Interrelationships between credit risk management and financial performance of Microfinance Institutions in Uganda

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Abstract:
Financial performance in financial institutions continue to attract attention of scholars and policy-makers due to the long reputable role they play towards economic growth and poverty alleviation. A study was conducted to examine the interrelationships between credit risk management and the financial performance of Microfinance Institutions (MFIs) in Uganda. Specifically, the study assessed how credit risk assessment, estimation and risk appraisal influences the financial performance of Microfinance Institutions in Uganda. The study adopted a cross-sectional survey design and primary data was collected from 32 microfinance institutions in Uganda in December 2022. The study obtained responses from 224 staff of MFIs using a questionnaire tool. Data was analyzed using SPSS software in which descriptive statistics, correlations and multiple linear regression results computed. The study findings revealed a statistically significant positive relationship between credit risk management and financial performance. In particular, there was a strong positive relationship between credit risk assessment and financial performance ($r=0.669$, $p<.01$). Credit risk estimation had a strong positive correlation with financial performance ($r=0.660$, $p<.01$). There was also a strong positive correlation between risk appraisal and financial performance ($r=0.775$, $p<.01$). The regression analysis showed that credit risk management is a significant predictor of financial performance among MFIs in Uganda ($\beta=0.562$, $t=10.138$, $p<.05$). Credit assessment had a moderate positive relationship with the financial performance of MFIs in Uganda ($\beta=0.302$). Credit risk estimation had a weak positive relationship with the financial performance of MFIs in Uganda ($\beta=0.155$). Lastly, loan portfolio performance had a moderate positive relationship with the financial performance of MFIs in Uganda ($\beta= 0.273$). In conclusion, it is clear from the study findings that the financial performance of MFIs highly depends on its credit risk management practices such as risk estimation, credit assessment, and credit risk control among others. There is therefore a need for microfinance institutions to embark on credit risk management in order to reduce on the risk of default and non-performing loans. This will involve loan assessments, controls, loan approvals, credit rating and borrower evaluation. Lastly, a pre-disbursement training is recommended for all successful loan applicants.

Key words: credit risk, microfinance institutions, appraisal, estimation.

Introduction

Financial performance among MFIs continues to attract attention of scholars and policy-makers due to the long reputable role they play towards economic growth and elevating lives of the poor (Garmaise, 2015). The financial performance of a MFIs is measured through the ability of the institution to meet the financial demands of its clients. Financial performance in this study can be understood as the MFI financial position in monetary form (Mvula ,2013).

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Credit risk management is a combination of coordinated tasks and activities for controlling and directing risks confronted by an organization through the incorporation of key risk management tactics and processes in relation to the organization's objectives.

The operations of MFIs require due attention by the management as credit risk management is one of the critical aspects in microfinance institutions for example, available statistics from the Bank of Uganda annual supervision report, 2015 indicates high incidence of credit risk reflected by increasing non-performing loans (NPLs) by MFIs. The situation has adversely caused by poor management has impacted on their profitability and overall asset quality has deteriorated.

Mvula (2013) revealed that MFIs face financial challenges including those of liquidity and majority of them can't meet demands of their client's due managerial incompetence. In the same line, available statistics from the Bank of Uganda annual supervision report, 2015 indicates high incidence of credit risk reflected by increasing non-performing loans (NPLs) by MFI's. The situation has adversely impacted on their profitability and overall asset quality has deteriorated.

Needless to say, the sector's overall asset quality deteriorated with the level of non-performing loans (NPLs) to total gross loans rising from 5.6% to 10.7% between 2013 and 2016 which could be attributed to poor credit risk management practices by inexperienced staff (Bank of Uganda Annual Supervision Report, 2016). The report also indicates that MFIs' registered deterioration in asset quality, with the volume of non-performing loans increasing from 3.4% to 15.6 % between 2013 and 2016. Total provisions and portfolio at risk increased from 4% to 13.5% and from 1.9% to 5.3% respectively in the same period. For credit institutions non-performing loans increased from 5.2% to 10.5% between 2013 and 2016. Total provisions and NPLs to total loans increased from 3.2% to 6.2% and from 3.5% to 4.0% respectively in the same period.

Although some MFIs in Uganda have strived to improve on their performance, most of them have been unsuccessful. It has been reported that MFIs experience low loan recovery rate, loan portfolio at risk, coupled with liquidity problem, low savings rate, low member's growth rate, low returns on investment and poor portfolio quality. Given the persistent unsatisfactory performance, credit risk management in MFIs is questionable (Ssekiziyivu, Mwesigwa, Mayengo, & Nkote, 2017). And very few known studies have been undertaken on the variables of the study. Therefore, a study was conducted to examine the interrelationships between credit risk management and the financial performance of Microfinance Institutions (MFIs) in Uganda. Specifically, the study assessed how credit risk assessment, estimation and risk appraisal relates with the financial performance of Microfinance Institutions in Uganda.

Methods

Research design

The study was carried out using a cross-sectional research design. That is, data to inform this study gathered one-off, studied and results presented. It involved use of both descriptive and analytical techniques.

Study population

The collection of all elements of interest to the researcher to enable him carry out an investigation refers to study population. There are 95 MFIs and 25 associate members in Uganda however the population study composed only 33 MFIs whose operations are based in

Kampala; these MFIs are selected because of their declining financial performance (Bank of Uganda Annual Report, 2019). The study focused on MFIs in Kampala city. The reason for choosing Kampala is because of the time, cost and proximity of the researcher.

Sampling design and Procedure

A sample is the element within the study population that takes part in the study. Therefore, the sample size of 32 MFIs were considered according to Yamane's sample calculation (Table 1). This is because the population under the study is finite. In total the study focused on 224 respondents. The unit of analysis was the MFIs, the unit of inquiry was 7 respondents which included the head of department, loans officer, risk manager, loan officer, general manager, two relationship officer per MFI, this is because these respondents are expected to be having enough experience and important knowledge about the concepts under the study.

Table 1: Sampling of Financial Institutions in Kampala City

Institution	**Population**	**Sample**
MFIs	24	23
Credit Institutions	4	4
Microfinance Deposit-taking Institutions	5	5
Total	**33**	**32**

Source: Bank of Uganda (2022).

Data processing and analysis

The researcher coded, edited and analyzed the data using a blend of both manual and computer data analysis packages. The data was tabulated and input in the Statistical Package for Social Sciences research (SPSS). Descriptive statistics, Pearson correlation coefficient and multiple linear regression analysis were performed to examine the relationship between credit risk management and financial performance of MFIs in Uganda.

Results

Background Characteristics of the respondents

The majority of the respondents who participated in this study were male (52.5%) as opposed to females (47.5%). Additionally, the results obtained that most respondents were aged between 31-40 Years (83). This implies that most of the respondents were mature enough to understand the issues addressed in the study (Table 2).

Further, the results obtained that most of the respondents were married people 55.4%). This meant that most of the people employed in these MFIs were married. In relation to education, the results indicated most of the respondents acquired at least bachelor's degree (42.1%). This means that MFIs employed competent people to manage the affairs of the MFIs. Educated people are most likely to under risk management practices because they posse the skills and competences to do the job. In addition, education is associated with acquired knowledge, skills and abilities which enhance one's management of financial matters. The results also indicated that majority of the respondents were loan officers which was represented by 40.6% and research findings indicate that 53% of the respondents has worked with the MFIs for less than a year.

Table 2: Background Characteristics of the respondents

Demographics (n=202)	**Frequency**	**Percentage (%)**
Gender		
Male	106	52.5
Female	96	47.5
Age Bracket		
20-30	79	39.1
31-40	83	41.1
41-50	26	26.9
51-60	14	6.9
Marital status		
Single	60	29.7
Married	113	55.9
Divorced	20	9.9
Widowed	9	4.5
Education level		
Certificate	37	18.3
Diploma	58	28.7
Bachelor's	85	42.1
Master's	22	10.9
Position of the respondent		
Loans officer	82	40.6
Risk manager	22	10.9
Head of Department	41	20.3
General manager	51	25.2
Years of service at MFI		
Less than 5yrs	107	53.0
6-10yrs	55	27.2
11-15 years	10	5.0
16-20 years	3	1.5
Above 20 Years	0	0.0

Source: Primary data.

Correlations between Credit risk management and financial performance of MFIs

Pearson Correlation Coefficient test was performed to examine the relationship between Credit risk management and Financial Performance of MFIs in Uganda (Table 3).

Table 3: Correlations on credit risk management and financial Performance of MFIs

Correlations		**1**	**2**	**3**	**4**
Credit Assessment [1]	Pearson Correlation (r)	1.000			
	Sig. (2-tailed)	0.000			
	N	202			
Credit Risk Estimation [2]	Pearson Correlation (r)	0.595**	1.000		
	Sig. (2-tailed)	0.000	0.000		
	N	202	202		
Risk appraisal [3]	Pearson Correlation (r)	0.630**	0.576**	1.000	
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	202	202	202	
Financial performance of MFIs [4]	Pearson Correlation (r)	**0.669****	**0.660****	**0.775****	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	202	202	202	202

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

Source: Primary data.

The study findings show a strong positive correlation between credit assessment and financial performance of Microfinance Institutions in Uganda (r=0.669). The coefficient of determination (r^2) shows that 44.8% of financial performance of MFIs in Uganda (r^2=0.448) is attributed to credit assessment.

Similarly, there is a strong positive correlation between credit risk estimation and financial performance of Microfinance Institutions in Uganda (r=0.660). The coefficient of determination (r^2) shows that 43.6% of financial performance of MFIs in Uganda (r^2=0.437) is attributed to credit risk estimation.

Lastly, there is a strong positive correlation between risk appraisal and financial performance of Microfinance Institutions in Uganda (r=0.775). The coefficient of determination (r^2) shows that 60.1% of financial performance of MFIs in Uganda (r^2=0.601) is attributed to risk appraisal.

Regression analysis on Credit risk management and Financial Performance of MFIs

The multiple linear regression analysis results on the relationship between Credit risk management and Financial Performance of MFIs in Uganda are presented below (Table 4).

Table 4: Regression results on Credit risk management and Financial Performance of MFIs

Model	Unstandardized Coefficients		Standardized Coefficients	t	p-value
	β	Std. Error	Beta		
(Constant)	3.917	1.174		3.337	0.001
Credit Assessment	0.302	0.073	0.296	4.113	0.000*
Credit Risk Estimation	0.155	0.079	0.143	1.950	0.053*
Loan portfolio performance	0.273	0.063	0.309	4.350	0.000*
Credit risk management	0.562	0.055	0.562	10.138	0.000*
Dependent Variable: Financial performance of MFIs. **R=**1.638 **Rsquare=**0.407 **Adjusted R Square=**0.398 **Std. Error=**3.046 **F=**45.235 **Sig.=**0.000					

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

Source: Primary data.

There is a linear relationship between credit risk management and financial performance of MFIs in Uganda (Sig=0.000). Given that R-Square=0.407, it can be deduced that credit risk management explains 40.7% change in financial performance of MFIs in Uganda.

The regression analysis findings show that credit assessment had a moderate positive relationship with the financial performance of MFIs in Uganda (β= 0.302). This indicates that 100% increase in credit assessment will bring about a 30.2% improvement in financial performance of MFIs.

Credit risk estimation had a weak positive relationship with the financial performance of MFIs in Uganda (β= 0.155). This indicates that 100% increase in credit risk estimation will bring about a 15.5% improvement in financial performance of MFIs.

Lastly, loan portfolio performance had a moderate positive relationship with the financial performance of MFIs in Uganda (β= 0.273). This indicates that 100% increase in loan portfolio performance will bring about a 327.3% improvement in financial performance of MFIs. On the overall, credit risk management had a strong positive relationship with the financial performance of MFIs in Uganda (β=0.562).

Discussions

The study findings show a statistically significant relationship between credit risk management and financial performance. When credit risk management procedures are followed, MFIs will have high repayment rates, low arrear rates and its portfolio at risk significantly reduces. MFIs with sound credit risk management practices are be able to use risk-based pricing in its loan portfolio, which mitigate risks associated with default repayment. Therefore, borrowers are in position to access credit after following acceptable policies and procedures and this will eventually help the MFIs and other financial institutions to have healthy repayment rates.

The above findings are in agreement with observations made by Koch & MacDonald (2014), argued that adapting to a changing operating environment, analyzing financial performance and establishing profitability and risks management help MFIs to manage the cost of funds, capital and liquidity hence managing credit given to members and managing the investment portfolio. Furthermore, the result indicates that financial institutions use flexible lending processes intended to reduce credit risks have a strong incentive to improve loan portfolio performance and rid themselves of the loan defaulters since the firm will be able to assess the prior to loan approvals.

Mengze and Wei (2015) established that the adoption of risk management techniques may provide an organization with a sustainable performance over its competitors. Their study however indicated that certain strict risk management practices provide strategies that deny a large number of borrowers from having an enduring preference for Banks's loans. This is consistent with Bailey, Huang, & Yang (2011) findings who explained that firms that are risk hostile may have been created due to financial distress and hence there is little informational value in additional bank loan portfolios.

Conclusions and Recommendations

It is also clear from our study that; the financial performance of MFIs highly depends on its credit risk management practices such as risk estimation, credit assessment, credit risk control among others. MFIs should also embark on credit risk management in order to reduce on the risk of default and non-performing loans. Since credit risk management was also found to be a positively related to financial performance, MFIs should embark on mechanisms such as loan assessments, controls, loan approvals, credit rating and borrower evaluation in order to safeguard themselves against various forms of risks faced by the financial sector. In this regard, efforts are needed to improve the power balance in complex credit allocations with effective risk management practices and improve the role of the loan officers and credit officers, such as strengthening the independence of the loan department, advocating the borrowing function of strategic management to prevent defaults and regular visits.

In addition, pre-disbursement training is recommended for all successful loan applicants for efficient credit risk management. This will help to impart relevant skills to officers in these institutions on how to allocate credit facilities to different loan applicant and also designing recovery mechanisms hence reduce on risks associated with credit.

MFIs are advised to revise their credit risk management policies and be broader by maintaining high liquidity, having stringent monetary policies, Utilization of collateral, background check on applicants, regular market analysis, collaboration with other players and using skilled personnel as opposed to the traditional observation of default risk, liquidity risk and market risk. This is because these measures are more action specific thus easily implemented.

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