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Severity of risks in microfinance Institutions in Ethiopia: the study on microfinance institutions in Ambo town

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The study is undertaken to assess the severity of the risks that microfinance institutions in Ethiopia come across while doing business focusing on those operating in Ambo area. Both quantitative and qualitative research methods were employed. Primary data was collected through adopted Microfinance Banana skins questionnaires and secondary data was collected through brochures and written materials from the institutions. Statistical package for social sciences (SPSS) was employed to analyze the data gathered via questionnaire and used to show risk levels. The result from the study revealed that microfinance institutions in Ambo area are affected by risks internal and external to the institutions which comprise strategic, financial and operational risks. Credit risk is identified as risk with high severity in affecting the performance of the institutions, followed by weak accounting systems, liquidity risk, staffing and lack of technology management. Competition and over indebtedness risks are also identified as low severe risks that affect the well performance of the institutions. Hence, these risks should be handled by developing appropriate risk management framework so that performance of the institutions is fostered.

Key words: risk severity, Credit risk, liquidity risk, staffing, over indebtedness risk

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INTRODUCTION

Microfinance institutions are those institutions that provide small loans typically for working capital for poor who could not get loan from the bank. Microfinance institutions have the advantage for poor in substituting collateral by group guarantees or compulsory savings which makes easy for poor to get access to loan. Moreover, it provides access to repeated and larger loans based on repayment performance of the client. Microfinance refers to the process of providing financial services on a cost recovery basis to poor, self-employed, micro and small entrepreneurs, including small producer associations and co-operatives, with the aim of helping them to make business profits while at the same time retaining their own employment and creating further jobs for others (Jairo, 2008). These institutions are contributing the way for poor to get loan, use it and generate income which in turn can improve their life. This implies microfinance is contributing for the economic growth of the family which will in turn bring about economic growth of the country.

Since the growth of Microfinance pave way to growth and prosperity of the country they should be managed well. Hence, the major risks that hinder the institutions from achieving their objectives ought to be clearly known. If the risks are clearly known they can be easily handled via various types of risk management techniques which lead micro finances to function well. In addition to identifying the risks there should be prioritization of the risks in accordance with the magnitude of their effect on well-functioning of the institutions so that those high ranked risk should be given due consideration.

In Ethiopia a legal framework for the establishment and operation of microfinance institutions is provided by proclamation NO 40/1996.The proclamation stipulates that MFIs (micro finance institutions) are to be established as share companies wholly owned by Ethiopians and should be licensed by the NBE (national bank of Ethiopia). Following the Proclamation, about 28 MFIs have been established, and the fragmented provision of micro credits by various NGOs and government departments has now been better streamlined (NBE, 2010).

According to National bank of Ethiopia (2010), when financial institutions issue loans, there is a risk of borrower default. When banks collect deposits and on-lend them to other clients (i.e. conduct financial intermediation), they put clients' savings at risk. Development finance institutions should either avoid risk (thus limiting their scope and impact) or ignore risk. Like all financial institutions, MFIs face risks that they must manage efficiently and effectively to be successful.

Like in other countries MFIs in Ethiopia also face diverse types of risks because risks are integral part of financial services in general and of microfinance in particular. Microfinance institutions consciously take risk as they perform their role of financial intermediation in the economy. Consequently, they are exposed to a spectrum of risks which include financial risks, strategic risks and operational risk. On the other hand, poorly managed risk can lead to losses and thus jeopardize the safety and soundness of MFIs and safety of microfinance institution's depositors. These risks may lead microfinance institutions to fail to meet their objectives.

Even though MFIs have the advantage of contributing to the growth and prosperity of the country by reducing poverty of the households they have got risks that hinder to achieve these objective. Therefore, those risks microfinance institutions face needs to be clearly studied so that the appropriate measures will be taken to reduce the effect of risks on the performance of MFIs.

Microfinance institutions in Ambo area also operate under risk situations like any other institutions. This study aims at uncovering the risks that affect the performance of MFIs in Ambo area.

STATEMENT OF THE PROBLEM

When MFIs fails to manage the risks well, it will likely fail to meet its social and economic objectives. When poorly managed risks begin to result in financial losses donors, investors, lenders, borrowers and savers tend to lose confidence in the organization and funds begin to dry up. When funds dry up, MFI cannot able to meet its social objective of providing services to the poor and quickly goes out of business. Managing risk is a complex task for any financial organization, and increasingly important in a world where economic events and financial systems are linked. Global financial institutions and banking regulators have emphasized risk management as an essential element of long-term success. Rather than focusing on current or historical financial performance, management and regulators now focus on an organization's ability to identify and manage future risks as the best predictor of long-term success (Steinwand, 2000).

The risks that hold back the growth of microfinance can be either from internal or external to the institution. These risks can be different in their effect. Some of them are severe and bring high effect on the financial viability and total operation of micro finance institutions while others are low. However, these risks can hinder the development and the contribution of microfinance sector for economic growth. Henceforth these risks ought to be identified so as to give them a cure that uphold the growth and performance of the microfinance and help them in achieving their objectives.

Studies carried out so far have different in their aim and conclusions. Some of them depend on a single micro financial institution and others rely on a single type of risk that the institutions face. For instance, Ayayi (2012) focused only on credit risk assessment in the microfinance industry in Vietnamese while, Marrez and Schmit(2009) focused on credit risk analysis in microcredit. According to (Basharat, 2014), microfinance in Pakistan faces among others credit risk, liquidity risk, fraud-honesty of MFI staffs and client especially at loan staff level, interest rate risk, political interference and others which totalled to twenty seven risks.

In Ethiopia poor people have a limited access to loan from banks as they lack adequate collateral. This makes micro finance institutions preferred source of finance as compared to formal banks. Since these poor people get financial services from micro financial institutions well-functioning of these institutions should be given due attention. There are a number of factors that impede the well-functioning of these institutions. Hence these factors should be clearly assessed, identified and ranked in accordance to their effect on performance of microfinance institutions in order to provide appropriate solutions for the identified factors.

In Ethiopia also various studies have been carried on microfinance institutions like outreach and financial performance analysis of microfinance Institutions in Ethiopia by kereta (2007), Yirsaw (2008) did the study on performance of microfinance institutions in Ethiopia, Amha(2004) on development microfinance industry in Ethiopia: Current Status and the Prospect for Growth. But none of them address the risks that affect the performance of MFIs. Hence this study differs from prior studies in scope and tried to find out the risks those affect the performance of microfinance.

This study has been carried out in Ambo area. There are four MFIs like OCSSCO, Eshet MFI S.C, Busa Gonofa microfinance S.C and Wisdom micro financing institution S.C. This study is interested to find out the risks these institutions are experiencing and to suggest the appropriate risk mitigation strategies to minimize their effect.

This study has a great contribution in finding out the risks in micro-finance institutions so that it gives the clue on its management. Hence the study fills the gap by identifying the most influencing risks so that it enhances the management actions.

Ambo is purposively selected for the study as there is no research undertaken with regard to risks that microfinance encounters so far. This research is undertaken to find out the major risks that are inherent in micro finance institutions in Ambo area and prioritize them in order to fill the research gap and help the institutions in minimize their effect on their performance.

OBJECTIVES OF THE STUDY

The general objective of this study is to find out the severity of risks that micro finances encounters in their business.

Specifically the study aims:

- To know the sources of risks in microfinance institutions
- To investigate the highest and the lowest severe risks in microfinance institutions.
- To examine the risk mitigation mechanisms used by microfinance institutions.

LITERATURE REVIEW

There is overwhelming number of risks that hinders the good performance of microfinance institutions anywhere in the world. With this regard there are different researches done around the world and also in Ethiopia. According to (Krauss, 2010) and (Schicks, 2010) Over-indebtedness is one of the most serious risks of microfinance, endangering both social impact and stability.

For Kalapodas and Thomson (2005), credit risk is a major risk that financial institutions should take into account so that it will not affect the well-functioning of the financial institutions. Credit risk, the most common and often the most serious vulnerability in a microfinance institution, is the deterioration in loan portfolio quality that results in loan losses and high delinquency management costs (Visconti, 2012) and (Churchill and Coster, 2001).

Risks that occur in microfinance are different in severity and kind (Oguntoyinbo, 2011). Hence MFIs are expected to take appropriate risk management techniques seriously by establishing systematic procedures (Ledgerwood, 2000). Before risks are managed they need to be assessed in terms of nature of Microfinance and intense in Competition between existing MFIs (Rock et.al, 1998).

RESEARCH METHODOLOGY

Model description (Ordinal logistic regression)

According to Liu (2010) the formula to compute ordinal logistic regression is the following.

$$\ln Y = \ln\left(\frac{\pi_j(x)}{1-\pi_j(x)}\right) = \alpha_j + (-\beta_1 x_1 - \beta_2 x_2 - \dots$$

Where;
Y is microfinance performance

π_j (x) = π (Y≤j|x_1, x2,….x_p), which is the probability of being at or below category j, given a set of predictors. j =1, 2,…… J -1.
X_1, X_2……… X_p are risks that affect the performance of micro finances
α_j- are the cut points, and β_1, β_2 …β_p are logit coefficients of risks.

Assumptions of ordinal regression

a. Parallel Lines

One of the assumptions underlying ordinal regression is that the relationship between each pair of outcome groups is the same. In other words, ordinal regression assumes that the coefficients that describe the relationship between, say, the lowest versus all higher categories of the response variable are the same as those that describe the relationship between the next lowest category and all higher categories, etc. This is called the proportional odds assumption or the parallel regression assumption. Because the relationship between all pairs of groups is the same, there is only one set of coefficients. Thus, in order to assess the appropriateness of the model proportional odds assumption is normally evaluated (O'Connell, 2000).

b. Adequate Cell Count

As per the rule of thumb, 80% of cells must have more than 5 counts. No cell should have zero count as it is considered as a missing value and excluded from the study. The large percentage of cells with missing data could lead to a decrease of actual sample size from the model construction or an inaccurate chi-square test for the model fitting, since the model goodness-of-fit is usually dependent of chi-square test (Agresti, 2002).

Regression result

Model Fitting Information

Model fitting section provides results of ordinal logistic regression versus reduced model (intercept) with complimentary log-log link function. The presence of a relationship between the dependent variable and combination of independent variables is based on the statistical significance of the final model. As clearly portrayed on table 1 the -2LL of the model with only intercept is 504.244 while the -2LL of the model with intercept and independent variables/risks are 0.000. The difference (Chi-square statistics) is 504.244 - 0.000 = 504.244 which is significant since 0.000 <0.05. The conclusion is that there is association between the performance of microfinance and risk factors.

Goodness of fit

Pearson is widely used in statistics to measure the degree of the relationship between the linear related variables. Deviance is a likelihood-ratio test used under full maximum likelihood. The deviance can be regarded as a measure of lack of fit between model and data. The larger the deviance, the poorer the data will fit to the model. The null hypothesis states that the observed data are consistent with the fitted model. According to table 2 below the null hypothesis is accepted and the conclusion is that the observed data were consistent with the estimated values in the fitted model since the p was insignificant, p = 1.00 > 0.05.

Pseudo R-Square

As it is clearly observed from the table 3 Nagelkerke and McFadden indicates that risks explain the variation in the performance of microfinance perfectly. This shows the ratio of the likelihoods suggests the model predicted the outcome perfectly. Cox & Snell's pseudo R-square has also maximum value approaches to 1 i.e. 88.4% of the change in performance of micro finance is explained by risks. Thus the full model predicts the outcome.

Test of parallel lines

Test of parallel lines is designed to make judgment about model adequacy. The model null hypothesis states that the slope coefficients in the model are the same across the response categories. As it is observed from the table 4 significance is greater than 0.05 that indicates there is no significant difference for the corresponding slope coefficients across the response categories, suggesting that the model assumption of parallel lines was not violated in the model.

Parameter Estimates

From the following parameter estimate table there are risks that are significantly affecting the performance of microfinance. Weak administration and control, weak accounting system, competition management, competition risk, credit risk, liquidity risk, over indebtedness, staffing, technological management risk and risks related to too little fund are statistically significant. The only risk statistically insignificant is interest rate risk.

Severity of the risks

The severity of the risks that institutions are experiencing is summarized in the following table 5.

According to the regression result the credit risk is highly affecting the performance of the institution while risks due to weak administration and control and too little funding are very low in their severity as depicted on the table 5.

Measures taken by the institutions to mitigate the risks

The different risk mitigation strategies used by the MFIs in Ambo area are the following:

- ✓ Credit risk is minimized by the institutions by giving training on the issue credit risk which enables them to manage and repay their money back on the time needed and via continuous

Table :1 Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	504.244			
Final	.000	504.244	54	.000

Table 2: Goodness-of-Fit			
	Chi-Square	Df	Sig.
Pearson	9.054	84	1.000
Deviance	17.589	84	1.000

Table 3: Pseudo R-Square	
Cox and Snell	.884
Nagelkerke	1.000
McFadden	1.000

Table 4: Test of Parallel Lines				
Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Null Hypothesis	.000			
General	.000	.000	54	1.000

Table 5: severities of the risks

Severity	**High**	**Average**	**low**	**Very low**
Risks	✓ Credit risk	✓ Weak accounting systems ✓ Liquidity risk ✓ Staffing ✓ Lack of technology management	✓ Competition ✓ Over indebtedness	✓ Weak administration and control ✓ Too little funding

supervision and follow up and other through legal action

- ✓ Risks due to weak administration and control is mitigated by strengthening internal control department, improving the management and controlling systems, good planning, training and changing the plan to practices.
- ✓ Risk due to weak accounting system is lessens by making accounting adjustments to the nice and easily workable accounting systems.
- ✓ Client management is mitigated via follow up campaign and visiting the clients so that they feel belonging to the institution and reduces the rate that the customers switches to other institutions and revising the institution policies and strategies that satisfies clients more than the competitors on how to communicate and understand the customers so as to retain them
- ✓ planning and saving mobilization from customers and making the relationships with different

Source: *own survey*

Table 6: sources of risks in microfinance

Name of institution	Internal risks	External risks
Oromia credit and saving Share Company	➢ lose of documents due to manual based system of data keeping ➢ Lack of technology management ➢ lack of clear rules to select the appropriate customer ➢ fraud risk ➢ liquidity risk ➢ Risks due to weak administration and control Too little funding ➢ Staffing ➢ Quality of risk management ➢ Client management	➢ disagreement between the members of the borrowers in case of group lending which ends up with default risk ➢ over indebtedness ➢ Competition ➢ Credit risk
Eshet micro finance Share Company	➢ poor accounting report system ➢ insufficient fund ➢ no assignment of right staff at right position ➢ poor client selection criteria ➢ incapable staff and lack of training for staff ➢ lack of material facility ➢ no clear criteria to select place to lend money ➢ liquidity risk ➢ negligence Internal theft by the staff ➢ Lack of good risk of management framework ➢ Risks due to weak administration and control ➢ lack of modern technology ➢ lack of promotion through various media ➢ Hidden geographical location of the office	➢ credit risk ➢ competition ➢ problems in group collateral ➢ Over indebtedness

Source: *own survey*

Busa Gonofa micro finance share company	➢ Staff fraud ➢ Weak internal control ➢ Risks due to weak administration and accounting systems ➢ Liquidity risk ➢ Staffing ➢ Lack of technology management ➢ Problems with area selection and operational coverage ➢ Client management	➢ Competition ➢ Credit risk ➢ Over indebtedness
Wisdom microfinance share company	➢ poor screening for loan takers ➢ lacks of adequate training for staffs ➢ delinquency by staff ➢ incapability of the staffs ➢ improper recording and document handling ➢ over load of work due to lack of enough staff ➢ shortage of fund ➢ frauds by staffs ➢ Liquidity risk ➢ Quality of risk management ➢ inadequate follow up who took the loan ➢ poor credit group formation ➢ Client management	➢ disagreement between clients and not paying on time ➢ Competition ➢ Credit risk ➢ Over indebtedness

Source: *own survey*

lenders like banks and fund from NGOs so that cash is available for ease operation of the institutions are the mitigation strategies used to mitigate liquidity risk by the institutions and over indebtedness is managed by working with various micro finances in network that decreases the double loan i.e. by cross-checking with other lending institutions.

✓ too little funding risk can minimized by requesting fund from various NGOs and collecting saving from the clients and staffing risk through staff motivation by giving various incentives schemes and promotions .

✓ Competition risk is handled by providing clients good services that make the existing clients to stay and to attract new customers which will enable the institution to win the competition.

Internal and external risks

Several risks are observed in the microfinance institutions that are operating in Ambo area. Consistent to previous studies these risks are either internal or external to the institutions, and summarized here under. Table 6

As it can be observed from the above table there are numerous risks that are idiosyncratic risks as well as external risks. Most of internal risks are related to weak internal control risks due to weak administration and accounting systems, staff delinquency, and liquidation risk, quality of risk managements, lack of promotion and technology, and lack and incapability of staff. Hence most of internal risks can be seen from three perspectives; those born to staff members, management issues and shortage of fund. External risks are those risks appear from outside the institutions that hinder the performance. These risks are of from different sources as depicted on the above table. These are customers and competition. Customer's oriented risk include; The disagreement between the members of the borrowers in case of group lending which ends up with default risk. Microfinance providers will be adversely affected because their clients have borrowed, possibly from multiple lenders, beyond their capacity to repay; this is over indebtedness risk. Furthermore there is credit risk in which customers are failed to pay back the money they borrowed at stipulated day. Competition risk can also adversely affect the performance of microfinance institutions which comes from strong influence of competitors.

CONCLUSION AND RECOMMENDATION

Conclusion

After a careful analysis of the collected data, the sources of risks that affect the performance of MFIs in Ambo area are found to be internal or external to the institutions which can further be categorized as operational, strategic or financial risks. These risks are different in severity of their effect on the performance and sustainability of the institutions.

The study has shown that microfinance institutions in Ambo area are affected internally with staffing risk, liquidity risk, customer management, risks due to weak administration and control, lack of technology management weak accounting systems, and too little fund risk and externally by competition, over indebtedness and credit risk.

From the regression result it is clearly observed that credit risk has a high severity in affecting the performance of micro finance institutions in Ambo area. Risks such as weak accounting system, liquidity risk and technology management has average severity whereas weak administration and control, competition, customer management, over indebtedness and too little fund risks have low severity on the institutions' performance.

Microfinance institutions have taken their own measures to minimize and tackle the effect of risks they encountered. Some of the strategies used are:

- ✓ Credit risk is minimized by the institutions by giving training on the issue credit risk which enables them to manage and repay their money back on the time needed and via continuous supervision and follow up and other through legal action.
- ✓ Client management is mitigated via follow up campaign and visiting the clients so that they feel belonging to the institution and reduces the rate that the customers switches to other institutions and revising the institution policies and strategies that satisfies clients more than the competitors on how to communicate and understand the customers so as to retain them.
- ✓ planning and saving mobilization from customers and making the relationships with different lenders like banks and fund from NGOs so that cash is available for ease operation of the institutions are the mitigation strategies used to mitigate liquidity risk by the institutions and over indebtedness is managed by working with various micro finances in network that decreases the double loan i.e. by cross-checking with other lending institutions.
- ✓ too little funding risk is minimized by requesting fund from various NGOs and collecting saving from the clients and staffing risk through staff motivation by giving various incentives schemes and promotions

RECOMMENDATIONS

Microfinance institutions are serving as a tool to reduce poverty by serving the poor who cannot afford to get the loan from the bank due to insufficient property they own. When these institutions are serving these peoples there are wider array of risks in their businesses. These risks should be managed effectively by creating the systematic approach that considers the aggregate impact or probability of risks on the performance. Some institutions have mitigated these risks more effectively than others, and this has made the difference of performance. Based on the results found from the finding of the study the following recommendations are given to improve the performance of MFIs by minimizing the risks.

- ✓ MFIs should ensure that their administration and control comprise the right mix of individuals who collectively represent the technical, personal skills and backgrounds needed by the institution to minimize or get rid of risks due to weak administration and control. This can be accomplished via appointment of a responsible person for quality in charge of procedures and internal controls of the institution.

- ✓ Risks due to weak accounting system can be minimized by changing the accounting system the institution is following i.e. those institutions that are using manual accounting and document keeping should to shift to computerized system and others who are using computerized system ought to use it effectively in a way minimizes the risk; for instance by hiring the accounting expert who is capable of using the computer to manage the accounting system of the institution.
- ✓ Clients should be treated wisely by providing the necessary services so that they stay long time as the customer and saves the institution from the loss of the customers. Care should be given for customer by treating them with respect and dignity.
- ✓ Competition as one of the risk that encounters MFIs should be managed well so that the institution remains a competitor. This can be managed by being competitive by providing the necessary services that other competitors are giving like by waving the interest rates and adjusting the loan ceiling so that new customers are attracted and the existing are maintained.
- ✓ Microfinance institutions ought to follow well established procedure like well-designed borrower screening, careful loan structuring, close monitoring, clear collection procedures, active oversight by senior management, on-going checks and balances for transaction, and strict control over loan transactions so that credit risk will be minimized.
- ✓ Liquidity risk can be mitigated by maintaining detailed estimates of cash inflows and outflows for the period cash requirements is identified, preserving short term investment accounts that can be easily liquidated into cash, maintaining account in local banks so that the institution will make use of it when the need arises, and setting some rules to limit unexpected increases in cash needs, by limiting the amount of withdrawals that customers can make from savings account.
- ✓ Over indebtedness by client as one of the risk that microfinance institution is facing can be lowered by introducing a limit on the volume of loans of individual clients; assigning and giving training to staff that follow-up over-indebtedness of the client, giving critical emphasis on the loan selection and approval process and by working closely with other microfinance institutions that are operating surrounding area so that cross-checking can be easily undertaken.
- ✓ With regard to quality of risk management institutions should follow clearly set procedures by which most threatening risks are identified and solutions are given. This can be accomplished by identifying the major risks that the institution is facing and assess the severity of their consequences on the healthy functioning of the institution, measuring the risks appropriately and evaluate the acceptable limits for that risk, monitoring the risks frequently, and managing the risks through close supervision and evaluation of performance.
- ✓ Geographical location problem should be solved so that clients can easily identify the location of the office and get service. This can be solved by changing the location of the office to an open access location like on the main road.
- ✓ Risks related to staffing can be handled by hiring qualified staff, maintaining and motivating through various incentive schemes because effective management of staffing will contribute for the success of the institution.
- ✓ Lack of technology management should also be solved by buying the necessary technological equipments like enough computers for the staff that will enable them to easily handle the transaction quickly rather than undertaking it manually.

To sum up, even though there is cumulative effect of the risks identified on performance of the microfinance institutions, top rated risks should be given priority in mitigating because the magnitude of these risks are high. This does not mean those risks which rated low and very low should be ignored; rather they have to be considered after top rated risks are given a remedy.

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