EFFECT OF LOAN PORTFOLIO MANAGEMENT ON THE PROFITABILITY OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN NAIROBI, KENYA

Monica S. Muiru

Lecturer, Department of Accounting, Finance & Management Science, Egerton University, Kenya

Wycliffe O. Oluoch

Lecturer, Department of Acounting, Finance and Management Science, Egerton University, Kenya

Joseph J. Ajang ✉

Student, Department of Accounting, Finance and Management Science, Egerton University, Kenya
josephjoka@yahoo.com, 0074813@student.egerton.ac.ke

Abstract

Loan portfolios are the major assets of the lending institutions, therefore they should be managed well to yield the desired profitability. Sound loan portfolio management is a prerequisite for microfinance institutions' stability and continuing profitability. The study sought to assess the effect of loan portfolio management on the profitability of deposit taking microfinance institutions in Nairobi, Kenya. In the study, correlation and regression analysis were used to determine the relationship between the independent and the dependent variables. The study found that loan portfolio management has a significant relationship with the profitability of Deposit Taking Microfinance Institutions; with portfolio planning, client screening and portfolio control predicting up to 68.2%, 3.8% (decrease) and 2.5% respectively.

Keywords: Return on Assets (ROA), loan portfolio, profitability and client screening

INTRODUCTION

Loan portfolio constitutes loans that have been made or bought and are being held for repayment. Loan portfolios are the major assets of the lending institutions. The value of the loan portfolio depends not only on the interest rates earned on loans but also on the likelihood that interest and principal will be paid. Lending is the principal business activity for most commercial banks. The loan portfolio is typically the largest asset and the predominant source of revenue. As such, it is one of the greatest sources of risk to a bank's safety and soundness. Whether due to lax credit standards, poor portfolio risk management, or weakness in the economy, loan portfolio problems have historically been the major cause of bank losses and failures. Effective management of the loan portfolio is fundamental to a microfinance institution safety and soundness (Janson, 2002).

Statement of the Problem

The major goal of DTMs is the provision of loans to low-income and the poor households and taking deposits from them. The chance that a microfinance institution may not receive its money (principal and interest) back from the borrowers is the most common and the most serious vulnerability in a microfinance institution. Since most microloans are unsecured, declining loan recovery rates and default can spread quickly from a handful of loans to a significant portion of a portfolio (Bystrom, 2007). Due to this decline in loans recovery rates, most microfinance institutions have invested in loan portfolio management since it is fundamental to their safety and soundness; hence profitability.

Objectives of the study

General Objective

To assess the effect of loan portfolio management on the profitability of deposit taking microfinance institutions

Specific Objectives

i. To determine the effect of loan portfolio planning on the profitability of DTMs.
ii. To assess the effect of client screening on the profitability of DTMs.
iii. To find out how loan portfolio control affects the profitability of DTMs.
iv. To find out the joint effect of loan portfolio planning, client screening and loan portfolio control on the profitability of DTMs.

Scope of the Study

The study was carried out in Nairobi County. The county was selected because all the DTMs are based or have branches there; thus made it an appropriate place to do this research. The study covered all the DTMs operating in Nairobi licensed by the Central Bank of Kenya.

LITERATURE REVIEW

Wakaria (2016) carried out a study on the effect of credit management on the financial performance of microfinance institutions in Kenya. The researcher used descriptive research design as it draws in a comprehensive analysis of credit risk management and its correlation with financial performance in microfinance institutions. The researcher used secondary data (2011 – 2015) gathered from the study population of 13 deposits taking microfinance institutions licensed by Central Bank of Kenya and 22 non deposit taking microfinance institutions. The study's specific objectives were credit risk, liquidity risk and interest rate risk. The study found out most microfinance institutions in Kenya are faced with credit risk as depicted by the significant negative relationship between the financial performances (measured by return on equity) and credit risk. A unit increase in credit risk holding other factors constant resulted in a 2.165 decrease in the return on equity which is the highest negative association when compared to other forms of risks. The study recommended that the microfinance institutions in Kenya must pay constant attention to credit risk being a major risk to non- performing loans.

Nkuah (2015) carried out a study on the effect of loan portfolio quality on the performance of banks in Ghana. The study employed panel regression techniques. Among various data techniques, fixed effect model was identified as the best technique based on Hausman test between fixed and random effect. The study population was made up of 10 Ghanaian universal banks. The data for the study was obtained from secondary source (2007 - 2013). The return on equity and net interest margin were used to proxy financial performance while loan portfolio profitability and loan loss provision/gross loan advances were used as proxies for loan portfolio quality. The findings of the study established that loan portfolio quality has significant effect on the financial performance of the selected Ghanaian universal banks. The study recommended that universal banks in Ghana should develop effective and efficient strategies and policies to improve the quality of their loans in order to improve their profitability. It further recommended that, efficient cost management must be adopted by Ghanaian universal banks to improve performance.

Adamu, et al (2014) carried out a study on credit portfolio management in microfinance banks using the lending methodologies in Nigeria. They found out that the success of microfinance banks is dependent on the effective and efficient management of its credit

portfolio. The risk portfolios proved to be the source of recurring problems and the cause of failure for many microfinance banks. Credit policies, procedures, systems and controls do not always assure asset quality and earnings. They asserted that practical approach is therefore necessary for effective loan portfolio management. They recommended that the practical approach is needed by microfinance banks and the need to have operations research experts among the bank's employees. Operation Research experts could use their wealth of experience in both objective and quantitative problem solving skills to continually carry out research on causes of loan defaults in Microfinance Banks and recommend optimum solutions.

George et al (2013) carried out a study on the analysis of the loan portfolio management on organization profitability: a case of commercial banks in Kenya using a descriptive survey. Their analysis was based on variables such as the profitability measures, interest expense, administrative cost, and asset value at the organizational level. They picked a sample at the management level. Using regression analysis, they found out that, the loan portfolio has a direct influence on the profitability of the banks whereas non-performing loans and the new loans have different impact on the profitability of the bank. They further asserted that, the interest expense was rated highly as a factor that works to reduce the profits. They also pointed out that, the administration costs especially salary and overheads were utterly blamed on reducing profitability. Their findings further revealed that, the depreciation of assets and the provisions was seen as a dent to profitability of any bank. However, it was also noted that the size of bank by asset value does not per se translate to higher profitability but it is a key fact for profitability efficiency.

Rodgers (2013) in his study on loan performance and profitability of microfinance institutions in Uganda used both quantitative and qualitative information (data) from questionnaires and interviews. The study design was mainly descriptive, analytical and explanatory. The research findings revealed that most of loan clients are affected by the loan period so as to meet their payment obligations. Most of the loan clients borrow for business purposes, the loan advanced was not adequate, the interest rates were very high and borrowers were not allowed participation in loan negotiation as terms and conditions are predetermined by the bank. The findings further revealed that expenses incurred by the borrowers from the time of application up to the time of repayment of the loans were too high, default rate was high, and not all the staff agreed that they monitor projects which are advanced and the bank does not motivate its clients to repay the loans.

Sindani (2012) in her study on effectiveness of credit management system on loan performance: empirical evidence from micro finance sector in Kenya. The study found out that credit terms formulated by the microfinance institutions do affect loan performance; the

involvement of credit officers and customers in formulating credit terms affects loan performance. Interest rates charged had a negative effect on the performance of the loans, the higher the interest rates the lower the loan performance. Credit risk controls adopted by microfinance institutions have an effect on loan performance, credit insurance, signing of covenants with customers, diversification of loans, credit rating of customers, reports on financial conditions, refrain from further borrowing had an effect on loan performance. Collection policies adopted by microfinance institution had an effect on loan performance, stringent policy had a great impact on loan performance, and the lenient policy had an effect but was not as great as that of stringent policy.

Kalio and Kirui (2012) carried out a study on the influence of credit risk management practices on loan performance of microfinance institutions in Baringo County. The study employed a descriptive design. They considered the technique appropriate because it enabled them to obtain factual information from the respondents. The target population in their study was 7 managers and 88 credit officers in MFIs in Baringo County. Census technique was used because all branch managers and credit officers were directly targeted in their study. They found out that, there is a strong positive relationship between client appraisal and loan performance of MFIs.

Musyoki et al (2012) carried out a study on the impact of credit risk management on the financial performance of banks in Kenya. The research design used for the study was descriptive. The population of interest was the 48 banks that operate in Kenya. The variables studied were default rate, bad debt cost and cost per loan asset on bank financial performance. The results of the study showed that credit risk management is an important predictor of bank financial performance thus success of bank performance depends on risk management to the extent of around 36%. The study results also showed that default rate as one of the risk management indicator is a major predictor of the bank financial performance to the extent of 54% and followed by bad debt cost at 9.3% and lastly slightly influenced by cost per loan asset up to 3.7%. Credit risk management is crucial on the banks performance since it has a significant relationship with bank performance and contributes up to 35.6 % of the bank performance. They further asserted that, among the risk management indicators, default rate management is the single most important predictor of the bank performance since it influences 54% of the total credit risk influence on bank performance. Risk management indicators such as bad debt cost and cost per loan asset are not significant predictors of bank performance.

Gatuhu (2011) in her study on the effect of credit management on the financial performance of microfinance institutions in Kenya using a descriptive survey design on all the MFIs registered under AMFI found out that the variables; client appraisal, credit risk control and

collection policy have effect on financial performance of MFIs. She asserted that there is a strong relationship between financial performance of MFIs and client appraisal, credit risk control and collection policy. She further asserted that a unit increase in client appraisal would lead to increase in financial performance of MFIs in Kenya; this is an indication that there is positive association between client appraisal and financial performance of MFIs, an increase in credit risk control would lead to increase in financial performance of MFIs in Kenya, which shows that there is positive relationship between financial performance of MFIs and credit risk control and a unit increase in collection policy would lead to increase in performance; this is an indication that there is a positive relationship between financial performance of MFIs and collection policy. Client appraisal, credit risk control and collection policy significantly influence financial performance of MFIs in Kenya.

Karekaho (2009) in his study on loan portfolio management and the performance of microfinance institutions in Uganda, Wakiso District, using an analytical and cross sectional survey focusing on both qualitative and quantitative data found out that the portfolio planning, client screening and portfolio control are related significantly with the portfolio performance of MFIs, but the strongest relationship was between portfolio control and the performance of MFIs. In addition, they asserted that, although all the independent variables predicted a significant proportion of this performance, the most significant individual predictor was again portfolio control dominated by loan monitoring. The results, therefore, indicated that if MFIs are to achieve the desired portfolio performance, they have to consider all these independent variables but putting more emphasis on their loan portfolio control generally and loan monitoring in particular.

METHODOLOGY

The study adopted a descriptive research design. The technique was appropriate in providing an in-depth study and analysis on this research. The target population for this study was made up of all the fourteen licensed deposit taking microfinance institutions in Nairobi County. A census study was used to carry out the research. The data collected through questionnaires was tabulated and analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics such as frequencies and percentages were used to analyse data. Furthermore, descriptions were made based on the results of the tables. Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was coded to enable the responses to be grouped into various categories. The findings were then presented using tables, bar graphs, and pie charts. Correlation and regression analysis were used to test the relationships between the variables. Correlation analysis was

used to test the relationship between each of the independent variables and the dependent variable. Regression analysis was used to test the relationship between all the variables (independent and dependent variables). The regression model that was used in the study is shown below:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + ę$

Where Y= Profitability of microfinance institutions measured by ROA

α= Constant Term

β= Beta Coefficient –This measures how many standard deviations a dependent variable will change, per standard deviation increase in the independent variable.

X_1= Loan Portfolio Planning

X_2= Clients Screening

X_3= Loan Portfolio Control

ę= Error term

FINDINGS

Bivariate correlation analysis was carried out to determine the effect of loan portfolio planning on the profitability of DTMs, effect of client screening on the profitability of DTMs and effect of portfolio control on the profitability of DTMs as shown in the Table 1, 2 and 3 respectively. Multiple linear regression was used to assess the effect of the combined variables on the profitability of DTMs

Correlation analysis

Table 1: The relationship between Loan portfolio planning and profitability of DTMs

		Loan portfolio planning
	Pearson Correlation	.301
Profitability of DTMs	Sig. (2-tailed)	.008
	N	35

Table 1 presents the relationship between profitability of DTMs and Loan portfolio planning; the Pearson Correlation is 0.301 indicating a positive relationship. The Sig. (2-tailed) was 0.008< p-value (0.05), null hypothesis was not accepted and a conclusion is made that Loan portfolio planning has a statistical significant relationship with the profitability of DTMs.

Table 2: The relationship between Client screening and profitability of DTMs

		Client screening
	Pearson Correlation	.105
Profitability of DTMs	Sig. (2-tailed)	.006
	N	35

Client screening and profitability of DTMs have a positive relationship; their Pearson Correlation is (0.105), since Sig. (2-tailed) is 0.006< P-value (0.05) the null hypothesis is rejected and a conclusion is made that the Client screening has a significant effect on the profitability of DTMs as presented in Table 2 above.

Table 3: The relationship between Loan portfolio control and profitability of DTMs

		Loan portfolio Control
	Pearson Correlation	.101
Profitability of DTMs	Sig. (2-tailed)	.005
	N	35

The loan portfolio control has a weak positive relationship with the profitability of DTMs since the Pearson Correlation is (0.101), the null hypothesis is rejected and conclusion is made that the relationship is significant Sig. (2-tailed) is 0.005<p-value (0.05) as shown in Table 3 above.

Regression analysis

The study sought to determine the effect of combined variables on the profitability of DTMs

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.301[a]	.091	.003	1.54669

a. Predictors: (Constant), portfolio control, loan portfolio planning, client screening

b. Dependent Variable: ROA

The model had a regression value of 0.301 which depicts good linear relationship between predicted and explanatory variables. The model was also moderately strong owing to R-square

values of 0.091 which was adjusted for errors to 0.003. This depicts that the independent variables explains only 30.1% of the changes in Profitability of DTMs as measured by ROA.

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.383	3	2.461	1.029	.003[b]
1	Residual	74.160	31	2.392		
	Total	81.543	34			

a. Dependent Variable: ROA

b. Predictors: (Constant), loan portfolio control, loan portfolio and client screening

Table 5 reveals that the model was significant owing to F-test value of 1.029 at significance value of 0.003 (p < .05) which attributed to the rejection of null hypothesis and a conclusion was made that there is a significant relationship between the combined variables and the profitability of DTMs.

Table 6: Regression Coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
	(constant)	2.053	2.402		.855	.399
	Loan portfolio planning	.682	.426	.304	1.604	.119
1	Client screening Loan	-.038	.468	-.016	-.082	.935
	portfolio control	.025	.541	.009	.046	.964

a. Dependent Variable: ROA

From Table 6 above, the following regression equation was established:

$$ROA = 2.053 + 0.682 Loan\ portfolio\ planning - 0.038 client\ screening + 0.25\ loan\ portfolio\ contral$$

When other factors (loan portfolio planning, client screening and loan portfolio control) are at zero, the Profitability of DTMs (ROA) will be 2.053. Holding loan portfolio control and client screening constant, a unit increase in loan portfolio planning would lead to 0.682 increases in

DTMs Profitability. Holding other factors (loan portfolio planning and client screening) constant, a unit increase in loan portfolio control would lead to a .025 increase in DTMs' ROA. Furthermore, holding loan portfolio control and loan portfolio planning constant, a unit increase in client screening would lead to a .038 decrease in DTMs' ROA.

CONCLUSION

The first objective of the study was to establish the relationship between loan portfolio planning and profitability of DTMs in Nairobi County. Results indicated that this relationship was significant. This implies that, the manner in which the Deposit Taking Microfinance Institutions conduct their loan portfolio planning affects their profitability in a significant way. The results showed that portfolio planning is a significant positive predictor of the DTMs profitability. The findings also showed out that client screening has a significant effect on the profitability of DTMs. Also, loan portfolio control has a significant effect on the profitability of DTMs. Portfolio control involves enforcing ways and means of loan recovery in case a client begins to show signs of defaulting or late repayment. Since MFIs have no collateral to seize, they usually adopt control measures that recover loaned money.

The study revealed that loan portfolio management has a significant effect on the profitability of the DTMs. In this research all the independent variables predicted a significant proportion of the profitability, but the most dominant one is portfolio planning. For DTMs to achieve the desired profitability, they have to consider all these independent variables but putting more emphasis on their loan portfolio control and client screening.

Given the aforementioned summary of findings, the study makes the following conclusions: Results indicated that loan portfolio planning has a significant relationship with the profitability of Deposit Taking Microfinance Institutions in Nairobi County. Planning is a significant factor, predicting up to 68.2% of the profitability of DTMs. Results showed that most of the DTMs conduct their portfolio planning by putting more emphasis on loan pricing and loan size determination.

Findings also indicated that client screening has a significant relationship with the profitability of DTMs in Nairobi. It predicted up to 3.8% decrease in profitability, however, it is effectively carried out in most of the DTMs. The findings also showed that loan portfolio control has a significant relationship with the DTMs' profitability in Nairobi County. It was established as significant predictor of up to 2.5% of the profitability.

REFERENCES

Adamu, I., Asongo, A.I. &Nyor, N. (2014). Credit portfolio management in microfinance banks: Conceptual and practical insights; ModibaAdama University of Technology, Yola, Nigeria.

Aleema, I. &Kasekende, L. (1999). Reforming finance in a low income country: The case of Uganda, Kampala: Bank of Uganda.

Antonio, S. (2000). Understanding client exit: A survey of Bangladesh and Pakistan,   focus notes No.16.

Aquilars, M. K. &Kirui, S. (2012). Influence of credit risk management practices on loan performance of microfinance institutions in Baringo County, Kenya. International journal of science and research, Vol 3 Issue 10

Armendariz, A., Beatriz, Jonathan &Morduch, J. (2005). The economics of microfinance, Cambridge, MA: MIT Press

Arun, T., &Hulme, D. (2009).Microfinance: A reader. New York: Routledge.

Association of Chartered Certified Accountants; ACCA, (2005).Historical financial indicators, Kampala, Uganda. Retrieved from http://www.ugandaeconomy.com/trade-associations/acca

Baxley, B. J. (1996). Banking management, USA: Gulf Publishing Company.

Berger, A. N. & Gregory, F. U. (2004).The institutional memory hypothesis and procyclicality of bank lending behaviour.Journal of financial intermediation 13, 458-495

Bystrom, H. (2007). Structured microfinance. Lund University in Lund, Sweden: Swiss printers

Consultative Group to Assist the Poor, (1999). "Format for appraisal of MFIs," CGAP technical tools series No. 4 July 1999

Consultative Group to Assist the Poor; (CGAP).(2001). Disclosure of guidelines for financial reporting by microfinance institutions. January 2001: Washington DC

Consultative Group to Assist the Poor; (CGAP). (2003). The impact of microfinance:Donor brief No.13, July 2003. Washington D.C.

Consultative Group to Assist the Poor; (CGAP). (2012). What is a microfinanceinstitution? Retrieved on March, 12, 2015 from http:// www.cgap.org.

Crosbie, P & Bohn, J. (2003).Modelling difficult risk.white paper: Moody's KMV.

Dixie, L., Elizabeth, S. C. & Gardner, M. J. (2004). Managing financial institutions – an asset- liability approach. New York: The Dryden press, a division of Harcourt College Publisher, 4th Edition.

Duku, H. (2004). Financial decentralization and performance at Makerere University.A research project at Makerere University.

Ejigu, L. (2009). Performance of a sample microfinance institution of Ethiopia.International NGO Journal Vol 4(5) p.p287-298Retrieved 20 May, 2009 form http:// www.academic journals.org/ INGOS pdf.

Frank, W. (1996).Business Accounting. London: Pitman Publishing Company Ltd, 6th Edition.

Garber, C. (1997). Private investment as a financing source for micro credit: University of Miami.

Gatuhu, R, N. (2011). The effect of credit management on the financial performance of microfinance institutions in Kenya: University of Nairobi.

Getubig, D. (1987). Factors in commercial credit. New York: McMillan.

Gongera, E.G., Miroga, B.J., Ngaruiya W. N., Mindila, R. &Nyakwara, S. (2013). An analysis of loan portfolio management on organization's profitability: A case of Commercial banks in Kenya.

Harmut, S. (1997). Microfinance for the poor: Development seminars. Paris.

Helms, B. (1998). Cost allocation for multi-service microfinance institutions: Occasional paper No.2 April 1998. CGAP, Washington DC. Available on: http://www.uncdf.org/mfdl/readings/CGAP occ.2pdf

Janson T. (2002). Performance indicators for MFIs: Technical guide. Micro rate and inter- American Development Bank, Washington DC.

Joppe, M. (2000).The Research Process. Retrieved from http://www.ryerson.ca/~mjoppe/rp.htm

Kadubo, S. A. &Musyoki, D. (2012).The impact of credit risk management on the financial performance of banks in Kenya (for period 2000 – 2006).

Kagwa, P. (2000). Financial institutions loan portfolio performance in Uganda: A comparative study of commercial banks and micro-finance institutions. Kampala University.Unpublished Msc. Dissertation.

Kalio, A.M &Kirui, S.K. (2012), Influence of credit risk management practices on loan performance of microfinance institutions. A case of Baringo County

Karekaho, S.S. (2009). Loan portfolio management and the performance of microfinance institutions in Uganda: A case of Wakiso District.

King, R. G., & Levine, R. (1994).Finance, Entrepreneurship and Growth.Journal of Monetary Economics 3 (108) 717-737.

Koch, T, W. & Wall, L, D. (2000.) Bank loan loss accounting: A review of theoretical and empirical evidence. Federal Reserve Bank of Atlanta, economic review, No.2 pp. 1-17.

Lascelles, D. (2008). Microfinance banana skins – risk in booming industry. March 2008, London, Centre for Study of Financial Innovation.

Loan Analytics (2004). Dealings in commercial loans: Loan portfolio management, http://www.exodusdesign.com/analytics/portfolio.cost.allocation html

Markowitz, H. M. (1952). Portfolio selection Journal of FinanceVol 7, No 1.

Martin, J. (1996). Managing credit for the rural poor: Lessons from Grameen Bank. Washington DC.

Martin, M.P., Reyna, M.M. & Jorgensen, A. (2006). Loan portfolio management.http://www.fca.gov/download/lpmfortheweb.pdf

Meeker, L. G. (1998). Development finance: Doing the undoable deals. Journal of Commercial banks learning 72; 13-26.

Merton, R. (1974). On the pricing of corporate debts: The risk structure of interest rates. Journal of Finance 29, 449-470.

Ministry of Finance, Planning and Economic Development; MFPED. (2005). Loans repayments and grace periods for microfinance institutions that lend to agricultural clients; Kampala Uganda. Retrieved http://www.finance.go.ug/index.php?option=com_contect&review=contact&id=1&itemid=2

Microfinance Bulletin.(2008a). Issue No.16, spring, Washington DC. Microfinance Information Exchange Inc (mix). Available http://www.themix.org/sites/default/files/mix_MBB16_Spring%202008%20/issue.pdf

Microfinance Bulletin.(2008b). Issue No.17 Autumn, Washington DC. Microfinance Information Exchange Inc (mix).

Available http://www.themix.org/sites/default/files/MBB%2017%20Autumn%202008.pdf

Morduch, J. (1999). The microfinance promise.Journal of Economic Literature 37(4), p.p1569-1614.

Mugenda, O.M. &Mugenda, A.G. (2003). Research methods: Quantitative and qualitative Approaches. Nairobi: African Centre for Technology Studies.

Mullineux, A.W. &Murrinde, V. (2002).Developing financial structures to foster enterprise development: University of Birmingham, department of economics.

Mullineux, A.W. (1996). Banking sector restructuring, debt consolidation, small and medium sized enterprises financing in formally, centrally planned economies. In Gangopadhyay, S. (Ed); Institutions governing financial markets. New Delhi. Allied publishers Ltd.

Mutua, K. (2007, November 16). New regulations on MFIs. Retrieved from http://www.microcapital.com/mfis/newregulations.html

Mwanza, K. (2010, July 20). Microfinance institutions tap technology as the breach to reach the unbanked millions. Business Daily pp.1-2. Retrieved from http://www.businessdailyafrica.net

Nkuah, E. (2015). The effect of loan portfolio quality on the performance of banks in Ghana: Kwame Nkrumah University of Science and Technology.

Oketch, J. (1998). Financial integration and development in sub-Sahara Africa: A study of informal finance in Ghana; Overseas Development Institution.

Ong'ayo, M., Otto.H.,&Musinga, M. (2002). "An evaluation of microfinance programmes in Kenya as supported through the Dutch co-financing programme; With a focus on KWFT" (Working paper,steering committee for the evaluation of the Netherlands Co-financing Programme).

Pandey, I. M. (1996).Financial management. USA. Pine Publishing Company, 7th Edition.

Peachey,S. , &Roe,A. (2004). Access to finance: A case study for the Worlds Savings BanksInstitute. Oxford; Oxford policy management.

Pettinger, T. (2012). Asymmetric information problem: Oxford University, United Kingdom.

Also available on http://www.economicshelp.org/about-2/

Regulations and Guidelines. (2013). Retrieved from http://www.centralbank.go.ke/mfis/regulations-guidelines.html

Richardson, D.C. (2002). Pearls monitoring system: World Council Information Centre. Maddison; WOCCU Toolkit Series No.4

Robinson, M. (2003).The microfinance revolution: Sustainable finance for the poor (Vol 1.) Washington D.C: World Bank.

Rodgers, K. (2013). Loan performance and profitability of microfinance institutions. A case study: Pride Microfinance Ltd, Nateete Branch: A Research project; Makerere University Uganda.

Rosenberg, Richard, Gonzales, Adrian, Narian&Sushma. (2009). The new money lenders: are the poor being exploited by high micro-credit interest rates? Occasional paper No.15, February2009, Washington DC,CGAP. Available on http://www.cgap.org/gm/document-1.9.9534/op15 rev.pdf

Sindani, M. N. (2012) Effectiveness of credit management system on loan performance: Evidence from microfinance sector in Kenya: Jomo Kenyatta University of Agriculture and Technology

Sinkey, J. (1992). Commercial bank financial management. London. Macmillan Perspective Publishing Company.

United Nations Capital Development Fund; (UNCDF). (2009). Microfinance distance learning course. Available on http://www.uncdf.org/mfdl/index.php?-mode=students.home

Van-Horne, J.C. (2002).Financial management and policy. London, England: Prentice-Hall, 12thEdition

Wakaria, S. (2016). The effect of credit risk management on the financial performance of microfinance institutions in Kenya: University of Nairobi

Wallen N.E., and Fraenkel J.R., (2000). Educational research: A guide to the process, 2nd Ed.Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.