Journal of Entrepreneurship & Project Management

Effects of Credit appraisal practices and credit monitoring on Profitability of Deposit Taking Sacco's In Nairobi County

Makori Ochogo George & Isabela Sile

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship and Project Management
Volume 1||Issue 1||Page 46- 60||December||2017|
Email: stratfordjournals.org

Effects of Credit Appraisal Practices and Credit Monitoring on Profitability of Deposit Taking Sacco's In Nairobi County

[1*]Makori Ochogo George and [2]Isabela Sile

[1]Postgraduate student

Management University of Africa

[2]Lecturer

Management University of Africa

***Corresponding email: gemao2000@yahoo.com**

How to cite this article: **Makori, O. G. & Sile I. (2017). Effects of Credit Appraisal Practices and Credit Monitoring on Profitability of Deposit Taking Sacco's In Nairobi County.** ***Journal of Entrepreneurship and Project Management, 1*****(1), 46 - 60.**

Abstract

Prudential lending procedures in financial institutions involve identifying high-risk loan applicants, modifying lending conditions such as collateral requirements, loan duration and monitoring subsequent repayments. Credit risk management is an emerging phenomenon that lies within SACCO's. Many researchers have attempted to unravel the benefits of the credit risk management. However, it has remained unclear for the SACCO's management on the effects of sound credit risk management practices among deposit taking SACCO's. The General objective of this study was to analyze the effects of credit risk management practices on the profitability of deposit taking SACCO's in Nairobi County. Specifically, to establish the effect of credit appraisal practices on the profitability of deposit taking SACCO's in Nairobi and to determine the effect of credit monitoring on the profitability of deposit taking SACCO's in Nairobi. This study was carried out through a descriptive research method. The target population of this study was 80 respondents directly linked to credit management drawn from the 40 deposit taking SACCO's, in Nairobi county. Simple random sampling technique was used. The questionnaire was used to obtain and gather information from the respondents. Responses in the questionnaires was tabulated, coded and processed by use of a computer Statistical Package for Social Science (SPSS v.21) programme to analyze the data. The regression results revealed that credit appraisal practices, credit monitoring had a positive and significant effect on the financial profitability of SACCOs in Nairobi. Based on the findings above the study concluded that credit appraisal practices and credit monitoring have a positive effect on the financial profitability of the SACCOs. The study recommended that management of SACCOs should adopt effective credit appraisal practices and credit monitoring practices to enhance effective and efficient performance.

Keywords: *credit appraisal, credit monitoring, profitability*

1.1 Introduction

The credit function of financial institutions enhances the ability of investors to exploit desired profitable ventures. Credit creation is the main income generating activity of financial institutions (Kargi, 2011). The Sacco Society Regulatory Authority (SASRA) Supervision report (2012) 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 profitability. The higher the exposure of a financial institution to credit risk, the higher the tendency of the institution to experience financial crunch and vice-versa. Financial profitability is the company's ability to generate new resources, from day- to- day operations, over a given period of time; profitability is measured 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 a financial institution does not have an indication of what proportion of their borrowers will default, earnings will vary thus exposing the institutions 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 agreed. Principally, the credit risk of a financial institution is the possibility of loss arising from non-repayment of interest and the principle, or both, or non-realization of securities on the loans (Kithinji, 2010).

Credit risk management is very important to financial institutions as it is an integral part of the loan process. It maximizes an institution risk, adjusted risk rate of return by maintaining credit risk exposure with view to shielding the financial institution from the adverse effects of credit risk. Financial institutions are investing a lot of funds in credit risk management modeling (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).

Adequately managing credit risk in financial institutions (FIs) is critical for the survival and growth of the FIs. In the case of Savings and Credit Co-operative Societies (SACCO's), the issue of credit risk is of even greater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in. SACCO's are in the business of safeguarding money and other valuables for their Members besides providing loans and offering investment financial services. Credit creation is the main income generating activity for the SACCO's. But this activity involves huge risks to both the lender and the borrower. The risk of a member not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of a SACCO's business. On the other hand, a SACCO with high credit risk has high bankruptcy risk that puts the members' funds in jeopardy. Among the risk that face SACCO's, credit risk is one of great concern to most SACCO authorities and government regulators. This is because credit risk is that risk that can easily and will most likely prompt SACCO failure (Boateng, 2008).

1.1.1 Credit Risk Management in Deposit taking SACCO's in Kenya

According to SASRA Supervision report 2012 the growth and development of the Sacco industry from small welfare institutions to large, multiple-branches financial outfits is testimony to the importance of Sacco societies in provision of affordable financial services to Kenyans of all walks of life. The SACCO's have ensured that Kenyans regardless of their economic status can access savings and credit services in an ethical and dignified manner. The quasi banking services, now known as Front Office Services Activity (FOSA), was a response to the high demands that banks required for one to operate a bank account in the late 1990s that subsequently led to massive closure of bank branches in rural Kenya. Thanks to this innovation by SACCO's, the FOSA gave renewed hope to thousands of low income earners who were practically excluded from the banking system. Twenty years on and in spite of the large and increasingly sophisticated banking industry, Sacco industry remains resilient and dear to millions of Kenyans in financing their developmental needs (Saunders & Cornett, 2002).

In 2007 the International Co-operative Alliance (ICA) ranked the Co-operative Sector in Kenya number seven (7) in the world and one (1) in Africa in terms of number of enterprises, membership, capital and contribution to national economy. Today, Kenya has about 15,000 registered Co-operatives with over 3.5 million members and a $2 billion loan portfolio. The study of credit risk management practices will help credit unions reduce their exposure to risks and enhance their ability to compete with other well established financial institutions like banks in the market as postulated by Iqbal & Mirakhor, 2010. Saunders & Cornett, 2005 concluded that reduction of SACCO exposure to credit risk will enhance achievement of its set objectives and ascertain its profitability. Therefore, it is necessary for SACCO'S to have in place comprehensive credit risk management practices and reporting process to identify, measure, monitor, manage, report and control credit risks. Efficient credit risk management practices have been vital in nurturing the phenomenal growth and sustainability in financial institutions.

Ileve, (2008) states that SACCO'S have tried to maintain relevance and market and have therefore been tempted to invest in information and technology and at the same time offer the latest hot products such as automatic teller machines and other tailor made loan products. Unfortunately, they are unable to flex the financial muscle needed to come up with these products. With the fierce competition experienced from banks and other financial institutions, they will have to adapt to prudential practices in order to survive. Previously these products were viewed as pushing the organization beyond its means but with the playing field being tilted in favour of banks and the other financial institutions, it may be necessary to look into this direction in order to sustain SACCO's(Saunders & Cornett, 2002).

However, the mere perception of high credit risk can dissuade credit unions from entering a particular market segment whereas the major contributing factor to that perception may be due to lack of adequate credit risk evaluation and management practices. In addition, if the practices are identified and the risk controllable, management can take certain calculated steps to improve its potential for success. Failure to control credit risk may lead to firms' insolvency, significant drain on capital and net worth that they adversely affect firms' growth prospect and ability to compete with others (Saunders & Cornett, 2002).

Credit risk management practices is an issue of concern today and there is need to develop improved processes and systems to deliver better visibility into future profitability of the credit unions. According to Saunders and Cornett (2002), when a good selection strategy for risk monitoring is adopted this implies good pricing of the products in line with the estimated risk which greatly affect their profitability. Wambugu (2008) who studied credit risk practices by micro finance institutions (MFIs) in Kenya found that most MFIs had clearly defined credit policies which will be reviewed annually and goals which will be formulated by credit committees and credit control department. Ngare (2008) on the other hand did a survey of credit risk management practices by financial institutions in Kenya. Despite the development and use of highly sophisticated tools and models to measure the exposure of Financial Institutions to Credit Risk, the default rate in the SACCO'S in Kenya remain relatively high. For example the Amount of defaulted loans for Kenyan SACCO'S rose from Ksh.5 Billion in the year 2007 to over with Ksh10 Billion in 2012 (MOCD,2009). Various issues such as the capital adequacy levels in the SACCO system, the role of rating agencies in financial regulation and the fair-value assessment of SACCO assets are the most debated challenges. In response to these crises, significant reformations have been carried out in the SACCO regulatory system. However, issues such as lack of risk sensitive measures of the creditworthiness and weak incentives for SACCO'S to strengthen risk management system emerge as shortcomings (Porvali, 2011).

While the above research outcomes provide insight on credit risk management techniques by commercial banks and MFIs, there is no known study to the researcher, which has been done on the survey of practices of credit risk management in SACCO'S. Therefore the knowledge gap exists as to whether SACCO's use any Credit risk management practices. This study seeks to identify the credit risk management practices used by SACCO'S in Nairobi.

1.2 Statement of the Problem

The diversification of financial products and services by the SACCO's has to be consumed with some caution and prudence as this involves a great deal of risk. According to the SACCO supervision report for 2011, loans disbursed to members accounted to three quarters of the total assets. The quality of loans has therefore been a challenge as the average gross non-performing loans (NPL) stood at 9.6% for the licensed SACCO'S contrary to the Sasra prudential guidelines which provide that the level of non-performing debts should not exceed 5%. According to World Council of Credit Unions (WOCCU) 2008 the financial discipline of provisioning for loan losses has not been part of the SACCO development since

SACCO'S have relied on the check-off system of automatic salary deductions for loan repayment for decades. Many SACCO'S are faced with weak credit management systems, inefficient management information systems, huge portfolio of nonperforming loans, noncompliance to SASRA capital adequacy requirements and ineffective liquidity management systems among others. The SACCO'S have extremely low net institutional capital and do not meet the WOCCU prudential standard of excellence of a minimum of 10% net institutional capital. The researcher sought to unravel these challenges by assessing the level of effects of the practices with a view of enhancing services delivery and general management.

Locally studies have been done on effects of credit risk management, among them Silikhe (2008) on credit risk management in microfinance institutions in Kenya found out that despite the fact that microfinance institutions have put in place strict measures to credit risk management loan recovery is still a challenge to majority of the institutions. Kimeu (2008) conducted a survey of credit risk management techniques of unsecured bank loans. The fundamental question is how significant are the credit risk management practices on the financial profitability of SACCO'S and by extension their survival in the future. Kibui. & Moronge, (2014) Therefore this study sought to address current challenges by studying the effects of Credit appraisal practices and credit monitoring on Profitability of Deposit Taking Sacco's In Nairobi County.

1.3 Research Objectives

i. To establish the effect of credit appraisal practices on the profitability of deposit taking SACCO's in Nairobi.
ii. To determine the effect of credit monitoring on the profitability of deposit taking SACCO's in Nairobi.

2.0 Literature Review

2.1 Theoretical Literature

The study presented various theories that informed the variables underlined in the current study. These theories included portfolio theory of investment, and Agency theory.

2.1.1 Portfolio Theory of Investment

According to Reilly & Brown, 2011), 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 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 profitability suggests that correcting for estimation error, particularly in the means, can substantially improve investment profitability (for example Jobson and Korkie, 1979; 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 Agency Theory

Agency theory is a concept that explains why behavior or decisions vary when exhibited by members of a group. Specifically, it describes the relationship between one party called the principal, that delegates work to another called the agent. It explains their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. The concept originated from the work of Berle and Coit (1932), who were discussing the issues of the agent and principle as early as 1932. Berle and Means explored the concepts of agency and their applications toward the development of large corporations. They saw how the interests of the directors and managers of a given firm differ from those of the owner of the firm, and used the concepts of agency and principal to explain the origins of those conflicts (Murtishaw and Sathaye, 2006).

Jensen and Meckling shaped the work of Berle and Means in the context of the risk-sharing research popular in the 1960s and '70s to develop agency theory as a formal concept. Jensen and Meckling formed a school of thought arguing that corporations are structured to minimize the costs of getting agents to follow the direction and interests of the principals. The theory essentially acknowledges that different parties involved in a given situation with the same given goal will have different motivations, and that these different motivations can manifest in divergent ways. It states that there will always be partial goal conflict among parties, efficiency is inseparable from effectiveness, and information will always be somewhat asymmetric between principal and agent. The theory has been successfully applied to myriad disciplines including accounting, economics, politics, finance, marketing, and sociology (Nikkinen and Sahlström, 2004). This theory prescribes that employees must constitute a good governance structure since they are held accountable in their tasks and responsibilities. An explanatory power of agency theory is reduced if and when the principal decides to divest to a new business. An agent must be motivated and monitored to create wealth, portraying the agent as potentially fraudulent as Marek, (2004) concluded.

2.2 Empirical Literature Review

2.2.1 Credit Appraisal Practices and Profitability

The Macaulay (1988) investigated the adoption of credit risk management best practices in the United States and reported that over 90% of the financial institutions in that country have adopted the best practices. Effective credit risk management has gained an increased focus in recent years, largely due to the fact that inadequate credit risk policies are still the main source of serious problems within the industry. The chief goal of an effective credit risk management policy must be to maximize a financial sector's risk adjusted rate of return by maintaining credit exposure within acceptable limits. Moreover, there is need to manage credit risk in the entire portfolio as well as the risk in individual credits transactions.

Bridgeforce (2008) did a study on comprehensive Management of financial profitability and Credit Risk. The researcher basically analyzed the documents to arrive to the following conclusion that managing credit relationships that are based upon all available customer information and consistent throughout the credit life cycle greatly increases profitability and reduces surprises. It also requires a greater investment of management focus, analytical skills, and technology.

Benedikt, Marsh, Vall and Wagner (2007), examined credit risk management policies for financial institution 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.

2.2.2 Credit Monitoring and Profitability

Peterson and Bohman (2008) in the study of credit risk management system of SACCO's in Tanzania examined that the financial intuitions well-documented credit risk management policy that elaborates the products offered and all activities play an important role to manage the credit risk. The institutions well organized credit manual that documents and elaborates the strategies for managing credit risk also the part of effective credit risk management and they have to formulate incompliance with the institutions credit policy. Strategies for granting credits also should focus on whom, how and what should be done at the branch and corporate division levels while assessing borrowers. Quantitative credit scoring models should be part of credit risk management mechanisms. Method used was quantitative research method. Carey (2001) conducted a survey of risk management practices and found that on average the lowest percentage is on the measuring, mitigating and monitoring risk that is 69% score as compared to risk management policies and procedures that is 82.4%, and internal control of banks that is 76%. Fatemi and Glaum (2000) found that there is significant difference between Micro credit Unions national and foreign banks in risk monitoring and controlling. The United Africa Emirate Micro credit Unions have an efficient risk monitoring and controlling system and it has positive influence on risk management practices.

Hassan, (2010) conducted a comparative study of Handelsbanken and Swedbank and how risk has been managed during the last decade**.** In this thesis the authors strive to investigate the risk management phenomena in the banking sector by conducting a longitudinal comparative study in two different banks i.e. Handelsbanken and Swedbank. In a broader perspective to understand the phenomena the authors depart from theoretical framework that recognizes the social and cultural elements of risk. However, to be more specific the thesis narrows down its analysis to three main variables that come under the realm of this discussion which are; how banks organizing for risk, how they measure it and the role of IT and human judgment. This study contributes to the banking sector by providing a road map of how successful banks manage risk. It highlights that the risk question should be addressed strategically and deemed to be a continuous phenomenon.

2.3 Conceptual Framework

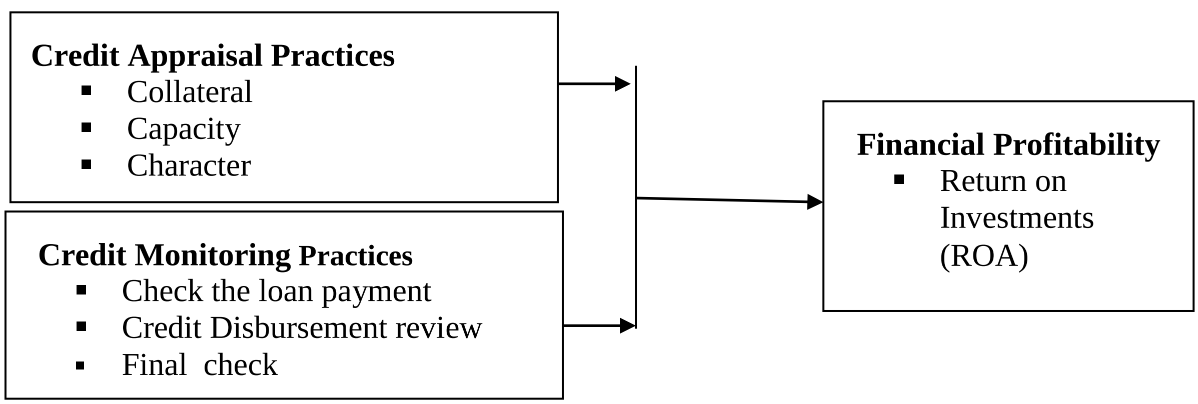

Figure 1: Conceptual Framework

3.0 Research Methodology

Descriptive study design was used as they are concerned with describing the characteristics of a particular individual, or of a group. The target population of this study was 80 respondents (2 respondents per SACCO) directly linked to credit management drawn from the 40 deposit taking SACCO's, in Nairobi (SASRA 2015). Primary data was collected through the administration of the questionnaires. Validity and reliability tests were conducted. Data analysis was conducted using descriptive and inferential statistics. The multivariate model was as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu$$

Where; Y = Financial profitability

Financial profitability was measured using secondary data on ROA.

X_1 = Credit appraisal practices.

Credit appraisal practices were measured by six statements based on a Likert scale. The mean scores for all statements were used

X_2 = Credit monitoring practices

Credit monitoring practices were measured by five statements based on a Likert scale. The mean scores for all statements were used

4.0 Analysis, Results and Discussions

4.1 Response Rate

The number of questionnaires that were administered was 80. A total of 75 questionnaires were properly filled and returned. This represented an overall successful response rate of 93.75% as shown on Table 1. According to Mugenda and Mugenda (2003) and also Kothari (2004) a response rate of above 50% is adequate for a descriptive study. Babbie (2004) also asserted that return rates of above 50% are acceptable to analyze and publish, 60% is good and 70% is very good.Based on these assertions from renowned scholars, 93.75% response rate is very good for the study.

Table 1: Response Rate

Response	Frequency	Percent
Returned	75	92.75%
Unreturned	5	7.25%
Total	**80**	**100%**

4.2 Descriptive statistics

4.2.1 .Credit appraisal practices

The first objective of the study was establish the effect of credit appraisal practices on the profitability of deposit taking SACCO's in Nairobi. The respondents were asked to respond on statements on credit appraisal practices. The responses were rated on a five likert scale as presented in Table 2. Majority of 78%(49.3%+29.3%) of the respondents agreed with the statement that the credit department always checks at the character of the borrower during credit review 70.7% agreed with the statement that the credit department always checks at the collateral of the borrower during credit review, 66.7% of the respondents agreed that the credit department always checks at the capacity of the borrower during credit review, 80% of the respondents agreed that there The credit department always checks at the capital of the borrower during credit review, while 82.7% of the respondents agreed that The credit department always checks at the conditions during credit review. On a five point scale, the average mean of the responses was 3.91 which mean that majority of the respondents were agreeing with most of the statements; however the answers were varied as shown by a standard deviation of 1.09.

Table 2: Credit appraisal practices

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev
The credit department always checks at the character of the borrower during credit review	4.00%	6.70%	10.70%	49.30%	29.30%	3.93	1.018
The credit department always checks at the collateral of the borrower during credit review	4.00%	10.70%	14.70%	36.00%	34.70%	3.87	1.131
The credit department always checks at the capacity of the borrower during credit review	10.70%	5.30%	17.30%	38.70%	28.00%	3.68	1.243
The credit department always checks at the capital of the borrower during credit review	6.70%	8.00%	5.30%	56.00%	24.00%	3.83	1.095
The credit department always checks at the conditions during credit review	0.00%	10.70%	6.70%	30.70%	52.00%	4.24	0.984
Average						**3.91**	**1.09**

4.2.2 .Credit Monitoring practices

The second objective of the study was to determine the effect of credit monitoring on the profitability of deposit taking SACCO's in Nairobi. The results are presented in Table 4.3 below show that 70.7% (12%+58.7%) of the respondents agreed that prior to disbursing the credit, the individual credit exposure is subjected to a final check, 72% of the respondents agreed that the credit disbursement review covers compliance with internal guidelines, 80.0% of the respondents supported that The credit Disbursement review covers completeness of the credit application, 82.6% agreed that the credit department always checks that the loan is being paid in time while 70.7% agreed that the credit department monitors the status of the loan

Using a five point scale likert mean, the overall mean of the responses was 3.92 which indicates that majority of the respondents agreed to the statement of the questionnaire. Additionally, the standard deviation of 1.19 indicates that the responses were varied. The results herein imply that credit monitoring influences profitability of deposit taking SACCO's.

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship and Project Management
Volume 1||Issue 1||Page 46- 60||December||2017|
Email: stratfordjournals.org

Table 3: Credit Monitoring practices

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev
Prior to disbursing the credit, the individual credit exposure is subjected to a final check	17.30%	4.00%	8.00%	12.00%	58.70%	3.91	1.552
The credit Disbursement review covers compliance with internal guidelines	4.00%	14.70%	9.30%	40.00%	32.00%	3.81	1.159
The credit Disbursement review covers completeness of the credit application	4.00%	4.00%	12.00%	41.30%	38.70%	4.07	1.018
The credit department always checks that the loan is being paid in time	4.00%	5.30%	8.00%	41.30%	41.30%	4.11	1.034
The credit department monitors the status of the loan	10.70%	5.30%	13.30%	42.70%	28.00%	3.72	1.236
Average						**3.92**	**1.19**

4.3 Correlation Analysis

Table 4 presents the results of the correlation analysis. The results revealed Credit appraisal practices and profitability are positively and significant related (r=0.486, p=0.000). The table further indicated that credit monitoring practices and profitability are positively and significantly related (r=0.207, p=0.007). This implies that an increase in any unit of the variables leads to an increase in the profit.

Table 4: Correlation Matrix

		profitability	Credit appraisal practices	Credit Monitoring practices
profitability	Pearson Correlation	1.000		
	Sig. (2-tailed)			
Credit appraisal practices	Pearson Correlation	.486**	1.000	
	Sig. (2-tailed)	0.000		
Credit Monitoring practices	Pearson Correlation	0.207**	0.137	1.000
	Sig. (2-tailed)	0.007	0.240	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.4 Regression Analysis

The results presented in table 5 present the fitness of model used of the regression model in explaining the study phenomena. credit appraisal practices and credit monitoring were found to be satisfactory variables in explaining profitability. This is supported by coefficient of determination also known as the R square of 26.0%. This means that on credit appraisal practices and credit monitoring explain 26.0% of the variations in the dependent variable which is profitability of Saccos. This results further means that the model applied to link the relationship of the variables was satisfactory.

Table 5: Model Fitness

Indicator	Coefficient
R	0.510
R Square	0.260
Adjusted R Square	0.218
Std. Error of the Estimate	0.436

In statistics significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

Table 6 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of implementation of youth development projects. This was supported by an F statistic of 6.144 and the reported p value 0.000 which was less than the conventional probability of 0.05 significance level.

Table 6: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.663	4	1.166	6.144	**0.000**
Residual	13.283	70	0.19		
Total	17.947	74			

Regression of coefficients results in table 7 shows that credit appraisal practices and profitability are positively and significant related (r=0.342, p=0.002). The table further indicated that credit monitoring practices and profitability are positively and significantly related (r=0.152, p=0.015).

Table 7: Regression of Coefficients

Variable	B	Std. Error	t	Sig.
(Constant)	2.414	0.484	4.985	0.000
Credit appraisal practices	0.342	0.107	3.194	0.002
Credit monitoring	0.152	0.103	1.475	0.015

5.0 Conclusions

Based on the findings above the study concluded that credit appraisal practices, credit monitoring, debt collection practices and credit risk governance practices have a positive effect on the financial profitability of the SACCOs.

The study concluded that managing credit relationships that are based upon all available customer information and consistent throughout the credit life cycle greatly increases profitability and reduces surprises.

6.0 Recommendations

The following recommendations based on the study findings are suggested to help boost the profitability of Saccos in Kenya. The study recommended that management of SACCOs should adopt effective credit appraisal practices and credit monitoring to enhance effective and efficient performance.

Finally, the study recommend that informal relationship between MFIs and borrowers need to be encouraged since it helps in monitoring and early detection of problems that may arise in non-repayment of loans that finally lead to credit risk. In addition, cooperation and coordination among various agencies that provide additional support to borrowers may help SACCOs to succeed in risk management in their business.

7.0 References

Apps. R, (1996). The Monetary and Financial System. London, Bonkers Books Ltd, 3rd Edition.

Black F. (1971): Implications of the random walk hypothesis for portfolio management. *Financial Analysts Journal* 27:16–22.

Black, F. (1972): Capital market equilibrium with restricted borrowing. *Journal of Business* 45: 3–18.

Bridgeforce. (2008). Comprehensive management of profitability and credit risk.

Campbell, A. (2007). Bank insolvency and the problem of nonperforming loans. *Journal of Banking Regulation, 9*(1), 25-45.

Carey, A. (2001). Effective risk management in financial institutions: the Turnbull approach, *Balance Sheet*, 9 (3), 24-27.

Coyle B. (2000), Framework for Credit Risk Management; Chartered Institute of Bankers,United Kingdom

Early J.S. (1966). Problems in the Measurement of the Quality of Credit. Proceedings of the Business and Economic Statistics Section of the American Association, 202-217

Jobson, J.D., B. Korkie, V. Ratti (1979). Improved estimation for Markowitz portfolios using James-Stein type estimators. 'Proceedings of the American Statistical Association, Business and Economics Statistics Section 41:279–284.

Jorion, P. (1991). Bayesian and CAPM estimators of the means: Implications for portfolio selection. *Journal of Banking and Finance* 15:717–727.

Kibui, N. & Moronge, M. (2014). Effects of credit risk management on financial profitability of SACCO'S: A case study of Harambee SACCO. International Journal of Social Sciences and Project Planning Management, 1 (3), 157-172.

Kimeu, T. K. (2008). *A survey of credit risk management techniques of unsecured bank loans of commercial banks in Kenya* (Doctoral dissertation).

Kithinji, A. M. (2010) Credit Risk Management and Profitability of Commercial Banks In Kenya. A published Masters Thesis university of Nairobi

Macaulay, F.R. (1988). Some theoretical problems suggested by the movements of interest rates, bond yields, and stock prices in the Unites States since 1856. New York: NBER.

Markowitz, H.M. (1959). Portfolio Selection. New York: John Wiley and Sons

Murtishaw, S. and Sathaye, J.(2006). *Quantifying the Effect of the Principal–Agent Problem on US Residential Use*, Report LBNL-59773

Ngare, E. M. (2008). A Survey of Credit Risk Management Practices by Commercial Banks in Kenya. *Unpublished MBA research project* University of Nairobi.

Nikkinen, J., & Sahlström, P. (2004). Does agency theory provide a general framework for audit pricing?. *International Journal of Auditing*, *8*(3), 253-262.

Peterson,J. & Bohman E.R. (2008). Bank regulatory agreements and real estate lending. *Working Papers,* 5 (1).95-102

Porvali, H. (ed) (2013) The Development Of Cooperatives and Other Rural Organizations, Agriculture and Rural Development Series, No.8, The World Bank, Washington, D.C.

SASRA, (2013). Deposit taking SACCO Societies Licensed by the Sacco Regulatory Authority

Saunder M., Thorn H. A., Lewis P. (2002). Research Methods for business student 4th Edition, London, Pitman Publishers Ltd.

Wambugu, E. M. (2008). Credit risk management practices in savings and credit cooperative societies (SACCO's) offering Front Office Service Activity (FOSA) in Kenya (Doctoral dissertation, University of Nairobi, Kenya).

Kothari, C. (2004). *Research Methodology: Methods & Techniques*, 2nd edition. New age International Publishers, New Delhi, India

Mugenda, O. M., and Mugenda, A. G. (2008). *Research Methods: Quantitative and Qualitative Approaches*, Acts Press, Nairobi-Kenya