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ABSTRACT

Purpose: The purpose of this study was to analyse the effect of credit risk management on profitability of commercial banks in Kenya.

Methodology: This study adopted a descriptive design. The study targeted a population of all the 44 commercial banks with the exception of Charterhouse bank which is under statutory management. The sample of this study was 86 employees out of a possible 30,056 employees from the 43 commercial banks. The sample of 86 was generated by purposively sampling two employees from each bank. One employee was a manager from the finance department while the other employee was a manager from the credit risk department. The questionnaire comprised of closed ended questions. Secondary data for ROA was identified. SPSS was used to produce frequencies, descriptive and inferential statistics which was used to derive conclusions and generalizations regarding the population. Regression analysis was also used to show the sensitivity of profitability, ROA to various independent variables.

Results: The study findings indicated that credit department had various checks during loan credit review. The credit department always checked at the character of the borrower, collateral of the borrower, capacity of the borrower, capital of the borrower, conditions and controls during credit review. Results indicated that the banks had credit appraisal practices, credit monitoring practices, debt collection practices and credit risk governance practices in place. Regression results indicated that there was a positive and significant relationship between credit appraisal, credit monitoring, debt collection and credit risk governance practices and profitability of commercial banks.

Unique contribution to theory, practice and policy: The study concluded that credit appraisal, credit monitoring, debt collection and credit risk governance practices had a positive effect on the profitability of commercial banks. The study recommends that the banks should continue emphasizing on the effective credit appraisal, credit monitoring, debt collection and credit risk governance practices so as to enhance maximum profits in banks.

Keywords: *credit appraisal, credit monitoring practices, debt collection practices, credit risk governance*

1.1 INTRODUCTION

The credit function of banks enhances the ability of investors to exploit desired profitable ventures. Credit creation is the main income generating activity of banks (Kargi, 2011). However, it exposes the banks to credit risk. The Basel Committee on Banking Supervision (2001) defined credit risk as the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Credit risk is an internal determinant of bank performance. The higher the exposure of a bank to credit risk, the higher the tendency of the banks to experience financial crisis and vice-versa.

Financial performance is the company's ability to generate new resources, from day- to- day operations, over a given period of time; performance is gauged by net income and cash from operations. A portfolio is a collection of investments held by an institution or a private individual (Apps, 1996). Risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources (Apps, 1996). Whereas Credit risk is the risk of loss due to a debtor's non-payment of a loan or other line of credit (either the principal or interest /coupon or both) (Campbell, 2007), default rate is the possibility that a borrower will default, by failing to repay principal and interest in a timely manner (Campbell, 2007).

Credit risk management is defined as the identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments (Early, 1996; Coyle, 2000). Credit extended to borrowers may be at risk of default such that whereas banks extend credit on the understanding that borrowers will repay their loans, some borrowers usually default and as a result, banks income decrease due to the need to provision for the loans. Where commercial banks do not have an indication of what proportion of their borrowers will default, earnings will vary thus exposing the banks to an additional risk of variability of their profits. Every financial institution bears a degree of risk when the institution lends to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as agreedShadow education has also been reported as a common practice in African Countries. For example, in Egypt, a 2004 study estimated that households devoted 61.0% of education expenditures to private tutoring. A 1997 study estimated that household expenditures on tutoring in all levels of schooling accounted for 1.6% of gross domestic product. A 1994 survey of 4,729 households found that in urban areas 64.0% of primary children with 52.0% in rural areas had received supplementary tutoring (World Bank, 2004).

1.2 Problem Statement

Financial institutions have faced difficulties over the years for a multitude of reasons. The major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, or lack of attention to changes in economic or other circumstances that can lead to deterioration in the credit standing of a bank's counterparties (Gil-Diaz, 2008). In unstable economic environments, interest rates charged by banks are fast overtaken by inflation and borrowers find it difficult to repay loans as real incomes fall, insider loans increase and over concentration in certain portfolios increases giving a rise to credit risk. Bank failures in Mexico were attributed to improper lending practices, lack of experience, organizational and informational systems to adequately assess credit risk in the falling economy (Gil-Diaz, 2008). The same can be said of banking crisis in Kenya in the 1980s and in Spain in the 1990s. The problem that this study wishes to address is that credit risk management is a pertinent managerial problem that if not addressed would lead to lower profitability and in extreme cases bank failure. Do credit risk management practices really matter to commercial banks? If they do, then they should significantly contribute to profits as high profits are expected to enhance shareholder value.

Credit risk management is very important to banks as it is an integral part of the loan process. It maximizes bank risk, adjusted risk rate of return by maintaining credit risk exposure with view to shielding the bank from the adverse effects of credit risk. Banks are investing a lot of funds in credit risk management modelling (Campbell, 2007). Credit risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it and mitigation of risk using managerial resources. The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk (Chen, 2008).

According to CBK risk management Guidelines (2013), credit risk is the current or prospective risk to earnings and capital arising from an obligor's failure to meet the terms of any contract with the bank or if an obligor otherwise fails to perform as agreed. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization. For most institutions, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions.

Several studies have analysed the effect of credit risk management practices on profitability. Gizycki (2001),Kithinji (2010) and Musyoki and Kadubo (2011) analyzed the impact of credit risk management on the financial performance of Banks in Kenya for the period 2000 – 2006 and concluded that default rate, bad debts costs and cost per loan asset have an inverse impact on banks' financial performance, however the default rate is the most important determinant of bank financial performance vis-à-vis the other indicators of credit risk management. The research had a gap since it did not address the effect of credit risk management practices on profitability. Looking at the emphasis that is laid on credit risk management by commercial banks, the level of contribution of this factor to profits has not been sufficiently analyzed. It is for these research gaps that this study wished to establish the effect of credit risk management on profitability of commercial banks in Kenya.

1.3 Specific Objectives

i) To establish the effect of credit appraisal practices on the profitability of commercial banks.

ii) To establish the effect of credit monitoring practices on the profitability of commercial banks.

iii) To establish the effect of debt collection practices on the profitability of commercial banks.

iv) To establish the effect of credit risk governance on the profitability of commercial banks.

2.0 LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Portfolio Theory of Investment

The portfolio theory is an investment approach in which the investor balances risk against expected return to maximize earnings from an entire portfolio (Markowitz, 1959). Portfolios are an effective way of increasing returns while decreasing risk in investment. For this reason, portfolio selection strategies have received quite some attention in financial literature. The modern portfolio theory introduces approximate 'mean-variance' analysis to simplify the portfolio selection problem. Markowitz (1959) attempted to quantify risk and quantitatively demonstrate why and how portfolio diversification works to reduce risk for investors. The 'risk' of a portfolio is quantified as a standard deviation of return from period to period, and the portfolio selection problem is reduced to computing an 'efficient' portfolio, that is, one that minimizes the risk for a fixed level of return in a single period.

According to the portfolio theory, the larger the expected return the better the investment, and the smaller the standard deviation of the return the more attractive the investment. Furthermore, the theory shows that we can reduce the standard deviation of the return or risk by combining anti-covariant securities. However, each asset class generally has different levels of return and risk and also behaves uniquely so that one asset may be increasing in value as another is decreasing or at least not increasing as much, and vice versa. This theory, however, has a shortcoming; it cannot allow both more and less risk averse investors to find their optimal portfolio, a problem surmounted by the capital asset pricing model (CAPM) (Sharpe, 1964). The CAPM, associated with Sharpe (1964), Lintner (1965) and Black (1972) explains the risk of a particular asset or portfolio using the excess return on the market portfolio (Black, 1971). The model suggests that investors should hold diversified portfolios, and predicts that investors will hold some fraction of the market portfolio. Furthermore, an important implication of the CAPM, also referred to as efficient markets hypothesis, is that investors lacking special investment knowledge would be well advised to buy and hold diversified portfolios (Black, 1971).

The CAPM shows that investors require high levels of expected returns to compensate them for high expected risk. However, it is now widely recognized that in the presence of informational

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asymmetries and contract enforcement problems, it is not necessarily true that the banking system will allocate resources to projects or firms with the highest returns. Empirical evidence based on mean-variance portfolio selection, simulation analysis, and out of sample portfolio performance suggests that correcting for estimation error, particularly in the means, can substantially improve investment performance (for example Jobson and Korkie, 1979; Jobson *et al*(1980, 1981); Jorion, 1985, 1991).

Despite attempts to verify or refute the CAPM, there is no consensus on its legitimacy. The modeling approach employed in this paper is therefore that of the portfolio theory. This paper therefore assumes that deposits are one of the items in a bank's portfolio. A banks portfolio consists of both assets and liabilities. It is the banks managers' job to construct a portfolio to yield a high return and at the same time reduce the risk (standard deviation) of such a portfolio.

2.1.2 Liquidity Preference theory

According to Keynes, the speculative demand for money is sensitive to changes in the interest rate (Carpenter and Lange, 2002). In other words, it is interest-elastic and extremely so at very low rates of interest. The speculative demand for money is contrasted with the transactions demand the latter being a stable function of income(Carpenter and Lange, 2002).In the Keynesian model, the accumulation of large speculative balances implies that people expect the rate of interest to (rise, fall). They (want, do not want) to hold bonds because the interest rate and bond prices are (directly, inversely) related to one another. If the supply of money remains constant, the high speculative demand implies a (high, low) level of transactions balances, which corresponds to a (high, low) level of income. If, with a given money supply and an equilibrium rate of interest, people are suddenly overcome by the fetish of liquidity, the demand for speculative balances would shift (rightward, leftward), putting (upward, downward) pressure on the rate of interest (Carpenter and Lange, 2002).

If people are suddenly overcome by the fetish of liquidity, the Federal Reserve should (increase, decrease) the money supply. Once full-employment income has been achieved, the Fed's policy rule of "Print money to (hold, spend), but not money to (hold, spend)" may not be a viable policy rule because the speculative demand for money is too (stable, unstable). Besides, the Fed may not have an unambiguous indicator of the needed policy: its timely information includes **(**the interest rate, income) but not (the interest rate, income)(Carpenter and Lange, 2002).

The theoretical framework below is informed by liquidity preference theory. The rationale for putting in place proper credit risk management practices is to ensure that there is enough liquidity for transactional, speculative demand and precautionary demand for money.

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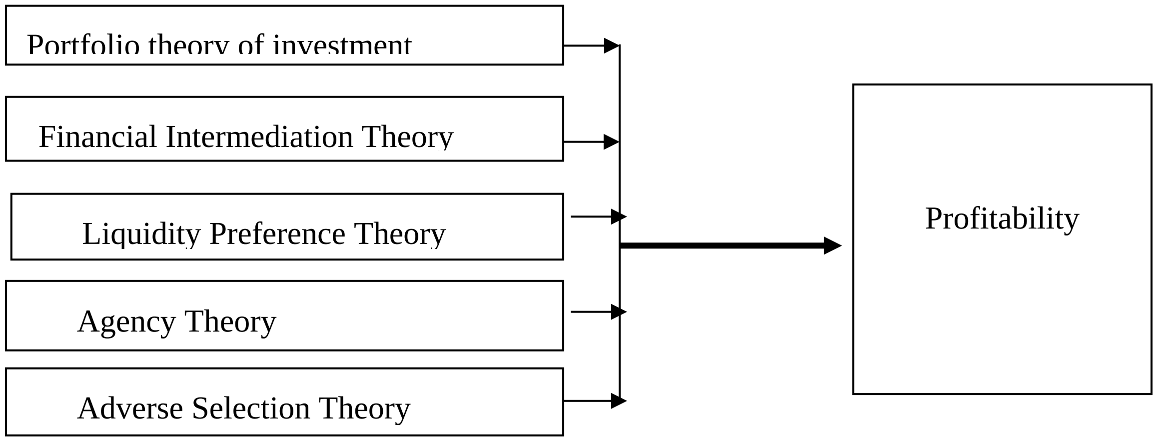

Figure 1: Theoretical Framework

Source: Author 2013

2.2 Empirical Literature Review

2.2.1 Credit Appraisal Practices and Profitability of Commercial Banks

Fatemi and Luft (2002) examined credit risk management policies for ten banks in the united states using a multivariate model and found that banks that adopt advanced credit risk management techniques (proxies by the issuance of at least one collateralized loan obligation) experience a permanent increase in their target loan level of around 50%. Partial adjustment to this target, however, means that the impact on actual loan levels is spread over several years. The findings confirm the general efficiency- enhancing implications of new risk management techniques in a world with frictions suggested in the theoretical literature.

Sudhir, et al (2010) indicates that credit risk management provides directional guidelines to the banking sector that will improve the risk management culture, establish minimum standards for segregation of duties and responsibilities, and assist in the ongoing improvement of the banking sector in Bangladesh. Credit risk management is of utmost importance to Banks, and as such, policies and procedures should be endorsed and strictly enforced by the CEO and the board of the Bank.

2.2.2 Credit Monitoring and Profitability of Commercial Banks

Failure to establish adequate procedures to effectively monitor and control the credit function within established guidelines has resulted in credit problems for many banks around the world. Compromising credit policies and procedures has been another major cause of credit problems. Accordingly, each bank needs to develop and implement comprehensive procedures and information systems to effectively monitor and control the risks inherent in its credit portfolio.

According to Mishkin (2004), Banks need to develop and implement comprehensive procedures and information systems for monitoring the condition of individual counterparties across the bank‘s various portfolios. These procedures should define the criteria for identifying and reporting potential problem credits and other transactions to ensure that they are subject to more frequent monitoring, corrective action, and proper classification/provisioning.

2.2.3 Debt Collection Practices and Profitability of Commercial Banks

Olufunso, Herbstand, Lombard (2009) did an investigation into the impact of the usage of debt on the profitability of small and medium enterprises in the Buffalo city municipality, South Africa and concluded that the usage of debt has a significantly negative impact on the profitability of SMEs. The study however did not link debt collection practices and profitability of commercial banks.

Nelson, Kalani (2009) conducted a study on commercial banking crises in Kenya: cause and remedies. The statement of the problem for the study was that many financial institutions that collapsed in Kenya since 1986 failed due to non-performing loans. This study investigated the causes of non-performing loans, the actions that bank managers have taken to mitigate that problem and the level of success of such actions. Using a sample of 30 managers selected from the ten largest banks the study found that national economic downturn was perceived as the most important external factor. Customer failure to disclose vital information during the loan application process was considered to be the main customer specific factor. The study further found that lack of an aggressive debt collection policy was perceived as the main bank specific factor, contributing to the non performing debt problem in Kenya.

2.2.4 Credit Risk Governance Practices and Profitability of Commercial Banks

Vassileios (2011) noted that the global credit crisis that began in summer 2007 has raised a number of significant issues concerning corporate governance and risk management practices. Banking sector worldwide has been severely challenged in an extreme financial crisis, causing some to fail and others to be taken into various degrees of national ownership. This paper analyzes the role of risk management and corporate governance in the outburst of the financial crisis. The present study analyzes corporate governance as a cause of the credit crisis, its relation with failures and weaknesses in risk management practices and routines in order to reveal the extent to which corporate governance did not serve its purpose permitting excessive risk in a number of major banks.

Institute of International finance (2012) noted that as firms delve into the implementation of significant changes in their governance structures and procedures, a number of challenges arise. These include achieving the right mix of Board members, making the process of interaction between senior management and the Board more effective, and achieving the right balance on the degree and content of intervention of the Board on risk matters. More specifically, some of the key challenges faced by firms strengthening risk governance and organizational structures are: building strong risk governance committees, managing the interaction of various Board and executive risk committees, achieving comprehensiveness while maintaining comprehensibility in risk reporting to the Board, providing the Board with meaningful stress test results and associated risk analysis to facilitate strategic decision making, and conducting Board self-evaluations to assess how the Board fulfills its risk responsibilities.

3.0 RESEARCH METHODOLOGY

Methodology: This study adopted a descriptive design. The study targeted a population of all the 44 commercial banks with the exception of Charterhouse bank which is under statutory management. The sample of this study was 86 employees out of a possible 30,056 employees from the 43 commercial banks. The sample of 86 was generated by purposively sampling two employees from each bank. One employee was a manager from the finance department while the other employee was a manager from the credit risk department. The questionnaire comprised of closed ended questions. Secondary data for ROA was identified. SPSS was used to produce frequencies, descriptive and inferential statistics which was used to derive conclusions and generalizations regarding the population. Regression analysis was also used to show the sensitivity of profitability, ROA to various independent variables.

4.0 RESULTS AND DISCUSSIONS

4.1 The Response Rate

A successful response rate of 77 % (66 respondents out of possible 86) was obtained. The high response rate was achieved because of the follow up calls that were made in an effort to enhance the successful response rate. Babbie (2004) asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. The study response rate was very good according to Babbie (2004) standards. Results are presented in Table 1.

Table 1: Response rate

	Response	% Response
Successful	66	77%
Unsuccessful	20	23%
Total	**86**	100%

4.2 Quantitative Data Analysis

The study presented the quantitative data results. Specifically, this was done in line with the objectives of the study.

4.2.1 Credit Appraisal Practices and Profitability of Commercial Banks

The study sought to establish the effect of credit appraisal practices on the profitability of commercial banks. Results in Table 4.4 indicated that 74% of the respondents agreed that the credit department always checks at the character of the borrower during credit review, 79% agreed that the credit department always checks at the collateral of the borrower during credit review and 87% of the respondents agreed that the credit department always checks at the capacity of the borrower during credit review. Ninety five percent agreed that the credit department always checks at the capital of the borrower during credit review, 78% agreed that the credit department always checks at the conditions during credit review and 78% agreed that the credit department always checks at the controls during credit review. The mean score for the responses was 3.95 which indicates that majority of the respondents agreed with the statements regarding the effects of credit appraisal practices on the profitability of commercial banks. These results imply that credit appraisal practices have a positive effect on the profitability of commercial banks.

The findings concur with those in Mishkin (2004) who concluded that the credit policy should set out the bank's lending philosophy and specific procedures and means of monitoring the lending activity. The guiding principle in credit appraisal is to ensure that only those borrowers who require credit and are able to meet repayment obligations can access credit.

Table 2 : Credit Appraisal Practices and Profitability of Commercial Banks

Statement	Strongly disagree	Disagree	Neither agree not disagree	Agree	Strongly agree	Likert mean
The credit department always checks at the character of the borrower during credit review.	12%	11%	3%	50%	24%	3.64
The credit department always checks at the collateral of the borrower during credit review.	11%	5%	6%	29%	50%	4.03
The credit department always checks at the capacity of the borrower during credit review.	8%	2%	5%	35%	52%	4.21
The credit department always checks at the capital of the borrower during credit review.	2%	0%	3%	59%	36%	4.29
The credit department always checks at the conditions during credit review.	9%	9%	5%	55%	23%	3.73
The credit department always checks at the controls during credit review.	8%	11%	5%	52%	26%	3.77
Average Likert mean						**3.95**

4.2.2 Credit Monitoring Practices and Profitability of Commercial Banks

The second objective of the study was to establish the effect of credit monitoring practices on the profitability of commercial banks. Eighty percent of the respondents agreed that prior to disbursing the credit, the individual credit exposure is subjected to a final check, 78% agreed that the credit disbursement review covers compliance with internal guidelines and 65% greed that the credit disbursement review covers completeness of the credit application. Eighty percent agreed that the credit department always checks that the loan is being paid in time and 80% agreed that the credit department monitors the status of the loan. The mean score for the responses was 3.97 which indicates that majority of the respondents agreed with the statements regarding the effects of credit monitoring practices on the profitability of commercial banks. These results imply that credit monitoring practices have a positive effect on the profitability of commercial banks. Results are shown in Table 4.9 below.

The findings concur with those in Mishkin (2004), who asserted that banks need to develop and implement comprehensive procedures and information systems for monitoring the condition of individual counterparties across the bank‘s various portfolios. The findings also agree with those in Hassan (2009) who asserted that specific individuals should be responsible for monitoring credit quality; including ensuring that relevant information is passed to those responsible for assigning internal risk ratings to the credit. In addition, individuals should be made responsible for monitoring on an ongoing basis any underlying collateral and guarantees. Such monitoring will assist the bank in making necessary changes to contractual arrangements as well as maintaining adequate reserves for credit losses. The results were presented in table 4.5

Table 3: Credit Monitoring Practices and Profitability of Commercial Banks

Statement	**Strongly disagree**	**Disagree**	**Neither agree not disagree**	**Agree**	**Strongly agree**	**Likert mean**
Prior to disbursing the credit, the individual credit exposure is subjected to a final check.	6%	6%	8%	44%	36%	3.98
The credit disbursement review covers compliance with internal guidelines.	2%	14%	5%	27%	53%	4.17
The credit disbursement review covers completeness of the credit application.	6%	20%	9%	42%	23%	3.56
The credit department always checks that the loan is being paid in time.	6%	11%	6%	32%	46%	4.00
The credit department monitors the status of the loan.	8%	8%	5%	24%	56%	4.14
Average Likert mean						**3.97**

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4.2.3 Debt Collection Practices and Profitability of Commercial Banks

The other objective of the study was to establish the effect of debt collection practices on the profitability on commercial banks. Table 4.6 shows that 85% of the respondents agreed that there existed a written loan collection policy, 76% of the respondents agreed that collection policies and procedures apply equally to all borrowers regardless of their professional or social standing and 74% agreed that a loan was always marked for closer attention, even if not delinquent, if there was reason to believe future payments may be in doubt. Eighty six percent agreed that a loan was always considered delinquent when it was one day past due and payment had not been made, 71% agreed that all loans were always subject to penalties after a specified number of days of delinquency, 78% agreed that it was the responsibility of the Loans Department Manager to authorize and monitor the activities of all third party collection agents and 75% agreed that friendly reminders were always issued when any staff person encountered a borrower with a past due loan. The mean score for the responses was 4.03 which indicates that majority of the respondents agreed with the statements regarding the effects of debt collection practices on the profitability of commercial banks. These results imply that debt collection practices have a positive effect on the profitability of commercial banks.

The findings agree with those in Rajan, (2005) who asserted that collection policies and procedures will apply equally to all members regardless of their professional or social standing and the author also argued that it is an object of the bank to be in compliance with applicable national and regional regulations, to follow Board approved procedures and guidelines, to adequately train staff to perform their duties, and to properly document loan files..

Table 4: Debt Collection Practices and Profitability of Commercial Banks

Statement	Strongly disagree	Disagree	Neither agree not disagree	Agree	Strongly agree	Likert mean
There exists a written loan collection policy.	0%	5%	11%	41%	44%	4.24
Collection policies and procedures apply equally to all borrowers regardless of their professional or social standing.	0%	15%	9%	38%	38%	3.98
A loan is always marked for closer attention, even if not delinquent, if there is reason to believe future payments may be in doubt.	0%	15%	11%	38%	36%	3.95

A loan is always considered delinquent when it is one day past due and payment has not been made.	2%	3%	9%	30%	56%	4.36
All loans are always subject to penalties after a specified number of days of delinquency.	17%	8%	5%	39%	32%	3.62
It is the responsibility of the Loans Department Manager to authorize, and monitor the activities of all third party collection agents.	2%	12%	9%	32%	46%	4.08
Friendly reminders are always issued when any staff person encounters a borrower with a past due loan.	0%	20%	6%	29%	46%	4.00
Average Likert mean						**4.03**

4.2.4 Credit Risk Governance and Profitability of Commercial Banks

The fourth objective of the study was to establish the effect of credit risk governance on the profitability of commercial banks. Results revealed that 74% of the respondents agreed that the board Credit risk committee reviewed and recommended for Board approval on an annual basis for the Risk Tolerance and other material credit risk policies for the banks. Seventy percent agreed that the board Credit risk committee reviews and recommend for Board approval on an annual basis the Credit Risk Governance Framework, and 63% agreed that the board Credit risk committee monitors Compliance with the Risk Tolerance and Credit Risk Governance Framework at least quarterly through the receipt of periodic reports and provide the Board of Directors with periodic compliance updates. Results in Table 4.7 also indicated that 92% of the respondents agreed that the board Credit risk committee considered any prospective breaches or exceptions to the portfolio management limits and reviewed management exposure reduction plans and/or ratified an excess limit request on an ongoing basis and 95% agreed that the board Credit risk committee reviewed and recommended for Board approval on an as-needed basis management proposals to introduce new risk types, product lines and services that involved credit risk outside the scope of existing businesses. The mean response for this section was 4.13 which indicates that majority of the respondents agreed with the statements regarding the effects of credit risk governance on the profitability of commercial banks. These results imply that credit risk governance have a positive effect on the profitability of commercial banks.

The findings concur with those in Vassileios (2011) who analyzed corporate governance as a cause of the credit crisis, its relation with failures and weaknesses in risk management practices

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and routines in order to reveal the extent to which corporate governance did not serve its purpose permitting excessive risk in a number of major banks. The findings also agree with those in Institute of International finance (2012) which noted that as firms delve into the implementation of significant changes in their governance structures and procedures, a number of challenges arise. These include achieving the right mix of Board members, making the process of interaction between senior management and the Board more effective, and achieving the right balance on the degree and content of intervention of the Board on risk matters.

Table 5: Credit Risk Governance and Profitability of Commercial Banks

Statement	Strongly disagree	Disag ree	Neither agree not disagree	Agre e	Strong ly agree	Likert mean
The board Credit risk committee reviews and recommends for Board approval on an annual basis the Risk Tolerance and other material credit risk policies for the banks.	2%	14%	11%	38%	36%	3.94
The board Credit risk committee reviews and recommend for Board approval on an annual basis the Credit Risk Governance Framework.	5%	20%	6%	24%	46%	3.86
The board Credit risk committee monitors Compliance with the Risk Tolerance and Credit Risk Governance Framework at least quarterly through the receipt of periodic reports and provides the Board of Directors with periodic compliance updates.	2%	18%	17%	30%	33%	3.76
The board Credit risk committee considers any prospective breaches or exceptions to the portfolio management limits and review management exposure reduction plans and/or ratify an excess limit request on an ongoing basis.	0%	3%	5%	27%	65%	4.55

The board Credit risk committee reviews and recommend for Board approval on an as-needed basis management proposals to introduce new risk types, product lines and services that involve credit risk outside the scope of existing businesses	0%	0%	5%	36%	59%	4.55
Average Likert mean						**4.13**

4.3 Cross Tabulation Tables and Mean Scores

The mean scores of the independent variables were presented here. The variables were also ranked using the mean score as the criteria. Credit risk governance was the highest ranked in terms of effectiveness followed by debt collection, credit monitoring and credit appraisal in that order. The findings implied that credit risk governance is the most important practice in credit risk management as it offers an oversight to the operational credit risk management practices at the branch level. It sets the road map and strategic direction for the banks credit risk management.

Table 6: Cross Tabulation Tables and Mean Scores

Variable	Mean Score	Ranking
Credit appraisal	3.95	4
Credit monitoring	3.97	3
Debt Collection	4.03	2
Credit Governance	4.13	1

4.4 Regression Analysis

4.4.1 Multicollinearity Diagnostics/ Correlation Analysis

The term multicollinearity refers to a situation in which there is an exact (or nearly exact) linear relation among two or more of the input variables. Multicollinearity can be addressed in 10 distinct ways. The most obvious is where multicollinearity is eliminated by dropping the highly correlated variables from the equation. However, in real life, it is impossible to eliminate multicollinearity since variables are usually highly correlated (especially in social statistics). In this case, it is expected that there should be high correlation among the variables since credit risk management practices are highly related. For example, it is highly likely, that if a respondent rates credit appraisal practices highly, they may also rate credit monitoring, debt collection and credit risk governance practices highly. This was the case in the study as there was a high correlation between credit appraisal and credit monitoring($R=0.975$); debt collection and credit appraisal ($R=0.933$); credit risk governance and credit appraisal ($R=0.967$); debt collection and

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credit monitoring(R=0.951); credit risk governance and credit monitoring(R=0.959); credit risk governance and debt collection practices (R=0.939). The study chose the most practical way of dealing with multicollinearity which was to "*Leave the model as is, despite multicollinearity*". This approach is recommended by Gujarati (2003) because the presence of multicollinearity doesn't affect the efficacy of extrapolating the fitted model to new data provided that the predictor variables follow the same pattern of multicollinearity in the new data as in the data on which the regression model is based.

Table 7: Multicollinearity

		Profitability(ROA)	Credit Appraisal practices	Credit monitoring	Debt collection practices	Credit risk governance
Profitability(ROA)	R	1				
	P value					
Credit Appraisal practices	R	.485**	1			
	P value	.000				
Credit monitoring	R	.608**	.975**	1		
	P value	.000	.000			
Debt collection practices	R	.632**	.933**	.951**	1	
	P value	.000	.000	.000		
Credit risk governance	R	.481**	.967**	.959**	.939**	1
	P value	.000	.000	.000	.000	

4.4.2 Multivariate Regression Analysis

After testing for multicollinearity, the study attempted to establish the statistical significance of the independent variables on the dependent variable (profitability/ROA) using regression analysis. The regression equation took the following form.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where

Y = Profitability

X_1 = credit appraisal practices

X_2 = credit monitoring practices

X_3 = debt collection practices

X_4 = credit risk governance

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In the model, β_0 = the constant term while the coefficient β_ii = 1….4 was used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables. μ is the error term which captures the unexplained variations in the model.

Table 7 shows that the coefficient of determination also called the R square is 69.6%. This means that the combined effect of the predictor variables (credit appraisal practices, credit monitoring practices, debt collection practices and credit risk governance) explains 69.6% of the variations in profitability. The correlation coefficient of 83.4% indicates that the combined effect of the predictor variables has a strong and positive correlation with profitability.

Table 8: Multivariate Regression Model Fitness

Indicator	coefficient
R	0.834
R Square	0.696
Adjusted R Square	0.676
Std. Error of the Estimate	0.66195

Analysis of variance (ANOVA) on Table8 shows that the combine effect of credit appraisal practices, credit monitoring practices, debt collection practices and credit risk governance was statistically significant in explaining changes in profitability. This is demonstrated by a p value of 0.000 which is less that the acceptance critical value of 0.05.

Table 9: ANOVA

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	61.131	4	15.283	34.878	0.000
Residual	26.729	61	0.438		
Total	87.861	65			

Table displays the regression coefficients of the independent variables. The results reveal that credit appraisal practices and credit risk governance are positively and statistically significant in explaining the profitability of commercial banks. In addition, credit monitoring and debt collection practices were positive and statistically significant in influencing profitability of commercial banks. The findings imply that all the independent variables were strong determinants of commercial banks profitability.

The results indicate that; an increase in the effectiveness of credit appraisal practices by one unit leads to an increase in ROA by 4.65 units; an increase in the effectiveness of credit monitoring practices by one unit leads to an increase in ROA by 5.742 units; an increase in the effectiveness of debt collection practices by one unit leads to an increase in ROA by 2.285 units; an increase in the effectiveness of credit risk governance practices by one unit leads to an increase in ROA by 1.732 units.

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Table 10: Regression Coefficients

Variable	Beta	Std. Error	t	Sig.
(Constant)	-6.06	1.063	-5.704	0.000
Credit Appraisal practices	4.65	1.011	4.598	0.000
Credit monitoring practices	5.742	0.95	6.047	0.000
Debt collection practices	2.285	0.597	3.828	0.000
Credit risk governance practices	1.732	0.585	2.963	0.004

ROA= -6.06 + 4.65 Credit Appraisal practices + 5.742Credit Monitoring practices +2.285 Debt Collection practices+ 1.732 Credit risk governance practices

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECCOMMENDATIONS

5.1Credit Appraisal Practices and Profitability of Commercial Banks

One of the study objectives was to establish the effect of credit appraisal practices on the profitability of commercial banks. The study findings indicated that credit department had various checks during loan credit review. This was demonstrated by descriptive statistics that showed that majority of the respondents agreed that credit department always checked at the character of the borrower, collateral of the borrower, capacity of the borrower, capital of the borrower, conditions and controls during credit review. Regression results indicated that there was a significantly positive relationship between credit appraisal practices and profitability is positive and significant.

5.2 Credit Monitoring Practices and Profitability of Commercial Banks

The second objective of the study was to establish the effect of credit monitoring practices on the profitability of commercial banks. Results indicated that the banks had credit monitoring practices in place. This was supported by the descriptive and inferential statistics that indicated that majority of the respondents agreed that prior to disbursing the credit, the individual credit exposure was subjected to a final check, credit Disbursement review covered compliance with internal guidelines and credit Disbursement review covers completeness of the credit application. Findings further indicated that credit department always checked that the loan was being paid in time and the credit department monitored the status of the loan. These results implied that credit monitoring practices have a positive effect on the profitability of commercial banks. Regression results indicated that there was a positive and significant relationship between credit monitoring practices and profitability of commercial banks.

5.3 Debt Collection Practices and Profitability of Commercial Banks

The other objective of the study was to establish the effect of debt collection practices on the profitability on commercial banks. The study findings revealed that commercial banks had put in place debt collection practices as this was demonstrated by majority of the respondents agreeing that there existed a written loan collection policy, that collection policies and procedures applied equally to all borrowers regardless of their professional or social standing and that a loan was always marked for closer attention, even if not delinquent, if there was reason to believe future payments may be in doubt.

Results also indicated that a loan was always considered delinquent when it was one day past due and payment had not been made, all loans were always subject to penalties after a specified number of days of delinquency, it was the responsibility of the Loans Department Manager to authorize, and monitor the activities of all third party collection agents and friendly reminders were always issued when any staff person encountered a borrower with a past due loan. Regression results indicated that there was a statistically significant relationship between debt collection practices and profitability of commercial banks. These results implied that debt collection practices have a positive effect on the profitability of commercial banks.

5.4 Credit Risk Governance and Profitability of Commercial Banks

The fourth objective of the study was to establish the effect of credit risk governance on the profitability of commercial banks. Results indicated the banks had emphasized on credit risk governance practices as this was supported by majority of the respondents agreeing that the board Credit risk committee reviewed and recommended for Board approval on an annual basis for the Risk Tolerance and other material credit risk policies for the banks, the board Credit risk committee reviews and recommend for Board approval on an annual basis the Credit Risk Governance Framework, and the board Credit risk committee monitors Compliance with the Risk Tolerance and Credit Risk Governance Framework at least quarterly through the receipt of periodic reports and provide the Board of Directors with periodic compliance updates.

Results also indicated that the board Credit risk committee considered any prospective breaches or exceptions to the portfolio management limits and reviewed management exposure reduction plans and/or ratified an excess limit request on an ongoing basis and the board Credit risk committee reviewed and recommended for Board approval on an as-needed basis management proposals to introduce new risk types, product lines and services that involved credit risk outside the scope of existing businesses. Regression results also indicated that there was a positive and significant relationship between credit risk governance and profitability of commercial banks. These results implied that credit risk governance have a positive effect on the profitability of commercial banks.

5.3 Conclusions

Based on the objectives and the findings of the study the following conclusion can be made.

The study concluded that the banks had put in place effective credit appraisal practices as the banks had ensured that credit department had various checks during loan credit review. It was also possible to conclude that credit appraisal practices were a strong determinant of banks profitability.

It was also possible to conclude that the banks had put in place effective credit monitoring practices as prior to disbursing the credit, the individual credit exposure was subjected to a final check, credit Disbursement review covered compliance with internal guidelines and credit

Disbursement review covers completeness of the credit application. The study noted that credit monitoring practices had a positive effect on profitability of commercial banks.

Debt collection practices were a strong determinant of banks profitability. This was concluded because commercial banks had put in place effective debt collection practices by ensuring that there existed a written loan collection policy, that collection policies and procedures applied equally to all borrowers regardless of their professional or social standing and that a loan was always marked for closer attention, even if not delinquent, if there was reason to believe future payments may be in doubt.

Finally the study concluded that banks had put in place effective credit risk governance practices as the board Credit risk committee reviewed and recommended for Board approval on an annual basis for the Risk Tolerance and other material credit risk policies for the banks, the board Credit risk committee reviews and recommend for Board approval on an annual basis the Credit Risk Governance Framework, and the board Credit risk committee monitors Compliance with the Risk Tolerance and Credit Risk Governance Framework at least quarterly through the receipt of periodic reports and provide the Board of Directors with periodic compliance updates. The study further noted that credit risk governance had a positive effect on profitability of banks.

5.4: Recommendations

5.4.1 Recommendations for study findings

The study recommends that banks need to invest in an effective Management Information system as doing so would reduce credit risk. In addition, the banks should emphasize on the use of effective credit appraisal mechanisms so as to curb the high credit risk exposures. Specifically, the banks need to observe the 6 C's of credit appraisal namely character, collateral, capacity, and capital, conditions and controls.

Furthermore, the banks should ensure use of effective debt collection practices as doing so would reduce the high defaults rates and also enhance loan recoveries. A specific recommendation is to have a written loan collection policy which is followed by all parties.

5.4.2 Recommendations for Further Research

Further studies need to be done on the effect of credit risk management practice son Microfinance institutions and also on Sacco's. A comparative study of East Africa commercial banks can be done in order to assess whether credit risk management practices differ. It is also recommended that a study on the new risk management guidelines is being adhered and if yes to what extent.

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