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Determinants of Credit Risk Management System: Evidence from Selected Micro Finance Institutions in Ethiopia

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Abstract: The objective of this study was to identify determinants of credit risk management of MFIs in Ethiopia. To this end, the researcher employed quantitative approach with explanatory research design where the effect caused by the independent variables on the dependent variable is observed through regression analysis. The purposive sampling techniques have been employed by researcher in order to select 115 sample size from MFIs. The primary data was collected using structured questionnaire. Then, the result of multiple liner regression showed that five variables such as use of collateral, credit risk identification, credit monitoring, and credit policy and credit analysis have positive and statistically significant effect on credit risk management system. Based on the findings of the study, the researcher forwarded possible recommendations for the MFIs in the study area to work on statistically significant variables due to fact that they have significant influence in improving credit risk management system. For instance, having sound credit policy enhances the credit risk management system. So, that it is recommended to MFIs should work on sound credit policy to improve credit risk management system that enables to advance the capacity of MFIs to deliver different financial services to the public.

Keywords: Credit Risk Management system, Micro Finance Institutions, Multiple Regression Model, Ethiopia

1. Introduction

According to [3] and [1] microfinance is a provision of a broad range of financial services such as savings, credit, insurance and payment services to the poor or low-income group who are excluded from the normal banking sectors. In other way, microfinance covers the provision of a range of financial services to low income households, including loans, savings, money transfers and insurance. The microfinance revolution has allowed more than 150 million poor people around the world to receive small loans without collateral, build up assets, and buy insurance. The idea that providing access to reliable and affordable financial services can have powerful economic and social effects has captured the imagination of policymakers, activists, bankers, and researchers around the world.

In developing countries, like Ethiopia, micro financing institutions (MFIs) emerged with unique opportunity to serve poor people who do not have access to commercial banks. Microfinance involves the provision of micro-credit, savings, and other services to the poor that are excluded by the commercial banks for collateral and other reasons. Microfinance programs and microfinance institutions have augmented in outreach over the last few years with their largest client being the poor, vulnerable and women [27].

Microfinance institutions are one of the financial institutions which provide different financial service for the poor who are out of the conventional banking system particularly in developing countries of the world including Ethiopia. It has been renowned globally as a feasible and sustainable tool for poverty reduction and economic development through improving income generating activities and employment creations. Micro-Finance Institutions (MFIs) can be defined as any activity that includes the provision of financial services such as credit, savings, and insurance to low income individuals which fall just above the nationally defined poverty line, and poor individuals which fall below that poverty line, with the goal of creating social value. The creation of social value includes poverty alleviation and the broader impact of improving livelihood opportunities through the provision of capital for micro enterprise, insurance and savings for risk mitigation and smoothing [1].

MFIs established in 1996 and comprises the Commercial Code of Ethiopia, proclamations issued by Government of Ethiopia (GOE) based on the Proclamation No. 40/1996, and Proclamation No. 147/1998) directives issued by the National Bank of Ethiopia (NBE). Microfinance Institutions are required to incorporate as share companies in accordance with the provisions of Article 304 of the Commercial Code of Ethiopia. According to Association of Ethiopia Micro Finance Institution currently there are 35 Micro Finance Institutions operating in different regional states of Ethiopia. These are Amhara Credit and Saving Institutions, Addis Credit and s Africa Village Financial services saving Institutions, Adeday Microfinance Institution, Am Afar Microfinance, Aggar Microfinance, among them five (5) MFIs were operating in Sidama Regional States. They are; Sidama Microfinance, Benshangul Gumuz Microfinance, Bussa Gonofa Microfinance, Dedit Credit and saving Institutions, Diredawa Microfinance, Digaf Microfinance, Dynamic Microfinance, Eshet Microfinance, Gambela Microfinance, Gasha Microfinance, Harar Microfinance, Harbu Microfinance, Lefayeda Credit and Saving, Letta Microfinance, Lideta Microfinance, Meklit Microfinance, Metemamen Microfinance, Nisir Microfinance, Oromia Credit and saving, Rays Microfinance, Poverty Eradication and Community Empowerment Microfinance Institutions, Specialized Financial and Promotional Institutions, Somali Microfinance Institutions, Tesfa Microfinance, Wasasa Microfinance, Omo Micro Finance, Agar Microfinance, Vision Fund Micro Finance, and Kendile Micro Finance. Among these, the researcher purposively selected five MFIs such as Omo Micro Finance, Agar Microfinance, Vision Fund Micro Finance, and Kendile Micro Finance due to nearness of the institutions to the local area of research and the chance of easily collecting data needed for the purpose of this study.

As any organization credit risk management system is necessary for the efficiency and effectiveness of Micro finance operation. An effective credit risk management function provides independent assurance to the board of directors and senior management on the quality and effectiveness of MFI's credit risk management and governance systems and processes, a strong internal control system, including an independent and effective internal audit function, is part of sound corporate governance. Having the an sound credit risk management system provides vital assurance to an organization's in doing so, the function helps reduce the credit risk management problems [29].

The study by [16] revealed that the Microfinance institutions in Ethiopia were influenced by poor credit risk management system. Besides, the finding study by [2] and [29] credit risk management continues to has

become the threat to Microfinance sustainability because it limits the loan collection capacity of Microfinance Institutions. This is why studying determinants of credit risk management system of micro finance institutions has become a burning issue that demands scientific investigation. Hence, this study is designed to examine the determinants of credit risk management system with reference to selected Micro Finance Institutions in Ethiopia. The end result of this study is expected to benefit to the micro finance institutions in Ethiopia primarily, policy makers and the government, the public at large and the investors, researchers who want to further investigate similar issues. The result of the analysis is expected to be supportive of designing well studied credit risk management system which strengthen the credit risk management system of the organizations.

2. Review of Related Literature

2.1 Overview of Microfinance and Credit Risk Management System

Microfinance is a category of financial services targeting individuals and small businesses who lack access to conventional banking and related services. Microfinance includes microcredit, the provision of small loans to poor clients; savings and checking accounts; micro insurance; and payment systems, among other branches [22]. So, microfinance services are designed to reach excluded customers, usually poorer population segments, possibly socially marginalized, or geographically more isolated, and to help them become self-sufficient [1].

The formal financial institutions played little role in financing development efforts in the rural areas. This is because they are clustered in urban areas, concentrate on funding large enterprises and are inaccessible to the rural poor especially in terms of distance. In addition, the rural poor can't fulfill banking requirement to get credits. The requirements for collateral and intrinsic banking procedures are in most cases very difficult for the poor to deal with. The volume of loan demanded by small farmers is not appealing to banks. Such loans are difficult to manage and their processing not financially feasible [3].

The Microfinance Institutions are targeted towards providing smaller loans to the mass, have been operating in the country for long towards satisfying the credit demand of the lower class of the economy, mainly composed of the informal sector. Meanwhile, credit risk is the most important of the risk categories. It is the potential loss resulting from the poor quality of the MFIs assets particularly its credit/loan portfolio. The most obvious manifestations of risk in credit projects are poor portfolio quality that leads to bad debt losses that erode the capital of the lending microfinance institution. The major variable that should determine a MFI's risk classification system are: past and present experience with overdue payments and type of methodology used in delivering loans [16].

Credit risk is directly related to the portfolio of the organization and is one of the most significant risks from an MFI perspective. Whenever an MFI lends to a client there is an inherent risk of money not coming back, i.e. the client turning into a defaulter, this risk is called the Credit risk. Credit risk is simply the possibility of the adverse condition in which the clients does not pay back the loan amount [9].

According to [5] credit risk, the most frequently addressed risk for MFIs, is the risk to earnings or capital due to borrowers' late and non-payment of loan obligations. Credit is a borrowed fund with specified term for repayment. The major issues raised in connection to credit provision are: loan size, loan term, interest rate, and grace period. Loan size is one of indicator of the depth and width of outreach in micro finance institutions and credit risk one major issue that harms the credit provision practice of MFI [15].

2.2 Empirical Review of Related Studies and Hypotheses Development

Reviewing of Empirical literature will provides a summary of some of the published work on the management of risks by banks in developed and developing economies. To this end, Prior researchers like [2],[3], [16] [4], [18];[25],[27], and studied the related topic and suggest that, use of collateral, credit risk monitoring credit policy, credit risk identification, and credit risk analysis have statistically significant influence the credit risk management system. The credit risk management system is dependent variable of the study. The views of empirical studies on determinants of credit risk management were reviewed and hypothesized as follow:

1) Using of Collateral:

The collateralization of loan is a mechanism for ensuring the repayment of loans other than the provision of formal collateral by the borrower. According to the regression result of empirical study by [3], [4]; [18] and [25] showed that use of collateral has positive influence on effect on credit risk management system.

H1: A use of collateral has positive and statistically significant effect on risk management system

Credit Risk Identification (CRI):
In order to properly manage risks, an institution must recognize and understand risks that may arise from both existing and new business initiatives. Properly identified credit risk enables to easily manage the risk and ensures credit collection. . According to the regression result of empirical study by [10], [21]; [23]; [25] and [23] showed that credit risk identification has positive influence on effect on loan collection

H2: A Credit Risk Identification has positive and statistically significant effect on risk management system

1) Credit Monitoring (CM):

Monitoring reports should be frequent, timely, accurate, and informative and should be distributed to appropriate individuals to ensure action, when needed. After measuring credit risk, an institution should establish and communicate risk limits through policies, standards, and procedures that define responsibility and authority. Accordingly, [3],[4], [18], and [25] result indicated that credit monitoring has positive on credit risk management system. Therefore, the researcher has forced to hypothesize that:

H3: A Credit monitoring has positive and statistically significant effect on risk management system

2) Credit Policy (CP):

It is a set of guidelines that are used to determine which customers are extended credit and billed. Set the payment terms for parties to whom credit is extended. Define the limits to be set on outstanding credit accounts. Good lending policy has positive influence on credit collection of MFIs while poor credit policy has positive consequence on credit collection. Hence, [3], [4], [11]; [18], [19], [20],[21] and [25] result indicated that credit policy has positive effect on credit risk management system.

H4: A Credit policy has positive and statistically significant effect on risk management system

3) Credit Risk Analysis (CRA):

After risk identification, analysis should follow, this will provide a greater understanding of risk, and is important to the organization as it helps in making risk based measureable and be aware about credit risk and easily manage it. Hence, [3], [4], [11]; [18], [19], [20], [21], [23], [25], [26], [27]; [28] and [29] result indicated that credit policy has positive effect on credit risk management system.

H5: Credit Risk Analysis has positive and statistically significant effect on risk management system

3. Materials and Methods

3.1. Research Design and Approach

In this study, the researcher was employed explanatory study design to precede this specific study because the objective of this study is to identify the effect of credit provision practice on loan collection of MFIs in Sidama Regional State. The research approach of this study was quantitative research approach due to quantitative nature of data used to prepare the report of this study.

3.2. Data source and Methods of Data Collections

In this research, the researcher used both primary and secondary data. The source of primary data was collected from respondents selected from the MFIs. While the secondary data source were collected from published materials like journals, books, and conference proceedings and unpublished like office annual reports, minuets and other materials related to the study. To collect primary data structured questionnaire was used.

3.3 Target Population, Sample Size and Selection Techniques

The target population of this study were all Microfinance Institutions in Ethiopia. Currently there are 35 Microfinance Institutions Operating in Ethiopia which considered as target population. Out of 35MFs the researcher then purposively selected 5 MFIs such as Omo Micro Finance, Sidama Micro Finance, Vision Fund Micro Finance, Agar Micro Finance and Kendile Micro Finance. These are considered as the target population of the study by the student researcher. To draw targeted respondent that means sample size from those MFIs this study was used judgmental sampling methods which is non-probability sampling techniques. To assess the credit provision practice and its effect on loan collection of Micro finance Institution operating in the region. The main respondents included directors (management members), loan officers, internal auditors and fiancé heads who serve in those MFIs. This is with the aim of getting detail about the topic under study and these respondents are considered to have direct relationship with their activity in their organization. Targeted population was 100 loan officers, 20 internal auditors, 34 managers and 5 finance heads from each MFIs total 115. Who were serve in the study MFIs. Respondents were selected purposively due to their proximity to the research objectives

Table1: Summary of Targeted Population and Sampling Design

Target Population	Sampling Technique	Sample Size
Loan officers, internal auditors, accountants, managers and finance heads in 35 MFIs	Purposive	50 loan officers, 20 internal auditors, 6 accountants, 34 managers and 5 finance heads from each MFIs total 115

Source: Researchers' Own survey from study MFIs in (2020)

Hence, the representative sample size of this study is 115 respondents for obtaining primary data required for this study.

3.5. Econometrics Model Specification

In this study, credit risk management system of MFIs (credit risk control) is continuous variable that can be measured through multiple linear regression model. In the multiple linear regression model, the dependent variable credit risk control proxy for credit risk management system and five independent variables such (1)

use of collateral (2) credit risk identification, (3) credit monitoring, (4) credit policy and (5) credit risk analysis (CRA), Designating the regressed by Credit risk control the independent variables by CRMS, CRA, CRI, CM, CP, and (CRA) and the error- by u , the model is given by the following Equation as:

$$LC = \beta_0 + \beta_1 * UCL + \beta_2 * CRI + \beta_3 * CM + \beta_4 * CP + \beta_5 * CRA + \epsilon$$

Whereas:

CRMS= credit risk control

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5

Refers to coefficients

UCL = Use of collateral

CRI= Credit Risk Identification

CM= Credit Monitoring

CP= Credit policy

CRA = Credit Risk Analysis

ϵ = is error term

3.8. Methods of Data Analysis

After accomplishment of data collection procedure, it was classified as per each variable; the qualitative data was coded to be measured quantitatively. In this research, the descriptive and inferential statistics of data analysis tool was employed and done by the help SPSS version 21.0 in order to get the reliable finding.

3.9. Ethical Considerations

The following ethical considerations have been given attention by the researchers while conducting the research. Conserving the voluntary participation of respondents, no participants were forced to take part in the research and participants were free to withdraw from the research at any moment. With regarding to harm to participants, the researcher ensured that there is no any physical or psychological harm done to the participants as a result of the study. When it comes to anonymity and confidentiality, all information gathered during the study has been handled confidentially and permission from the participants was obtained for all information to be shared publicly. Not deceiving the subjects since participants were informed clearly about the aim, purpose and procedures of the study and were not deceived in any way. Finally Privacy of participants the participants were respected.

4. Results

4.1 Introduction

In order to conduct data analysis, the researcher distributed one hundred fifteen (115) questionnaires to respondents. Out of the 115 questionnaires distributed, 100 questionnaires were correctly filled and returned. This implies that the response rate of the research was 86.95 % which implies almost all respondents have been participated in the process of data collection. Then, the descriptive statistical analysis has done using the statistical package for social science version 21.0 based on questionnaires properly collected.

4.2 Reliability and Validity Test

Reliability Test: To measure the consistency of the questionnaire particularly the Likert-type scale the reliability analysis is essential in reflecting the overall reliability of constructs that it is measuring. The test of reliability is the sound measurement.

Table 4.1 Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.755	0.789	6

In current research, the researcher employed Cronbach's Alpha (α) which is the most common measure of scale reliability and a value greater than 0.7 is very acceptable. From table 2 above, the value for Cronbach's Alpha (α) was 0.895 for all variables which is more than minimum acceptable (0.70). When these calculated reliability values for Cronbach's Alpha based on Standardized items is 0.897, which is also higher compared with the minimum value of alpha 0.70. This implies that the data fitted in the SPSS is more reliable.

Validity Test: The validity of the questionnaire was determined through face, content and constructs validity. First, the question airs was framed in such a manner that it was easily understood and exactly conveyed its sense and purpose to the respondents. Moreover, the draft questionnaire was given to academic staff of the college to view it in the light of the research objectives, its relevance, the adequacy of the questionnaire items, and question coverage.

4.3 Descriptive Statistics

Table 4.2: Summary of Descriptive Statistics for all Variables incorporated in the Model

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Credit risk control	100	1.00	5.00	2.6600	1.21622
Use of Collateral	100	1.00	5.00	2.5900	1.11096
Credit Risk Identification	100	1.00	5.00	3.0900	1.32646
Credit Monitoring	100	1.00	5.00	3.2704	.96783
Credit policy	100	1.00	5.00	2.8200	1.25835
Credit Risk Analysis	100	1.00	5.00	2.8700	.97084

Sources: Survey data (2020)

Credit risk control was the dependent variable of this study. As indicated in the above table 4.2, the loan collection (LC) shows that MFIs on average is a positive loan collection because the overall mean of the variable was 2.6600 with a maximum of 5 and a minimum of 1 Likert scale values. The standard deviation value is 1.21622 which indicates there was variation of actual responses from the mean. With regard to other variables the use of collateral (CL) has the overall mean was 2.5900 with SD of 1.11096, Credit risk identification (CRI) 3.0900 with SD of 1.32646, Credit monitoring (CM) 3.2704 high mean with SD of 0.96783, Credit policy (CP) 2.8200 with SD 1.25835, credit risk analysis (CRA) 2.8235 with SD of 0.97084. In summary, all most all variables incorporated in the model have moderate contribution to the response variable credit risk control of MFIs. The researcher may not consider the interpretation of mean since they influenced by the extreme values.

4.4 Pearson Correlation Matrix for Dependent and Independent Variables

Correlation analysis measures the relationship between two items. The resulting value (called the “correlation coefficient”) shows if changes in one item will result in changes in the other item. Correlation is a way to index the degree to which two or more variables are associated with or related to each other. The correlation matrix for this study was computed as follow:

Table 4:3: Pearson Correlation Matrix for Dependent and Independent Variables

Variables		Credit risk control	Use of Collateral	Credit Risk Identification	Credit Monitoring	Credit policy	Credit Risk Analysis
Credit risk control	Pearson Correlation	1	.359**	.163	.263**	.362**	.373**
	Sig. (2-tailed)		.000	.105	.008	.000	.000
	N	100	100	100	100	100	100
Use of Collateral	Pearson Correlation	.359**	1	.279**	.141	-.118	-.256*
	Sig. (2-tailed)	.000		.005	.161	.241	.010
	N	100	100	100	100	100	100
Credit Risk Identification	Pearson Correlation	.163	.279**	1	.071	-.438**	-.014
	Sig. (2-tailed)	.105	.005		.482	.000	.887
	N	100	100	100	100	100	100
Credit Monitoring	Pearson Correlation	.263**	.141	.071	1	.054	.027
	Sig. (2-tailed)	.008	.161	.482		.596	.794
	N	100	100	100	100	100	100
Credit policy	Pearson Correlation	.362**	-.118	-.438**	.054	1	.402**
	Sig. (2-tailed)	.000	.241	.000	.596		.000
	N	100	100	100	100	100	100
Credit Risk Analysis	Pearson Correlation	.373**	-.256*	-.014	.027	.402**	1
	Sig. (2-tailed)	.000	.010	.887	.794	.000	
	N	100	100	100	100	100	100

**Correlation is significant at 1 % significance level, * Correlation is significant at 5 % significance level (two tailed).

Source: Survey data, 2020

The table 6 shows the relationship between dependent variable which is Credit risk control and independent variables with coefficient of correlation 1 indicates that each variable is perfectly correlated with each other. The result shows that, variables such as use of collateral, credit risk identification, credit monitoring, credit

policy and credit risk analysis have positive relationship with loan collection and statistically significant respectively since p-value is more than 1% level of significance since p-value is less than 0.01. On other hand, credit risk identification has positive but statistically insignificant effect on credit risk management system.

4.5 The Regression Results (Inferential Statistics)

Ordinary Least Squares (OLS) is the most common estimation method for linear models and that's true for a good reason. As long as your model satisfies the OLS assumptions for linear regression, we can rest easy knowing that we're getting the best possible estimates. The most common assumptions to be tested before running final regression result are normality, multicollinearity, autocorrelation, and heteroscedasticity.

Table 4.5: Regression Results (Credit risk control) through SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-1.894	.532		-3.559	.001	-2.950	-.837		
Use of Collateral	.447	.090	.408	4.970	.000	.268	.626	.828	1.207
Credit Risk Identification	.181	.082	.198	2.208	.030	.018	.344	.698	1.433
Credit Monitoring	.206	.095	.164	2.155	.034	.016	.395	.970	1.031
Credit policy	.342	.091	.354	3.776	.000	.162	.522	.635	1.574
Credit Risk Analysis	.418	.109	.333	3.823	.000	.201	.634	.735	1.360
a. Dependent Variable: credit risk control: R=.689, R ² =.475, Ad R ² .447, Std. Error of the Estimate = .90475, Durbin-Watson (d) = 1.922, F-statistic = 16.979, P-value = 0.000, ANOVA with (p-value of 0.000)									

Source: Survey data, (2020)

Fitted Model

$$LC = -1.894 + 0.445 * UOC + 0.181 * CRI + 0.206 * CM + 0.342 * CP + 0.418 * CRI + E \dots \dots (2)$$

The OLS result of was presented in the above table 4.7. R-squared was measured the goodness of fit of the explanatory variables in explaining the variations in Credit risk control of selected MFIs. R-squared and the Adjusted-R-squared statistics of the model were 47.5 percent and 44.7 percent respectively. The result indicates that 44.7 percent variation in the dependent variable was jointly explained by the explanatory variables in the model. Whereas, the remaining 55.3 percent of the variation in the loan collection is explained by other variables which are not included in the model. The coefficient of explanatory variables such as use of collateral +0.447, credit risk identification +0.181, credit monitoring + 0.206, credit policy + 0.342 and credit risk analysis +0.418 implies that 1% increase in the variables leads to 44.7%, 18.1%,

20.6%, 15.8%, 34.2% and 41.8% increase in dependent variable (Credit risk control) of MFIs. Besides, the, F-statistics (16.979) in model summary and ANOVA with (p-value of 0.000) which is used to test the overall significance of the model was presented and indicates the reliability and validity of the model at 1 percent level of significance. This tells us that the model as a whole is statistically significant.

4.7 Discussion of Results

In addition more explanation of the model of this research, let us discuss each variables incorporated in the model one by one. The result of this study shows that support from existence of collateral with unstandardized coefficient of regression [$\beta = 0.447$] has a positive and statistically significant at 1% level of significance since (p-value of $0.000 < 0.01$). Hence, hypothesis H1 is accepted. This finding is consistent with idea of study result by [3], [4]; [18] and [25] showed evidenced that there is positive relationship between collateral and on credit risk management system of MFIs. This implies that more the usage of collateral is positively contributes to the success of Credit risk control.

The result of this study with regards to credit risk identification showed unstandardized coefficient of regression [$\beta = 0.181$] has positive and statistically significant at 5% level of significance since (p-value of $0.030 < 0.01$). Hence, the researcher accepted hypothesis H2. This finding is consistent the finding of other study result of [10], [21]; [23]; [23] and [25] who found out that credit risk identification has positive and significant effect on loan collection of MFIs. This implies that sound credit risk identification has positive contribution to the effective loan collection. Results indicated that the existence of credit monitoring procedures and effectiveness of loan collection had a positive and significant relationship. Consequently, the MFIs should work on credit risk identification which is the instrument for on credit risk management system from borrowers.

Regarding to the credit monitoring [$\beta = 0.206$] is positive and statistically significant with p-value ($0.034 > 5\%$, level of significance. Therefore, hypothesis H₃ is accepted by the researcher. Hence, the existence of credit monitoring in an organization has positive effect on loan collection. This is consistent with the empirical studies [3], [4], [18], and [25]. Results indicated that the existence of credit monitoring procedures and effectiveness of loan collection had a positive and significant relationship. So, the MFIs should work on credit risk identification which tool for loan recovery from borrowers. Results indicated that the existence of credit monitoring procedures and effectiveness of loan collection had a positive and significant relationship. So, the MFIs should work on credit monitoringsince the sound monitoring practice has positive effect on on credit risk management system.

The result of this study also shows that coefficient of regression credit policy is [$\beta = 0.342$] positive and statistically significant since (p-value of $0.00 < 0.01$ and 0.05). Hence, hypothesis H₄ is accepted. This finding is similar with findings of studies such as [3], [4], [11]; [18], [19], [20], [21] and [25] showed that existence of credit policy has positive and statistically effect on loan collection of MFIs. Results indicated that the existence of credit monitoring procedures and effectiveness of on credit risk management system had a positive and significant relationship. As a result, the MFIs should work on credit policy which tool for loan recovery from debtors.

When comes to the credit risk analysis, unstandardized coefficient of regression of variable is [$\beta = 0.418$] is positive and statistically significant with p-value ($0.00 > 1\%$, level of significance. Therefore, hypothesis H₆ is accepted by the researcher. This finding is consistent with the empirical result of empirical results [3], [4], [11]; [18], [19], [20], [21], [23], [25], [26], [27]; [28] and [29] result indicated that credit risk analysis has positive effect on credit risk management system. Results indicated that the existence of credit monitoring procedures has positive impact on loan collection. Thus, the MFIs should work on credit risk analysis because if credit risk is analyzed properly, it is easy to on credit risk management system of MFIs.

4. Conclusions

Conclusion is the process of making generalization based on findings of sample to total population. This study aimed to identify the determinants of credit risk management system of MFIs in Ethiopia. Therefore, the findings revealed from this study were generalized to all MFIs in Ethiopia: By keeping this objective in mind, the researcher collected the primary data through self-administrated or (structured) questionnaire. By using SPSS version 23.0 the analysis of both descriptive and inferential statistics has been done. Based on the findings from the descriptive analysis, the researchers had concluded that MFIs on average generated the good on credit risk management system. Based on the findings from the regression analysis of the model, the researchers concluded that the loan collection of MFIs is positive and significantly influenced by use of collateral, credit risk identification, credit monitoring, credit policy and credit risk analysis. The conclusion that can be drawn from the findings in the first hypothesis up to five hypotheses (H1, H2, H3, H4, and H5), stated as "collateral, credit risk identification, credit monitoring, credit policy and credit risk analysis has positive and significant effect on credit risk management system of MFIs were accepted. This means an increase one unit value the value of collateral, credit risk identification, credit monitoring, credit policy and credit risk analysis leads to increase in loan collection of MFIs. Then, the researcher forwarded the possible recommendations for MFIs to enhance the loan collection through improving on credit risk management system by giving attention on the stated variables with statistically significant effect on credit risk management system of micro finance institutions in Ethiopia.

5. Limitations & Road for the Future Research

Any study cannot be free from limitations. Accordingly, there are some limitations in current study. So, this study is focused only on determinants of credit risk management system with reference to five selected MFIs in Ethiopia. It will be improved if it is conducted on all MFIs in Ethiopia. The explanatory variables incorporated in the model have only explained 44.7 % of the model. The remaining 55.3% of changes in the on credit risk management system was explained by other explanatory variables that not included in the model. The other researcher should incorporate more variables to improve adjusted R² with the same topic at the same study area. In other way, the findings of this study may be difficult to generalize about all MFIs in Ethiopia and all countries in Africa in particular and in the world in general. Hence, this study can be improved if it will be done at continental level.

References

- [1] Arrassen, Wassini, (2013). "La microfinance : quelles leçons tirées des expériences des pays en développement Economics Thesis from University Paris Dauphine, Paris Dauphine University, number 123456789/12692 edited by Avouyi-Dovi, Sanvi
- [2] Adamu dama, Asongo A. Nyor N. (2014). Departments Credit Risk Portfolio Management in Microfinance Banks: Conceptual and Practical Insights. Universal Journal of Applied Science 2(6): 111-119.
- [3] Alex. K. (2011). Credit Policy and Loan Recovery in Microfinance Institutions: Case of Blue Microfinance Institution Kisoro. In Partial Fulfilment for the Award of Bachelor of Commerce of Makerere University, Kampala.
- [4] AJBE. (2018). The effect of credit collection policy on portfolio at risk of microfinance institutions in Tanzania. <https://www.athensjournals.gr/reviews/2018-2723-AJBE.pdf>. PP. 1-19

- [5] Arnone, M., Pellegrini, C.B., Messa, A., Pellegrini, L. and Sironi, E. (2012) 'Microfinance institutions in Africa, Asia, and Latin America: an empirical analysis of operational efficiency, institutional context and costs', *Int. J. Economic Policy in Emerging Economies*, Vol. 5, No. 3, pp.255–271.
- [6] BakloutiIbtissem, AbdelfettahBouri. (2013). Credit Risk Management In Microfinance: The Conceptual Framework. *Journal of Development and Agricultural Economics* Vol. 3(4), pp. 150-156
- [7] Banerjee, S. B., & Jackson, L. (2017). Microfinance and the business of poverty reduction: Critical perspectives from rural Bangladesh. *Human Relations*, 70(1), 63–91. <https://doi.org/10.1177/0018726716640865>
- [8] Basu, A., & Yulek, M. (2004). Microfinance in Africa: Experience and lessons from selected African countries. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=878999
- [9] Beck, T. (2015). IEG working Paper: Microfinance a critical literature survey:The World Bank Group.
- [10] Chirkos, A. Y. (2014). The Role of Microfinance Institutions in the Development of Small and Medium Size Businesses in Ethiopia, A Case Study in Amhara Credit and Saving Institutions. *Journal of Business Administration and Management Sciences Research*, 5(13), 106–120.
- [11] Glisovic, J., & Martinez, M. (2012). Financing Small Enterprises: What Role for Microfinance Institutions? *Cgap*, 81(Ifc 2010), 16
- [12] Fasika Firew .(2012). has investigated selected Ethiopian commercial banks operational risk management.
- [13] Hamilton, S. M., Liddell, L., Young, M., Shaw, P., Gacia, A., Khan, A., & Srivastava, A. (2008). Microfinance Institutions — Factors in Risk Assessment. *Fitch Rating, Criteria Report*, (June), 1–15.
- [14] Harper, M. (2012). *Beyond micro-credit: Putting development back into micro-finance*. Retrieved from <https://books.google.com/books?hl=en&lr=&id=jfBnBtxmPUwC&oi=fnd&pg=PA9&ots=CsgZs2XfZf&sig=6dSXi0Z4BifRlkeHYR3RhQ-yZHQ>
- [15] Helms, B. (2006). *Access for all: building inclusive financial systems*. Retrieved from <https://elibrary.worldbank.org/doi/abs/10.1596/978-0-8213-6360-7>
- [16] Mathewos Yure Dangisso, Kanbiro Orkaido Deyganto. Assessing the Institutional Outreach and Sustainability of Micro Finance Institutions in Ethiopia: Evidence from Omo Microfinance Institution Hawassa Branch. *American Journal of Theoretical and Applied Business*. Vol. 6, No. 1, 2020, pp. 1-5. doi: 10.11648/j.ajtab.20200601.11
- [17] Morduch, J., & Armendáriz, B. (2010). *The Economics of Microfinance*. (2nd Ed.) MIT Press.

- [18] Muthoni. M. P. (2016). Assessing Borrower's and Business' Factors Causing Microcredit Default in Kenya: A Comparative Analysis of Microfinance Institutions and Financial Intermediaries. *Journal of Education and Practice*. Vol.7, No.12. PP. 97-118
- [19] Nada Milenkovic, M. P. & S. O. (2011). Analysis of Credit Risk Based on Financial Statements As the Decisive Factor Influencing the. *International Symposium Engineering Management and Competitiveness, 2011*, 233–238.
- [20] Otieno, & Omondi, S. (2013). Assessment of the Impact of Microfinance on the Growth of Small Businesses in Kisumu Municipality , Kenya By Otieno Samuel Omondi a Research Project Report Submitted in Partial Fulfillment of the Requirement for the Award of a Degree of Master of Business.
- [21] Peter Kitonga. (2014). Determinants of Effective Debt Collection in Commercial Banks in Kenya. A Research Project Submitted to the Chandaria School of Business in Partial Fulfillment of the requirement for the Degree of Masters of Business Administration (MBA) to United States International University
- [22] Rozzani, N., Mohamed, I. S., & Syed Yusuf, S. N. (2017). Risk management process: Profiling of islamic microfinance providers. *Research in International Business and Finance*, 41, 20–27. <https://doi.org/10.1016/j.ribaf.2017.04.009>
- [23] Sharma, A.K, Sharma, D. and Barua, M.K., .(2012). Efficiency and productivity of Indian banks: an application of data envelopment analysis and Tobit regression, National Conference on Emerging Challenges for Sustainable Business, India. (Vasavada, Kumar, Rao&Pai,2005).
- [25] Tekilu .(2020.) The Effect Of Credit Risk Management On Loan Collection Effectiveness Of Selected Rural Saving And Credit Cooperatives: The Case Of Sidama Chalala Saving And Credit Cooperative Union. MSC thesis Unpublished
- [26] Tsion Fekede selasse .(2015). has studied on Risk Management Practice of Ethiopian Commercial Banks.
- [27] Tchouassi. G. (2011). Microfinance, inequality and vulnerability: Empirical analysis from Central African countries. *Journal of Development and Agricultural Economics* Vol. 3(4), pp. 150-156
- [28] Wikipedia. (2019). General Information about Microfinance. Available On <https://En.Wikipedia.Org/Wiki/Microfinance> Accessed On March 14, 2020
- [29] Yebabie Yoseph. (2017).Assessment of Credit Risk Management in Micro Finance Institutions. (In the case of Addis credit and saving institutions). MBA thesis