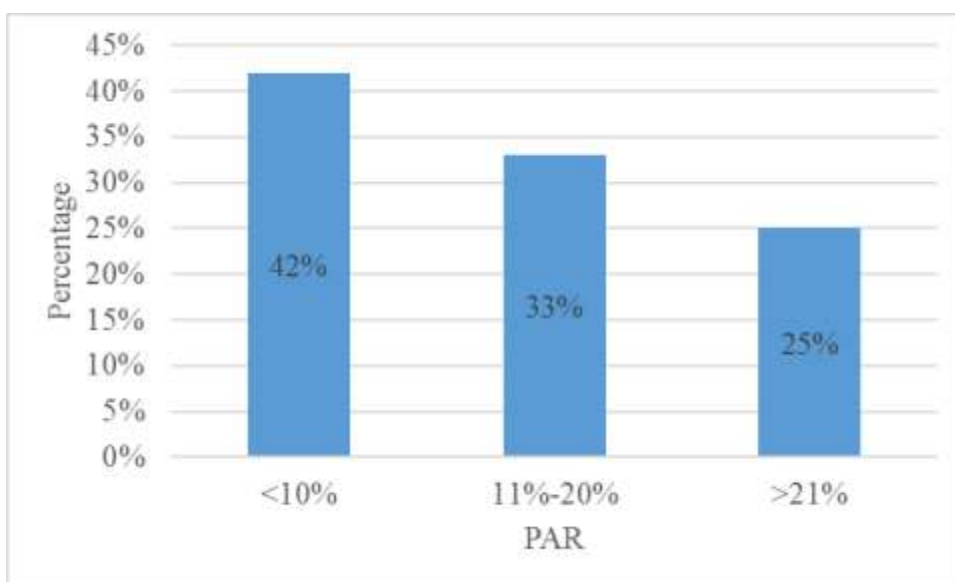


Figure 4.1 Portfolio at Risk

4.3.6.3 Number of Loan Accounts

To measure loan performance, the number of loan accounts was also assessed. The findings are presented in Table 4.7.

Table 4.7 Number of Loan Accounts

Loan accounts	Frequency	Percentage	Mean
< 100,000	3	25	133, 088
100, 001 – 500,000	8	67	
>500,000	1	8	
Total	12	100	

The results in Table 4.7 indicate that majority (67%) of the banks in the study had between 100, 001 and 500, 000 loan accounts over the study period. The man number of loan accounts was 133, 088.

4.3.6.4 Gross loans

The average gross loans of the participating banks are presented in Table 4.8.

Table 4.8 Number of Loan Accounts

Gross loans (KES) (Millions)	Frequency	Percentage	Mean
100 -250	4	33	321, 084
251 - 500	5	42	
501 - 750	2	17	
> 750	1	8	
Total	12	100	

The results in Table 4.8 indicate that the gross loans for 42% of the banks in the study was between KES 251M and KES 500M while 33% of the banks had gross loans of less than KES 250M. The mean gross loans was 321M.

4.3.6.5 Loan Growth

The percentage loan growth in the banks is shown in Figure 4.2. Findings in Figure 4.2 show that 33% of the banks in the study had a loan growth of between 6% and 10% while an equal number (33%) had a loan growth between 11% and 15%. The mean loan growth was 12%.

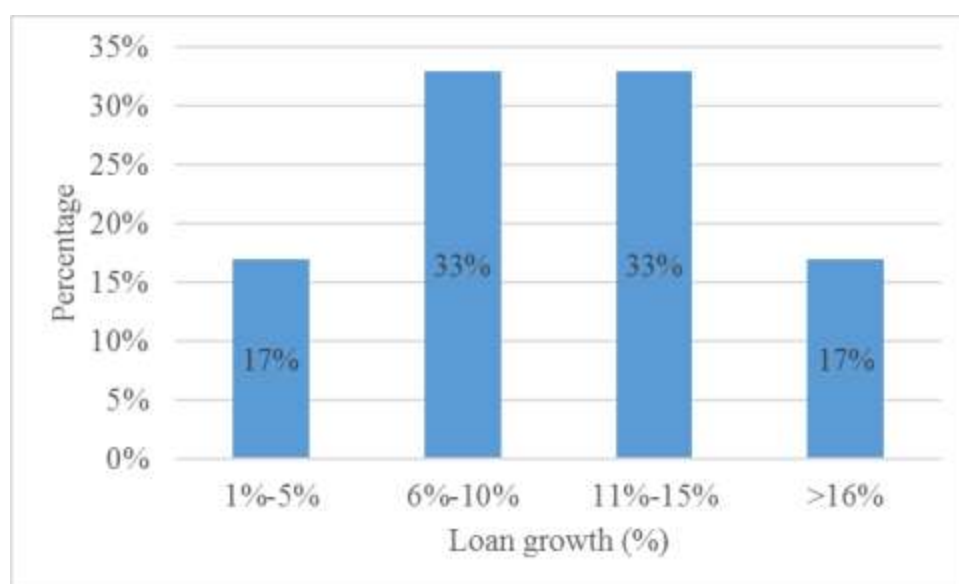


Figure 4.2 Loan Growth

4.3.7 Respondents' Opinion on Most Affecting Factor

Respondents in the study were asked to indicate which of the four variables in the study had the most effect on performance of unsecured loans in commercial banks. Findings in Figure 4.3 show that slightly above half (56%) selected risk analysis while 20% picked information technology as the factor with the most influence on performance of unsecured loans in commercial banks.

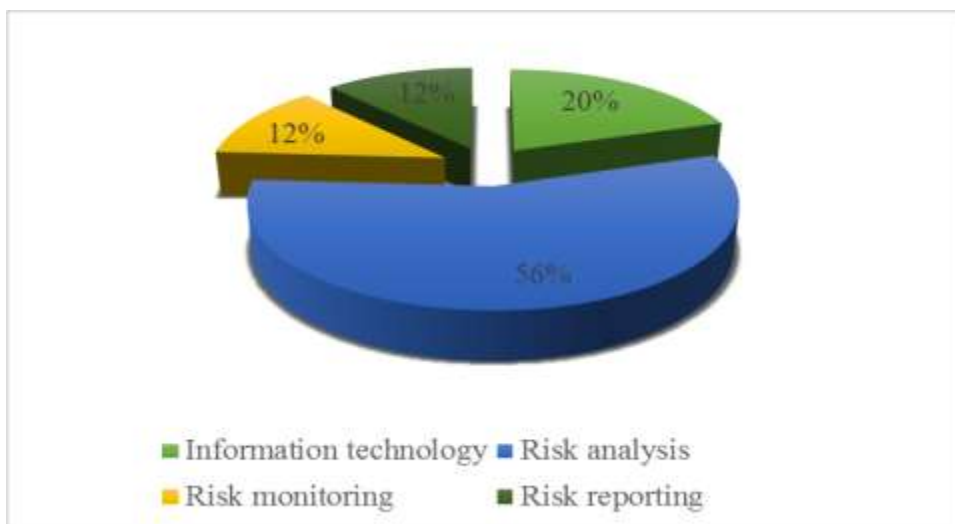


Figure 4.3 Respondents' Opinion on Most Affecting Factor

4.3.8 Respondents Suggestions on Enhancing Performance of Loans

Respondents in the study were also asked to suggest ways to enhance loan portfolio performance. Findings in Figure 4.4 show that 47% recommended enhancement of risk analysis methods, 38% recommended greater adoption of technology in risk management while 21% suggested borrower training.



Figure 4.4 Respondents Suggestions on Enhancing Performance of

4.4 Inferential Statistics

To determine the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya., regression analysis was done. Regression analysis was done with the help of SPSS at 95% confidence level. The findings would also enable testing of hypotheses.

4.4.1 Model summary

Table 4.9 shows the model summary.

Table 4.9 Model Summary

R	R Square	Adjusted R Square	Std. Error of the estimate
0.837	0.7	0.684	0.224

The results in Table 4.9 indicate that there was a strong positive correlation ($r=0.837$) between risk management on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings show that 68.4% of performance of unsecured loans in commercial banks in Nanyuki town, Kenya can be attributed to risk management. This therefore shows that risk management is vital for loan portfolio performance. The unaccounted variance of 31.6% can be attributed to variables not included in the current study. This is in agreement with Soi (2015) who established that credit risk management practices in banks with application of modern approaches to risk measurement, particularly for credit and overall risks is important for commercial banks. The finding is also in agreement with Mutuku (2016) finding that risk management practices under study significantly affected the financial performance of commercial banks. The finding is however in disagreement with Ghani and Mahmood (2015) who established that there is no relationship between risk management understanding and risk assessment and analysis and performance of financial institutions.

4.4.2 Analysis of Variance

Table 4.10 shows the ANOVA output

Table 4.10 ANOVA Output

	Sum of squares	df	Mean square	F	Sig
Regression	2.146	4	0.536	4.394	0.0043
Residual	0.854	7	0.122		
Total	3.000	11			

The results in Table 4.10 indicate that there is statistically significant relationship ($F(4,7) = 4.394$, $P=0.004$) between risk management on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. This lends support to the importance of risk management in loan portfolio performance. This finding is in support of findings from similar studies by Wahome (2010); Madume (2010); Tasmin (2012); Lipunga (2014); Soi (2015); Mutua (2015); Mutuku (2016) and Rao and Jirra (2017) who also found a significant relationship between risk management and performance of loans.

4.4.3 Coefficients Table

The regression coefficients are shown in Table 4.11

Table 4.11 Coefficients Table

Variable	B	Std. Error	t	sig
Constant	0.233	0.341	0.683	0.517
Information technology	0.429	0.186	2.309	0.044
Risk analysis	0.920	0.248	3.707	0.006
Risk monitoring	0.488	0.155	3.156	0.016
Risk reporting	0.156	0.125	1.248	0.252

The new model shows that without risk management, loan portfolio performance would be 0.233. The model also shows that all the beta coefficients have positive signs indicating that they all contribute to an increase in performance of unsecured loans. Looking at the beta coefficients, risk analysis ($\beta=0.920$) has the largest beta value indicating that it is the most affecting while risk reporting has the least beta value ($\beta=0.156$) indicating that it is the least affecting of the four variables on performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

The significance values in Table 4.11 can be used to test the hypothesis.

The first hypothesis (H_{01}) of the study stated that there is no significant effect of information technology on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Findings in Table 4.11 show that information technology ($p=0.044$) was statistically significant. The hypothesis is therefore rejected and the study concludes that there is a significant effect of information technology on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. This is consistent to findings of Madume (2010) who showed that bank output such as loans and other assets increase significantly to changes in expenditure on information and communication technologies. It is also consistent to Barret (2016) findings of a statistically significant relationship between IT risk management, institution size, and the financial performance of Jamaican credit unions. The findings are however in contrast to Tasmin (2012) who established that the usage of ICT can lead to lower costs, but the effect on profitability remains inconclusive,

The second hypothesis of the study stated that there is no significant effect of risk analysis on performance on unsecured loans in commercial banks in Nanyuki town, Kenya. Risk analysis ($p=0.006$) was found to be significant. The hypothesis is therefore rejected and the study concludes that there is a significant effect of risk analysis on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings are similar to those of Soi (2015) study which established that that in view of risk analysis and assessment as a credit risk management practice in the bank the application of modern approaches to risk measurement, particularly for credit and overall risks is important for commercial banks. The findings are also similar to those of Hitimana *et al.* (2012) study which revealed that risk management system has improved Cogeбанque bank's return on investment, profitability, liquidity, return asset and return on equity and loan returns by 72.7%. The findings are however different from those of Ghani and Mahmood (2015) who found that there is no relationship between risk management understanding and risk assessment and analysis and performance of financial institutions

The third hypothesis of the study stated that there is no significant effect of risk monitoring on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Analysis showed that risk monitoring ($p=0.016$) was significant. The hypothesis is therefore rejected and the study concludes that there is a significant effect of risk monitoring on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. This is in agreement with Obwogo *et al.* (2017) finding that

risk monitoring has a positive impact on performance of commercial banks in Kenya. It is also in agreement with Kauna (2016) study which found a significant positive relationship between credit risk identification and credit risk monitoring and the financial performance of commercial banks. The finding is however in disagreement with Ugirase (2013) who established that risk monitoring is not a predictor of financial performance or return on assets. It is also in disagreement with Mutuku (2016) finding that risk management practices under study significantly affected the financial performance of commercial banks with an exception of capital adequacy and risk monitoring which had a negative effect.

The fourth hypothesis of the study stated that there is no significant effect of risk reporting on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Findings in table 4.11 show that risk reporting ($p=0.252$) was not significant. The hypothesis is therefore retained and the study concludes that there is no significant effect of risk reporting on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. This is in contrast to Louhichi *et al.* (2015) finding that risk reporting affects positively company reputation. It is also in contrast to Stoel *et al.* (2017) finding that qualitative report information has a positive indirect association with managerial perceptions regarding strategic risk management activities.

The beta coefficients can be substituted into the model as shown below.

$$Y = 0.233 + 0.429 IT + 0.920 RA + 0.488 RM + e$$

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings of the study. The study's conclusions and recommendations are also presented. In addition, suggestions for further researcher are highlighted.

5.2 Summary of the Study

Banks have to manage more types of risks in order to maximize the shareholders' wealth. The African financial system continues to struggle with the monster of credit risk crisis in what appears to be a losing battle. More recently, Kenyan banks have witnessed increasing non-performing loans. The study focused on the risk management and performance of unsecured loans in banks. Specifically the study focused on information technology, risk analysis, risk monitoring and risk reporting. A descriptive cross sectional research design was adopted. Commercial banks in Nanyuki town were targeted. Departmental heads included heads of operations, credit, customer service and SME sections. All 12 banks and 60 respondents were involved in the study. The study used primary data collected by way of a self-administered questionnaire. Descriptive statistics such as frequencies, percentages, mean and standard deviation were used to organize findings. Regression analysis was also be conducted with the help of SPSS.

The study found that that information technology was used in risk management to a large extent ($M=1.76$, $SD=0.730$) in commercial banks in Nanyuki town, Kenya. Regression analysis showed that information technology ($p=0.044$) was statistically significant. A unit change in information technology was found to yield a 0.429 change in performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

Commercial banks in Nanyuki town, Kenya were found to conduct risk analysis to a large extent ($M=1.91$, $SD=0.762$). Regression analysis showed that risk analysis ($p=0.006$) was significant. A unit change in risk analysis as found to yield a 0.920 change in performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

Descriptive analysis showed that monitoring of risks was conducted to a small extent (2.90+0.918) in commercial banks in Nanyuki town, Kenya. Regression analysis showed that risk monitoring ($p=0.016$) was significant. A unit change in risk monitoring was found to yield a change in and performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

The study found that risk reporting was conducted to a very large extent (1.96+0.843). Risk reporting ($p=0.252$) was however not significant. A unit change in risk reporting was found to yield a change in performance of unsecured loans in commercial banks in Nanyuki town, Kenya.

Regression analysis showed that there was a strong positive correlation between risk management on performance whereby 68.4% of performance of unsecured loans in commercial banks in Nanyuki town, Kenya could be attributed to risk management. There was statistically significant relationship ($F(4,7) = 4.394, P=0.004$) between risk management on performance of unsecured loans in commercial banks in Nanyuki town, Kenya. The findings showed that risk analysis was the most affecting followed by risk monitoring, information technology and risk reporting in that order.

5.3 Conclusion of the Study

The study concludes that information technology affects performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Specifically, commercial banks which utilized information technology to a large extent in risk management were found to have better loan portfolio performance than those who utilized IT moderately or to a low extent. This can be attributed to the application of credit scoring models, data mining techniques, early warning systems which enable the banks assess the credit risk of a borrower and predict the deterioration of credit positions as early as possible using minimum effort and cost.

Risk analysis affects performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Risk analysis was the most important of the four factors under investigation. The more comprehensive a bank carried out risk analysis the greater its loan portfolio performance. Risk analysis contributes positively to greater loan portfolio performance because risk evaluation risk estimation and risk reduction strategies involved in risk analysis enable the bank predict client's probability of default and therefore limit the uncertainty preventing the bank from suffering unacceptable losses.

Risk monitoring is also vital to performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Although risk monitoring was not well conducted by majority of banks, those banks that observed risk monitoring to a great extent saw enhanced loan portfolio performance as opposed to those which didn't. Risk monitoring is important because activities such as risk audits, reserve analysis, setting reserve levels and risk reassessment enable the bank assess compliance with extant sanction and post-sanction processes laid down by the bank from time to time. Risk monitoring also enables the bank find out any mistakes in risk analysis and identify new risks and reassessing current ones and take corrective action.

Risk reporting was not found to be an important predictor of performance of unsecured loans in commercial banks in Nanyuki town, Kenya. This may be attributed to the fact that risk reporting is subject to the effectiveness of activities such as risk analysis, risk monitoring and use of information technology. If such activities are done well, the bank will have good performance of unsecured loans whether reporting is done well or not.

In summary the study concludes that risk management is vital to performance of unsecured loans in commercial banks. This relationship is driven by utilization of information technology, risk analysis and risk monitoring which enable the bank assess and predict risk and therefore employ corrective and mitigation strategies to avoid default. The study concludes that risk management works well when all the activities involved all conducted well since they complement each other.

5.4 Recommendations of the Study

In light of the findings of the study, the researcher recommends that commercial banks should make greater investments in information technology in risk management especially in the area of data mining. Commercial banks should seek to utilize scenario analysis more in risk analysis as it is a good credit risk assessment tool. Reserve analysis should be employed more as a risk monitoring tool. Commercial banks should also invest more in risk management techniques to get the most of reduced loan default.

5.5 Suggestions for Further Study

A wider study comprising of more banks should be conducted to deepen our understating of the relationship between risk management practices and performance of unsecured loans in commercial banks. The study found that although risk reporting

was conducted to a very large extent it was not significant. A study should therefore be conducted to find out the challenges and opportunities in risk reporting in commercial banks. A similar study should also be conducted in other institutions such as SACCOs and insurance companies.

REFERENCES

- Abdou, H., English, J. & Adewunmi, P. (2014) ' *an investigation of risk management practices in electronic banking: the case of the UK banks*', Banks and Bank
- Abu Hussain, H., & Al-Ajmi, J. (2012). Risk management practices of conventional and Islamic banks in Bahrain. *The Journal of Risk Finance*, 13(3), 215–239. <https://doi.org/10.1108/15265941211229244>
- Aduda, J., Magutu, P. O., & Wangu, G. M. (2012). The Relationship between Credit Scoring Practices by Commercial Banks and Access to Credit by Small and Medium Enterprises in Kenya. *International Journal of Humanities and Social Science*, 203-213.
- Afande, F. O. (2015). Credit Risk Management Practices of Commercial Banks in Kenya. *European Journal of Business and Management* 6(34), 21–62.
- Al-Tamimi, H. H. A., & Al-Mazrooei, M. F. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, 8(4), 394–409. <https://doi.org/10.1108/15265940710777333>
- Amsi, F., Ngare, P., Imo, P., & Gachie, M. (2017). Effect of Microfinance Credit on SMEs Financial Performance in Kenya The Catholic University of Eastern Africa Corresponding Author : Philip Ngare. *Journal of Emerging Trends in Economics and Management Sciences*, 8(1), 48–61.
- Armstrong, C. S., Guay, W. R., Weber, J. P., Baiman, S., Balakrishnan, K., Beatty, A., ... Zimmerman, J. (2010). *The Role of Information and Financial Reporting In Corporate Governance and Debt Contracting*. Retrieved from <https://www.business.uq.edu.au/sites/default/files/events/files/wguay-paper2.pdf>
- Barrett, S. (2016). Effects of Information Technology Risk Management and Institution Size on Financial Performance. *Walden Dissertations and Doctoral Studies*. Retrieved from <http://scholarworks.waldenu.edu/dissertations/2636>
- Bessis, J. (2002). *Risk management in banking*. 2nd Ed. West Sussex, United Kingdom: John Wiley and Sons, Inc.
- Bikker J.A and Metzmakers P.A.J (2005), "Bank Provisioning Behaviour and Procyclicality", *Journal of International Financial Markets, Institutions and Money*, Elsevier, Vol 15(2), Pages 141-157, April (Downloadable)
- Blaxter, L., Hughes, C., & Tight, M. (2006). *How to research* (Vol. 2). Philadelphia, 2006.
- Brown, S., Hillegeist, S. A., & Lo, K. (2004). Conference calls and information asymmetry. *Journal of Accounting and Economics*, 37(3), 343–366. <https://doi.org/10.1016/j.jacceco.2004.02.001>

- Burns, A.C. (2010). *Research method*. Boston: McGraw-Hill Inc.
- Buttimer R (2008); "Risk, Return and Risk Management"; *The Journal of Real Estate Finance and Economics*, Sterling Valuation Group Inc.
- Cadez S, Guilding C (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Account. Organ. Soc.*, 33(7/8): 836-863.
- Central Bank of Kenya (2012) Bank Supervision Annual Report 2011. CBK: Nairobi
- Central Bank of Kenya (2015) *Bank Supervision Annual Report*. Nairobi: Central Bank of Kenya
- Central Bank of Kenya (2016) *Bank Supervision Annual Report*. Nairobi: Central Bank of Kenya
- Central Bank of Kenya (2017) *Quarterly Economic Review*. Nairobi: Central Bank of Kenya
- Chandra, S., & Shadel, W. G. (2007). Crossing disciplinary boundaries: Applying financial portfolio theory to model the organization of the self-concept. *Journal of Research in Personality*, 41(2), 346-373. DOI: 10.1016/j.jrp.2006.04.007
- Chenhall RH (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Account. Org. Soc.*, 28(2/3): 127-168.
- Chornous, G., & Ursulenko, G. (2013). Risk Management in Banks: New Approaches to Risk Assessment and Information Support. *Ekonomika*, 92(1), 120–132.
- Collier & Mark, S. (2006). *Introduction to Risk Management and Insurance* (9 ed.). Englewood Cliffs, N.J: Prentice Hall.publisher, USA.
- Creswell, J. W. (2009) *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/BF02310555>
- Croteau, D., & Hoynes, W. (2003). *Media society: Industries, images, and audiences*. Thousand Oaks, Calif: Pine Forge Press.
- Dangolani, S. K. (2011). The Impact of Information Technology in Banking System (A Case Study in Bank Keshavarzi IRAN). *Procedia - Social and Behavioral Sciences*, 30, 13–16. <https://doi.org/10.1016/j.sbspro.2011.10.003>
- Dawson, C. (2009). *Introduction to research methods; A practical guide for anyone undertaking a research project*. Oxford: Spring Hill House.

- Dawson, C. (2009). *Introduction to research methods; A practical guide for anyone undertaking a research project*. Oxford: Spring Hill House.
- Epstein, M. J., & Buhovac, A. R. (2006). *The reporting of organizational risks for internal and external decision-making*. Society of Management Accountants of Canada.
- Esterhuysen, J. T. (2013). The management of operational risk in South African banks. Retrieved from <https://dspace.nwu.ac.za/handle/10394/423>
- Ewerbring, J., & Klingvall, F. (2016). Enterprise Risk Management - The usage of COSO 's framework in recently publicly listed Swedish companies, (May).
- Felici, R., & Pagnini, M. (2008). Distance, bank heterogeneity and entry in local banking markets*. *The Journal of Industrial Economics*, 56(3), 500–534. <https://doi.org/10.1111/j.1467-6451.2008.00357.x>
- Fernando, K.P.P. & Sriyalatha, M.A.K. (2015) Risk Management Practices of Banks: Evidence from Sri Lanka (December 7, 2015). 12th International Conference on Business Management (ICBM) 2015. Available at SSRN: <https://ssrn.com/abstract=2699704>
- Fheili, M. I. (2011). Information technology at the forefront of operational risk: banks are at a greater risk. *The Journal of Operational Risk*, 6(2), 47–67. <https://doi.org/10.21314/JOP.2011.092>
- Fiedler, F. E. (1964). A Contingency Model of Leadership Effectiveness. *Advances in Experimental Social Psychology*, 1, 149–190. [https://doi.org/10.1016/S0065-2601\(08\)60051-9](https://doi.org/10.1016/S0065-2601(08)60051-9)
- Gallati, R. (2003). *Risk management and capital adequacy*. New York: McGraw-Hill.
- Geitangi, D. M. (2015) *The Relationship between Credit Risk Management Practices and the Performance of Loan Portfolio of Commercial Banks in Kenya*. Masters thesis, University of Nairobi.
- Ghosh, A. (2012). *Managing risks in commercial and retail banking*. Chichester, United Kingdom: John Wiley and Sons Inc.
- Goldratt, E. M. (1997). *Critical Chain*. Great Barrington, MA: North River Press. ISBN 0-88427-153-6.
- Guguyu, O. (2017). Banks feel the heat as rate cap trims quarter one profits :: Kenya - The Standard. Retrieved September 4, 2018, from <https://www.standardmedia.co.ke/business/article/2001241756/banks-feel-the-heat-as-rate-cap-trims-quarter-one-profits>
- Gweyi, M.O. (2013). Credit Risk Mitigation Strategies Adopted By Commercial Banks in Kenya. *International Journal of Business and Social Science*, 4(6), 71-87.

- Härle, P., Havas, A., & Samandari, H. (2016). The future of bank risk management | McKinsey. Retrieved September 4, 2018, from <https://www.mckinsey.com/business-functions/risk/our-insights/the-future-of-bank-risk-management>
- Haynes, S.N., Richard, D.C.S., and Kubany, E.S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment*, 7, 238-247.
- Isaac Soi, D., & David. (2015). *Effect of Credit Risk Management Practices on Financial Performance of Commercial Banks in Kenya*. Retrieved from <http://ir-library.egerton.ac.ke/jspui/handle/123456789/672>
- Izquierdo, S. S., & Izquierdo, L. R. (2007). The impact of quality uncertainty without asymmetric information on market efficiency. *Journal of Business Research*, 60(8), 858–867. <https://doi.org/10.1016/J.JBUSRES.2007.02.010>
- Jenkins, H. (2010). An Evaluation Of The Risk Management Practices Of Commercial Banks In North Cyprus, 179–194.
- Johnson, K. (2010). External risk reporting | Treasury Today. Retrieved September 4, 2018, from <http://treasurytoday.com/2007/09/external-risk-reporting>
- Josiane Magnifique, U. (2013). *The Effect of Credit Risk Magement on the Financial Performance of Commercial Banks in Rwanda*, (November).
- Juma, V. (2018). KCB profit up to Sh5bn on increased lending - Daily Nation. Retrieved September 4, 2018, from <https://www.nation.co.ke/business/KCB-posts-Sh5bn-net-profits-3-months-/996-4565718-hmacyp/index.html>
- Kamau, P. M. (2010). *Adoption of risk management by commercial banks in kenya*. Retrieved from <http://erepository.uonbi.ac.ke/handle/11295/95792>
- Kauna, K. E. (2016). *Effect of Credit Risk Management Practices On Financial Performance Of Commercial Banks In Kenya*. Retrieved from <http://erepository.uonbi.ac.ke/handle/11295/97602>
- Kearney, A. (2010). Seven Tenets of Risk Management in the Banking Industry - Article - A.T. Kearney. Retrieved September 4, 2018, from <https://www.atkearney.com/financial-services/article?/a/seven-tenets-of-risk-management-in-the-banking-industry>
- Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. *American Journal of Health-System Pharmacy*, 65(23), 2276–2284. <https://doi.org/10.2146/ajhp070364>
- Kingdom, U. (2015). Relationship Between Banking Technologies and, *III*(11), 784–815.

- Kioko, P. M., & Mwanzia, P. (2014). *An analysis of credit risk assessment through credit scoring Models among commercial banks in Kenya*. Retrieved from <http://ir-library.ku.ac.ke/handle/123456789/10311>
- Kodithuwakku, S. (2015). Impact of Credit Risk Management on the Performance of Commercial Banks in Sri Lanka. *International Journal of Scientific Research and Innovative Technology*, 2(7), 2313–3759. Retrieved from https://www.ijisrit.com/uploaded_all_files/1989561912_u4.pdf
- Konovalova, N., Kristovska, I., & Kudinska, M. (2016). Credit Risk Management in Commercial Banks. *Polish Journal of Management Studies*, 13(2), 90–100. <https://doi.org/10.17512/pjms.2016.13.2.09>
- Kossa, A., & Pasha, S. A. M. (2016). *International journal of innovative research & development IJIRD*. *International Journal of Innovative Research and Development* (Vol. 5). Retrieved from <http://www.ijird.com/index.php/ijird/article/view/86722>
- KPMG. (2015). *KPMG analysis of Special Economic Zone Act 2015 | KPMG | KE*. Retrieved from <https://home.kpmg.com/ke/en/home/insights/2016/08/kpmg-analysis-of-special-economic-zone-act-2015.html>
- Kulchmanov, A., Hassan, M. K., & Rashid, M. (2016). Contingency Theory Approach To Risk Management Practices in Islamic Banks: a Case Study on Kazakhstan. *Ijib*, 1(2), 35–67.
- Lipunga, A. M. (2012). *Journal of Contemporary Issues in Business Research JCIBR*. *Journal of Contemporary Issues in Business Research* (Vol. 3). [s.n.]. Retrieved from <http://jcibr.webs.com/1-3-3-4-jcibr0051-abstract>
- Ljubić, M., Pavlović, V., & Milančić, S. (2015). The impact of credit risk assessment on credit activity of commercial banks. *Megatrend Revija ~ Megatrend Review*, 12(3), 141–152.
- Louhichi, W., Zreik, O., & Rennes, C. (2015). Corporate Risk Reporting: A study of The Impact of Risk Disclosure on Firms Reputation. *Economics Bulletin*, 35(4), 2395–2408.
- Low, R. K. Y.; Faff, R.; Aas, K. (2016). "Enhancing mean–variance portfolio selection by modeling distributional asymmetries". *Journal of Economics and Business*.
- Maccheroni, F., Marinacci, M., Rustichini, A., & Taboga, M. (2009). Portfolio Selection With Monotone Mean-Variance Preferences. *Mathematical Finance*, 19(3), 487–521. <https://doi.org/10.1111/j.1467-9965.2009.00376.x>
- Mahdavi D. B. (2013). "The Non-Misleading Value of Inferred Correlation: An Introduction to the Cointelation Model". *Wilmott Magazine*.
- Makena, W., Ngare, P., Mulindwa, K., & Wairia, M. (2017). Effect of Liberalized Financial Policy on Commercial Banks Performance in Kenya. *Journal of*

Emerging Trends in Economics and Management Sciences, 8(1):17-27.
Retrieved from file:///C:/Users/JACK/Desktop/waste/NHIF/Effect of Liberalized
Financial Policy NEW.pdf

- Marinč, M. (2013). Banks and Information Technology: Marketability vs .
Relationships ‡, (January).
- Markowitz, H. (1952). Portfolio selection*. *The Journal of Finance*, 7(1), 77–91.
<https://doi.org/10.1111/j.1540-6261.1952.tb01525.x>
- Mbuccho, C. W., & Senaji, T. (2015). Influence of Credit Management on the Loan
Performance Among Microfinance Institutions in Kenya Influence of Credit
Management on the Loan Performance Among. *The Strategic Journal of
Business & Change Management*, 2.
- Mititi, E. S. (2010). Credit risk management by private hospitals in Kenya. Retrieved
from <http://erepository.uonbi.ac.ke/handle/11295/5623>
- Monyoncho, N. L. (2015). Relationship between banking technologies and financial
performance of commercial banks in Kenya. *International Journal of Economics,
Commerce and Management*,3(11):784-815.ISSN 2348 0386
- Murphie, A. & Potts, J. (2003) *Culture and Technology*, Palgrave, Basingstoke.
- Mutua, J. M. (2015). Effect of Mitigating Credit Risk on Performance of Commercial
Banks in Kenya. *Journal of Economic and Sustainable Development*, 4(7), 113–
125.
- Mutuku, C. (2016). The effect of risk management on the financial performance of
commercial banks in Kenya. Retrieved from
<http://erepository.uonbi.ac.ke/handle/11295/98683>
- Mwaniki, C. (2017). Bank loans income dips Sh13 billion in three months - Business
Daily. Retrieved September 4, 2018, from
[https://www.businessdailyafrica.com/markets/marketnews/Bank-loans-income-
dips-Sh13-billion-in-three-months/3815534-3957538-cx1jx7z/index.html](https://www.businessdailyafrica.com/markets/marketnews/Bank-loans-income-dips-Sh13-billion-in-three-months/3815534-3957538-cx1jx7z/index.html)
- Ngugi, J., Ndwiga, P., Waitthaka, S., & Gakure, R. (2012). Effect of Credit Risk
Management Techniques on the Performance of Unsecured Bank Loans
employed by Commercial Banks in Kenya. *International Journal of Business
and Social Research*, 2(4), 221–236.
- Noreen, E. W., Smith, D., & Mackey, J. T. (1995). *The theory of constraints and its
implications for management accounting*. North River Press. Retrieved from
<https://dl.acm.org/citation.cfm?id=555055>
- Norris, P. (2001). *Digital Divide: Civic Engagement, Information Poverty, and the
Internet Worldwide*. Cambridge University Press: Cambridge.
- Oballa, P. (2017). Factors Influencing Performance Of Unsecured Bank Loan
Portfolios : A Case Of Selected Commercial In Nairobi County , Kenya.

- Ogilo, F. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Kenya. *DBA Africa Management Review*, 3(1), 22–37.
- Oloo, O. (2009). *The Banking Survey 2009*. Think Business. Nairobi
- Onyiriuba, L. (2015). Credit Risk Management in African Banks – Why It's Important | SciTech Connect. Retrieved September 4, 2018, from <http://scitechconnect.elsevier.com/credit-risk-management-african-banks/>
- Owojori, A. a, Akintoye, I. R., & Adidu, F. a. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation*, 3(2), 23–31. Retrieved from <http://www.academicjournals.org/JAT>
- Pérignon, C., & Smith, D. R. (2010). The level and quality of Value-at-Risk disclosure by commercial banks. *Journal of Banking & Finance*, 34(2), 362–377. <https://doi.org/10.1016/j.jbankfin.2009.08.009>
- Polit, D.F., Beck, C.T. and Hungler, B.P. (2001), *Essentials of Nursing Research: Methods, Appraisal and Utilization*. 5th Ed., Philadelphia: Lippincott Williams & Wilkins
- Rao, K. S. (2017). Analysis On Risk Disclosure Practices Of Commercial Banks In Ethiopia, (2014), 260–262.
- Reid GC, Smith JA (2000). The impact of contingencies on management accounting system development. *Manage. Account. Res.*, 11(4): 427-450.
- Rejda, G. E. (2008). *Principles of Risk Management and Insurance*, Prentice Hall, 10 th Ed.
- Riggins, F., & Weber, D. (2016). Exploring the Impact of Information and Communication Technology (ICT) on Intermediation Market Structure in the Microfinance Industry. *The African Journal of*, 8(3). Retrieved from http://digitalcommons.kennesaw.edu/ajis/vol8/iss3/1/?utm_source=digitalcommons.kennesaw.edu%2Fajis%2Fvol8%2Fiss3%2F1&utm_medium=PDF&utm_campaign=PDFCoverPages
- Rodrigues, S. da S., Galdi, F. C., Rodrigues, S. da S., & Galdi, F. C. (2017). Investor relations and information asymmetry. *Revista Contabilidade & Finanças*, 28(74), 297–312. <https://doi.org/10.1590/1808-057x201703630>
- Romdhane, S. Ben. (2013). Impact of information technology on the performance of Tunisian banks: A stochastic frontier analysis with panel data. *Asian Academy of Management Journal of Accounting and Finance*, 9(2), 95–125.
- Romdhane, S. Ben. (2013). Impact of information technology on the performance of Tunisian banks: A stochastic frontier analysis with panel data. *Asian Academy of Management Journal of Accounting and Finance*, 9(2), 95–125.

- Sabbadini T (2010). Manufacturing Portfolio Theory. International Institute for Advanced Studies in Systems Research and Cybernetics. pp.120-160.
- Saunders, M., Lewis, P. & Thornhill, A. (2007). *Research methods for business students*, 4th edition, Prentice Hall.
- Schanfield, A. & D. Helming (2008). 12 ERM implementation challenges. *Internal Auditor*, 65(6), 41-44.
- Schragenheim, E., Dettmer, H., Patterson, J., Dettmer, H. W., & Patterson, J. W. (2009). *Supply Chain Management at Warp Speed*. Auerbach Publications. <https://doi.org/10.1201/9781420073362>
- Schroeck, G (2002). *Risk management and value creation in financial institutions*, New Jersey: John Wiley & Sons, Inc
- Silverman D. (2005) *Doing Qualitative Research*. Sage Publications: London.
- Siro, G. O. (2010). An investigation of the relationship between credit risk disclosure and firm characteristics for Kenyan Commercial Banks. Retrieved from <http://erepository.uonbi.ac.ke/handle/11295/5850>
- Soi, D. I. (2015). Effect of Credit Risk Management Practices on Financial Performance of Commercial Banks in Kenya. Retrieved from <http://ir-library.egerton.ac.ke/jspui/handle/123456789/672>
- Stoel, D., Ballou, B., & Heitger, D. L. (2017). The Impact of Quantitative vs. Qualitative Risk Reporting on Risk Professionals' Strategic and Operational Risk Judgments. *Accounting Horizons*, acch-51777. <https://doi.org/10.2308/acch-51777>
- Tasmin, R. (2012). The Impact of Information and Communication Technology on Banks' Performance and Customer Service Delivery in the Banking Industry. *International Journal of Latest Trends in Finance and Economic Sciences* 2(1)
- Ugirase, J. M. (2013). The effect of credit risk management on the financial performance of commercial banks in Rwanda, *4747(2004)*, 23–30.
- Wachira, A. K. (2017). Effects of Credit Risk Management Practices on Loan Performance of Commercial Banks in Nyeri County, Kenya *European Journal of Economic and Financial Research*. *European Journal of Economic and Financial Research*, 2(2). Retrieved from <https://oapub.org/soc/index.php/EJEFR/article/view/92>
- Wahome, T. G. (2010). An investigation of risk assessment techniques applied by commercial banks in Kenya. Retrieved from <http://erepository.uonbi.ac.ke/handle/11295/5959>
- Wanyama, S.M., Yegon, J. C., & Kemboi, J.K. (2014). The Effect of Financial Sector Liberalization on Financial Development and Economic Growth: Evidence from Kenya. *Journal of Economics and Sustainable Development*, Vol.5 (7), 25-38.

Woods M (2009). A contingency theory perspective on the risk management control system within Birmingham City Council. *Manage. Account. Res.*, 20(1): 69-81.

Xinhua. (2018). Interest caps pile unintended pressure on Kenyan banks. Retrieved September 4, 2018, from <http://www.coastweek.com/4019-Interest-caps-pile-unintended-pressure-on-Kenyan-banks.htm>

APPENDICES

Appendix I: Questionnaire

The purpose of this questionnaire is to collect data to establish the relationship between risk management practices and performance of unsecured loans in commercial banks in Nanyuki town, Kenya. Indicate your response by ticking alongside the provided box or writing down in the space provided. To maintain confidentiality do not indicate your name.

I: Socio-demographic data

1. What is your gender?

Male

Female

2. How old are you?

18- 21 Years

22- 26 Years

27-31 Years

32 -35 Years

Over 35 Years

3. What is your highest level of education?

Certificate

Diploma

Bachelor's degree

Postgraduate degree

4. How long have you worked for this bank?

.....years

II: Information Technology

Indicate your response by ticking on the appropriate box:

1= Strongly Agree 2= Agree 3= Uncertain 4=Disagree 5= strongly disagree

		1	2	3	4	5
5.	The bank uses credit scoring models to assess the credit risk of a borrower and aid in the credit evaluation					
6.	Credit scoring provides a systematic, comprehensive way in which to assess the borrower's financial data					
7.	The bank employs data mining techniques in a credit risk analysis database.					
8.	Data mining can indicate whether the request of lenders can be classified as performing or non-performing loans risk.					
9.	The bank uses an early warning system in its loan portfolio management					
10.	The Early Warning systems predicts the deterioration of credit positions as early as possible					

III: Risk analysis

Indicate your response by ticking on the appropriate box:

1= Strongly Agree 2= Agree 3= Uncertain 4=Disagree 5= strongly disagree

		1	2	3	4	5
11.	The bank conducts risk evaluation to measures the magnitude of potential loss and the probability that loss will occur					
12.	Rating the risk of each loan in timely credit evaluations is fundamental to loan portfolio management.					
13.	Scenario analysis was the most common used technique to measure risk					
14.	The bank uses various models to estimate risk					
15.	The purpose of quantitative credit risk estimation models is the measurement of client's probability of default					
16.	The banks evaluates credit risk of credit applicants by using standardized or internal ratings-based(IRB) methods					
17.	Risk analysis limits the uncertainty of the overall financial performance to preventing the bank from suffering unacceptable losses					
18.	The bank employs various risk reduction measures to manage credit risk					
19.	Risk reduction measures employed are subject to the severity of risk envisaged					

IV: Risk Monitoring

Indicate your response by ticking on the appropriate box:

1= Strongly Agree 2= Agree 3= Uncertain 4=Disagree 5= strongly disagree

		1	2	3	4	5
20.	Risk audits are performed to link internal auditing to the bank's overall risk management framework.					
21.	Credit Audit examines compliance with extant sanction and post-sanction processes laid down by the bank from time to time.					
22.	The bank carries out reserve analysis to assess to monitor the bank's risk management activities					
23.	The bank sets reserve levels by performing an analysis of potential loan losses in its portfolio.					
24.	The bank carries out risk reassessment to identify new risks and reassessing current ones.					
25.	Risk reassessment is conducted to find out any mistakes in risk analysis					
26.	Proper risk monitoring also helps bank management to discover mistake at early stage					

IV: Risk Reporting

Indicate your response by ticking on the appropriate box:

1= Strongly Agree 2= Agree 3= Uncertain 4=Disagree 5= strongly disagree

		1	2	3	4	5
27.	The bank reports its business risks to its shareholders and customers					
28.	There is risk transparency, both in terms of internal risk reporting as well as external disclosure					
29.	Disclosures are comprehensive and include all the bank's key activities and risks.					
30.	Disclosures present relevant information and reflect how the bank manages its risks.					
31.	Disclosures are consistent over time, comparable among banks and provided on a timely basis.					
32.	Disclosures are provided on a timely basis.					
33.	Banks' directors are sometimes reluctant to disclose additional information because competitors may make strategic use of the disclosed information to their advantage					
34.	Risk reporting leads to better stewardship of the bank and more efficient allocation of resources					

V: Performance of loans

35. Indicate the quarterly loan performance for the previous financial year.

Measure	2014	2015	2016
NPL score			
PAR %			
No of loan Accounts			
Gross loan Kes			
Loan growth %			

36. Which of the following affects performance of loans the most?

- Information technology
- Risk analysis
- Risk monitoring
- Risk reporting

37. What can the bank do to enhance loan portfolio performance?

.....

Thank you.

Appendix II: Letters of Approval



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 1st August, 2018

TO: Joseph Karu
C/o Accounting and Finance Dept.

REF: D53/NYI/32049/2018

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL.

This is to inform you that Graduate School Board at its meeting of 25th July, 2018 approved your Research Project Proposal for the M.B.A Degree Entitled, "Risk Management and Level of Performance of Unsecured Loans in Commercial Banks in Nanyuki Town, Kenya".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and 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.

ANNBELL MWANIKI
FOR: DEAN, GRADUATE SCHOOL

c.c: Chairman, Accounting and Finance.

Supervisors:

1. Dr. John Mungai
C/o Department of Accounting and Finance
Kenyatta University



AM/Inr



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NAIROBI-KENYA

Ref No: **NACOSTI/P/18/65425/24663**

Date: **15th September, 2018**

Joseph Kingori Kariu
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Risk management and level of performance of unsecured loans in commercial banks in Nanyuki Town, Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Laikipia County** for the period ending **14th September, 2019**.

You are advised to report to **the County Commissioner and the County Director of Education, Laikipia County** 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.


**BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner
Laikipia County.

The County Director of Education
Laikipia County.