ASSESSMENT OF CREDIT RISK IN ETHIOPIAN MICRO FINANCE INSTITUTIONS

A Research Proposal Submitted to Wolkite University, College of Business and Economics, Department of Accounting and Finance in Partial Fulfillment of the Requirements for BA Degree in Accounting and Finance.

Prepared By Kidist Debebe

Advisor Mr.Mitiku(Ass.professor)

Wolkite University

We Strive for Wisdom!

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTEMENT OF ACCOUNTING AND FINANCE

JANUARY,2020

WOLKITE,ETHIOPIA

ABSTRACT

Credit risk management is one of the most important activities in any company and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. Sound credit risk management is a prerequisite for a financial institutions stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. This study is based on quantitative research approach using panel data as the main data analysis technique. The study was based on a 9 years' secondary data of 27 audited MFIs of Ethiopia obtained from the national bank of Ethiopia. This study specifies how the Ethiopian MFIs stand in terms of outreach, financial profitability, financial sustainability and efficiency. A financial ratio such as return on asset (ROA), return on equity (ROE), financial self-sufficiency (FSS), and operational self-sufficiency (OSS) was used. Moreover, descriptive statistics was used for the study to know how they are performing their operation. The result of the study shows that performances of MFIs are poor in terms of FSS which is below breakeven point implies that MFIs are subsidy dependent. Depth of outreach deviates from their mission as they are not reaching many poor people living under the poverty line. Regarding to ROA, the average value is less than standard which implied that the profitability is not encouraging. Therefore, their performance needs to be improved as they were not covering their financial breakeven to mean that some of the MFIs in Ethiopia cannot cover their operating expense, but are good in terms of breadth of outreach, efficiency, portfolio quality and ROE.

Key Words: Credit Management, MFIs, Financial Ratios

ACKNOWLEDGEMENT

I would like to owe my heart felt gratitude to the almighty God. I owe my heartfelt thanks to my adviser Mr. Mitiku. I would also like to extend my sincere gratitude and appreciation to all those who assisted me in making this beginning true specially my Familys.

Table of Contents

ACKNOWLEDGEMENT III

Table of Contents IV

LIST OF TABLES VI

ACRONYMS VII

CHAPTER ONE 1

INTRODUCTION 1

1.1. BACKGROUND OF THE STUDY 1

1.2. Statement of the Problem 3

1.3. OBJECTIVE OF THE STUDY 5

1.3.1 General Objective 5

1.3.2 Specific Objectives 5

3.4. Scope and Limitation of the study 5

1.4.1 Scope of the Study 5

1.4.2 Limitation of the study 5

Significance of the Study 6

1.5. Organization of the Paper 6

CHAPTER TWO 7

LITERATURE REVIEW 7

2.1. The concept of risk management 7

2.2. Common Risks Found in Microfinance Institutions 8

2.3. Credit Approval and Implementation 11

2.4. Credit Risk Exposure 12

2.5. Definition of Credit Management 13

2.6. Credit Risk management Indicators 14

2.7. Credit Risk management 17

2.8. Credit Analysis 18
2.9. Default Problems 20
2.10. Credit Collection Techniques 22
2.11. Strategies to Minimize Defaults 23
2.12. Empirical literature 24
RESEARCH METHODOLOGY 26
3.0. Introduction 26
3.1. Research Design 26
3.2. Type and source of data 27
3.3. Population 27
3.4. Sample size and sampling procedure 27
3.5. Data analysis 27
CHAPTER FOUR 28
DATA ANALYSIS AND INTERPRETATION 28
4.0. Introduction 28
4.1. Outreach indicators 28
4.2. Loan repayment (portfolio quality) 32
4.3. Sustainability and profitability of MFIs 33
4.4. Efficiency and productivity of MFIs (2010-2018) 38
4.5. Peer group performance measurement of MFIs 40
CHAPTER FIVE 46
CONCLUSIONS AND RECOMMENDATIONS 46
5.0. Introduction 46
5.1. Summary and Findings 46
5.2. Recommendations 48
REFERENCE 49

LIST OF TABLES

Table 1: Outreach (breadth) trends in Ethiopia (2010-2018) ……..29

Table 2: Trends of depth of outreach indicators (2010-2018) ……31

Table 3: Portfolio at risk >30 days (Non-performing loans) …….32

Table 4: Operational self-sufficiency (OSS) and financial self-sufficiency (FSS) (2010-2018) …34

Table 5: ROA and ROE trend analysis (2010-2018) ……..37

Table 6: Trends in efficiency and productivity ratio (2010-2018) …….39

Table 7: ROA and ROE of MFIs category A, B and C (2010-2018) …….41

Table 8: Operational self-sufficiency (OSS) & financial self-sufficiency (FSS) of category A, B and C MFIs (2010-2018)…….....43

Table 9: Peer group OER of category A, B and C Ethiopian MFIs (2010-2018) ……..44

ACRONYMS

MFI	MICRO FINANCE INSTITUSTION
NBE	NATIONAL BANK OF ETHIOPIA
AMFI	ASSOCATION OF MICRO FINANCE INSTITUSTION
LLPR	LOAN LOSS PROVISTION RATIO
PAR	PORTFOLIO AT RISK
WOR	WRITE OF RATIO
ROA	RETURN ON ASSET
ROE	RETURN ON EQUITY

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

The adequate management of credit risk in financial institutions is critical for the survival and growth of financial institutions. In the case of rural banks, the issue of credit risk is of greater concern because of the higher levels of perceived risk resulting from some of the characteristics of clients and business conditions that they find themselves. Credit risk management is a structured approach to managing uncertainties through risk assessment, development of strategies to manage it and mitigation of risk using managerial resources. The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk.

Hull (2007) explains that one of the basic formation of every organization, most importantly a banker is to understand the portfolio of risk it faced currently and the risk it plans to take in future. Oldfield and Santomero (1997) posited that risks facing all financial institutions can be segmented into three separate types from a management perspective. These are (i) risk that can be eliminated or avoided by simple business practices (ii) risk that can be transferred to other participants and (iii) risk that must be actively managed at the firm level.

In the review of Sinkey (2002), modern risk management in the banking industry can be highlighted by five verbs and these are; identify, measure, price, monitor and control. This process of risk management is very much important to the rural banking industry since most of their clients are susceptible to co-variant risk, market risk and credit risk.

Managing financial institutions has never been easy, but in recent years it has become even more difficult because of greater uncertainty in the economic environment. Credit management is one of the most important activities in any company and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. If the microfinance institutions (MFIs) do not manage their credit risks well, they are likely to fail to meet their social and financial 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, microfinance institutions (MFIs) are not able to meet their social objective of providing services to the poor and quickly go out of business.

As with any financial institution, the biggest risk in microfinance is default risk. Credit risk is a particular concern for MFIs because most micro lending is unsecured (i.e., traditional collateral is not often used to secure microloans) Churchill and Coster 2001. The MFIs' clients are those who cannot get credit from banks and such other financial institutions due to the lack of the ability to provide guarantee or security against the money borrowed.

Many banks do not extend credit to these kinds of people due to the high default risk for repayment of interest and in some cases the principal amount itself. Therefore, these institutions required to design sound credit management that entails the identification of existing and potential risks inherent in lending activities.

Profitability is a suitable mechanism for achieving long term viability and sustainability of the microfinance industry. At the micro level, profitability is a precondition to a competitive microfinance industry and the cheapest source of capital, without which no firm would draw external capital. MFIs profits are also an important source of equity, if profits are reinvested this may promote financial stability. By minimizing the probability of financial crisis, remarkable profits are vital in reassuring MFIs' stakeholders, including investors, borrowers, suppliers and regulators. At the macro level, a profitable microfinance industry is better placed to overcome negative shocks and contribute meaningfully to the stability of the overall financial system (Muriu, 2011)

Currently, Ethiopian microfinance institutions are playing crucial roles in improving the life of poor societies and economic development of the country as a whole. The National bank of Ethiopia (NBE) inaugurated the micro finance institutions.

This study was focused on assessing the credit risk management of microfinance institutions in Ethiopia based on financial ratios.

1.2. Statement of the Problem

Credit risk management challenges are implicit in financial institutions (including micro finance institutions) activities because credit risk events are typically uncertain (Laurentis 2009). Therefore, as Nancy (2001) noted an effective credit risk management process is required to help institution's top leadership establish rules to prevent operating losses due to human error, employee carelessness, technological malfunction or fraud. To illustrate, a micro finance's management may put into place internal controls and procedures as well as periodic internal audit reviews to ensure that employees comply with rules when performing duties in credit risk management. A credit risk management policy also may cover financial risks of financial institutions.

Al-Tamimi and Al-Mazrooei (2007) also noted that financial institutions including micro finance institutions are a business mostly associated with credit risk because of their high exposure to uncertainty. They also noted that credit risk management is one of MFI liabilities of the operations and procedures being followed. In today's dynamic environment, all micro finance institutions are exposed to potential credit risks. Due to such exposure to credit risks, efficient credit risk management is required.

Chua et al. (2000) also found that managing credit risk is one of the basic tasks to be done in micro financial institutions, once it has been identified and known. As a result, effective and sound credit risk management is a foundation for the safe and sound operation of a micro finance institution to improve their performance. In connection with this issue, different empirical studies are conducted internationally.

The following are some of them. The studies by Michael (2006) and Samuel (2006) tries to touch the issue of credit risk management in some micro finance institutions in Ethiopia but they did not assess exhaustively the performance of micro finance institutions in credit risk management. For example the study by Samuel (2006) only focuses on one micro finance institution.

Laurentis and Mattei (2009) in their study of Lessons' recovery risk management capability shows that the development of modern reliable systems of risk management like credit scoring can enhance even more those management capabilities.

In Ethiopia, the studies by Wolday (2001), Befkadu (2007), Zigju (2008), and Michael (2006) focus on progress of micro finance institutions in terms of number of clients, loan amount and number of branches the institutions have throughout the country.

Factors such as the increasing competition in markets and the integration of new technology into the industry further reinforce the importance of microfinance risk management. The growing interest of MFIs further reinforces the importance of risk management in MFIs. However, it is disturbing to note that systematic risk management is still not as widespread as it should be.

The empirical studies that have been reviewed in the preceding section focused on the different micro finance institutions issues that affect the performance and in effect profitability of micro finance institutions. In addition, most prior studies regarding credit risk management tried to examine the possible methods to manage credit risk including the use of credit score rating, and the impact of borrower's financial positions on credit risk management and the impact of relation of borrower and lender on credit risk management. However, it is possible to concluded that although there have been a number of studies on credit risk management and related issues both in developed and developing countries, Ethiopia in particular, the association between Credit Risk management and profitability has not been examined in this manner before. For instance, Andinet (2011) studied Institutional Viability and Performance in Ethiopia. Sara (2014) investigated the determinants of quality of MFIs loan portfolio. Gebrehiwot (2002) studied, Microfinance Institutions in Ethiopia: Issues of Portfolio Risk, Institutional Arrangements and Governance, in Microfinance Theory, Policy and Experience. Wolday (2000) investigated, Networking Microfinance Activities in Ethiopia: Challenges and Prospects, Association of Ethiopian Microfinance Institutions. Hence, it is difficult to believe that these studies exhaustively examined the credit risk management practice of micro finance institutions especially in our country Ethiopia.

As a result, this study was designed to fill the aforementioned gaps having the main objective of Credit Risk management. Therefore, the purpose of this study is to assess credit risk management in MFIs of Ethiopia.

The study therefore will try to answer the following basic questions.

1. How is the MFIs operating to control their credit risk?
2. How much is the MFIs working to succeed efficiency?
3. What techniques must be used to evaluate the credit risk management of the MFIs?

1.3. OBJECTIVE OF THE STUDY

1.3.1 General Objective

The general objective of this study is to analyze the credit risk management practice of Ethiopian Micro Finance Institutions.

1.3.2 Specific Objectives

1. To assess how the MFIs were operating to control their credit risk.
2. To measure the status of efficiency of the MFIs?
3. To apply the techniques that must be used to evaluate the credit risk management of the MFIs.

3.4. Scope and Limitation of the study

1.4.1 Scope of the Study

The study was delimited to assessing credit risks. Besides the study was delimited to Ethiopian Micro Finance Institutions. The study was also delimited on secondary source of data since the scope “Ethiopian” is wider to collect primary data source.

1.4.2 Limitation of the study

Hence the study was conducted based on secondary data sources, lack of primary data source is its limitation.

Significance of the Study

This study have several relevance to both knowledge and practical improvements in credit risk management. It is expected that it aids policy makers in their effort to improve the sector. It shall also be of great relevance to the organizations under study as well as other financial institutions. The non-financial business firms, whether manufacturing or service oriented shall also benefit from the research findings. This is because the result of the study shall enable the users especially MFIs to appraise its credit policies and to review its operations critically for more result oriented approach in dealing with its credit facilities.

1.5. Organization of the Paper

The study outlined and/or organized in five chapters. Chapter one presents introduction, which is the main skeleton of the study Chapter two contains a review of the related literature including theoretical framework of the study, review of empirical evidence on the subject matter with the circumstance of Ethiopia and knowledge gap and conclusion. The research design and methodology was to be presented in Chapter three. Chapter four was present results and discussion. Finally, chapter five presents summary, conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1. The concept of risk management

Risk management introduces the modern theory of planning or decision making under uncertainty that is contingency planning (Schwartz, 2001) managers in the past have always used financial ratios are quantifying risks. In this light, decisions in the future may turn out to have a negative effect on actual result or vice-versa or actual results can prone to be very different from expected results. Risk management is therefore concerned with the identification of potential problems and eliminating or reducing the damage which they may result in if the problem materializes. Risk management is a central part of any organization's strategic management activities. It is the process whereby organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefits within each activity and across the portfolio of all activities. The focus of good risk management is the identification and treatment of these risks. It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives. (Schwartz, 2001)

Cielens (2010) stresses the discipline aspect of risk management. Risk management is a discipline for dealing with the possibility that some future event will cause harm. It provides strategies, techniques, and an approach to recognizing and confronting any threat faced by an organization in fulfilling its mission. Also lingered that risk management information is used along with other corporate information, such as feasibility, to arrive at a risk management decision, transferring risk to another party, lessening the negative effect of risk and avoiding risk altogether are considered risk management strategies. Examples of risk management practices include: purchasing insurance; installing security systems; maintaining cash reserves; and diversification.

Jorion (1995) adapted this concept of risk management. The actual definition of risk management is the process of analyzing the exposure to risk and finding the means of handling this exposure properly. Every company weighs the pros and cons before starting out; this is done to avoid any future calamities that may lead to losses and insolvencies.

Jorion (1995) also drew the curtail line by defining risk management as “the process by which managers satisfy these needs by identifying key risks, obtaining consistent, operational risk measures, choosing which risks to reduce and which to increase and by what means, and establishing procedures to monitor the resulting risk position” he explained the need to identify risk and finding ways to mitigate the risk.

Management, like risk, can have many meanings, each valid in the appropriate context. For risk management of potential accidental losses, it is best to define management. Stoner (1985) did defined management as a process: the process of planning, leading organizing, directing, and controlling organizational resources to achieve given objectives.

Putting this definition of management together with our earlier definition of risk gives us a precise, quite concise, definition of risk management Kloman (2005) gave a comprehensive risk management by bringing out the management aspect of risk. He said Risk management is the process of planning, leading organizing, directing, and controlling organizational resources to achieve given objectives when Surprisingly good or bad events are possible. Churchill (2001) explained that risk taken by the microfinance institutions must be calculated and later merged (2005) concept of systemic approach of it. Risk management is the process of taking calculated risks, a systematic approach that identifies and prioritizes the risks and implements strategies to mitigate the risks. This approach includes both the prevention of potential problems and the early detection of actual problems. It is a continuous process that involves staff at all levels of the organization. However, it is observed that most definitions and explanations as well as the concepts by the experts simply got to do with identifying, measuring, monitoring and controlling the exposure of risk as the definition of management goes.

2.2. Common Risks Found in Microfinance Institutions

Financial intermediation involves some risks, with one major challenge facing financial institutions being to identify such risks and to hedge a against them. The risks vary in type and intensity for different financial institutions, whether or not they operate in the same business environment. Each microfinance , therefore, has to identify its own unique set of risks and to manage it in its own way if it wishes to continue to sustain its operations.

According to Fernando (2008), risk management, in relation to an MFI is the process of controlling the likelihood and potential severity of an adverse event; it is about systematically identifying, measuring, limiting, and monitoring risks faced by an institution. Services are relatively small and simple when a new microfinance bank commences Operations. During the setting up of a new microfinance bank, it tends to be very aware of the financial risks that it faces, causing it to make a conscious effort to mitigate them. However, as microfinance bank grows in size and diversifies its loan portfolios, different types of risks, other than the obvious financial ones, tend to begin to manifest themselves Generally, the following three categories of risks that might face microfinance business have been identified**.**

- **Liquidity risks**

According to Craig and Dan (2011), liquidity risk arises when a microfinance is unable to meet its cash requirements or payment obligations timely and in a cost-efficient manner. Microfinance have to plan the volume of loans to be approved and disbursed, the withdrawal pattern of their saving clients (where MFI is allowed to mobilize deposits), and other fund requirements for operational purposes, and should be able to match available funds against such requirements.

According to Kolari et al, in order to reduce liquidity risk, each microfinance branch needs to prepare a daily fund plan that guides the matching of cash inflows from loan repayment and saving deposits (that usually take place in the afternoon) with cash outflows (from draw-downs, customer withdrawals and operational expenses) for the branch on a daily basis. Any positive balance or surplus fund should be deposited with a correspondent bank daily, while any anticipated shortfall should be covered by withdrawing cash from the bank early in the day. No overnight cash should be held by the branch, in order to eliminate the risk of fraud or theft. As in the case of the daily fund plan, each branch should also prepare a monthly fund plan that should outline the amount of loans to be granted, the volume of saving withdrawals from customers, and the anticipated operational expenses. The preparation of the plan assists the finance department to anticipate the funding requirements of the various branches, thereby allowing the determination in advance of any potential cash shortfall or surplus facing the

branches concerned. The funds should then be moved to a position where they can address the situation, while any arising idle funds are invested appropriately.

- ***Credit Risk***

Credit risk is defined as the probability that some of a MFI‘s assets, especially its loans, will decline in value and possibly become worthless. Because MFIs hold little owners‘ capital relative to the aggregate value of their assets, only a small percentage of total loans need to go bad to push a bank to the brink of failure. Thus, management of credit risk is very important and central to the health of a MFI and indeed the entire financial system. As MFI s makes loans, they need to make provisions for loan losses in their books. The higher this provision becomes, relative to the size of total loans, the riskier a bank becomes. An increase in the value of the provision for loan losses relative to total loans is an indication that the bank‘s assets are becoming more difficult to collect . Credit risk is the risk of a loss resulting from the debtor's failure to meet its obligations to the MFI in full when due under the terms agreed (R.S. Raghavan 2003).

- **Operational risk**

Operational risks arise because of possible system or human errors in service or product delivery. Potentially, unexpected financial losses might occur as a result of a variety of issues, such as inadequate or deficient information systems, operational challenges, incompetent personnel, inadequate skill, deliberate breaches, or fraudulent tendencies. The management of such risks requires that the internal control framework is effective, the information technology (IT) used is adequate, the integrity of the employees is guaranteed, and the operating processes are streamlined. Given the various sources of operational risk, the most obvious is the interaction of loans and clients involving financial transactions. In the case of normal traditional banks, the staff undertaking credit assessment is usually well trained, with multiple levels of crosschecking put in place. Unfortunately, in the case of MFIs, there are usually numerous short-term loans of small amounts, making elaborate crosschecking not cost effective. As a result, the possibility of both error of assessment and deliberate fraud is relatively high (Mersland and Strom 2007)

2.3. Credit Approval and Implementation

The individual steps in the credit approval process and their implementation have a considerable impact on the risks associated with credit approval. The quality of credit approval processes depends on two factors, i.e. a transparent and comprehensive presentation of the risks when granting the loan on the one hand, and an adequate assessment of these risks on the other. Furthermore, the level of efficiency of the credit approval processes is an important rating element. Due to the considerable differences in the nature of various borrowers and the assets to be financed as well as the large number of products and their complexity, there cannot be a uniform process to assess credit risks. The quality of the credit approval process from a risk perspective is determined by the best possible identification and evaluation of the credit risk resulting from a possible exposure.

According to Oesterreichische National bank Credit Approval Process and Credit Risk Management (2000), the credit risk can be distributed among four risk components.

a. Probability of Default (PD)

b. Loss Given Default (LGD)

c. Exposure at Default (EAD)

d. Maturity (M)

The most important components in credit approval processes are PD, LGD, and EAD. While maturity (M) is required to calculate the required capital, it plays a minor role in exposure review. The significance of PD, LGD, and EAD is described below.

a) Probability of Default (PD)

Reviewing a borrower's probability of default is basically done by evaluating the borrower's current and future ability to fulfill its interest and principal repayment obligations. This evaluation has to take into account various characteristics of the borrower

(natural or legal person), which should lead to a differentiation of the credit approval processes in accordance with the borrowers served by the bank. (NBE, Credit Approval Process 2000)

Furthermore, it has to be taken into account that for certain finance transactions interest and principal repayments should be financed exclusively from the cash flow of the object to be financed without the possibility for recourse to further assets of the borrower. In this case, the credit review must address the viability of the underlying business model, which means that the source of the cash flows required to meet interest and principal repayment obligations has to be included in the review. (NBE, Credit Approval Process 2000)

b) Loss Given Default (LGD)

The loss given default is affected by the collateralized portion as well as the cost of selling the collateral. Therefore, the calculated value and type of collateral also have to be taken into account in designing the credit approval processes. (NBE, Credit Approval Process 2000)

c) Exposure at Default (EAD)

In the vast majority of the cases described here, the exposure at default corresponds to the amount owed to the institution. Thus, besides the type of claim; the amount of the claim is another important element in the credit approval process. (NBE, Credit Approval Process 2000)

2.4. Credit Risk Exposure

The credit risk exposure (CR) is measured by the sum of the level of loans past due 30 days or more and still accruing interest namely Portfolio at Risk (PAR-30). In robustness tests it is included further measures of credit risk by estimating various econometric specifications for three additional different explanatory variables; the write-off ratio (WOR) which is the value of loans written off during the year as uncollectible, as a percentage of average gross loan portfolio over the year. An additional measure of credit risk is the Risk Coverage Ratio (RC) which is measured as the Adjusted Impairment Loss Allowance/PAR>30 Days and finally Loan Loss Reserve Ratio (LLR). This is measured as the ratio of loan loss reserves to gross loans or simply put as Loan loss reserve/Value of loans outstanding. It is an indicator of how much of the gross loan portfolio has been provided for but not charged off. (Amoah-Binfoh et. al., 2005)

2.4.1 Loan product design

MFIs can mitigate a significant portion of default risk by designing loan products that meet client needs. Loan product features include the loan size, interest rate and fees, repayment schedule, collateral requirements and any other special terms Loan products should be designed to address the specific purpose for which the loan is intended. (Amoah-Binfoh et. al. 2005)

2.4.2 Credit Committees

Establishing a committee of persons to make decisions regarding loans is an essential control in reducing credit (and fraud) risk. If an individual has the power to decide who will receive loans, which loans will be written off or rescheduled, and the conditions of the loans, this power can easily be abused and covered up (Amoah-Binfoh et. al. 2005) While loan officers can serve on the credit committee, at least one other individual with greater authority should also be involved. The credit committee has the responsibility not only for approving loans, but also for monitoring their progress and, should borrowers have repayment problems, getting involved in delinquency management (Amoah-Binfoh et. al., 2005).

2.5. Definition of Credit Management

There are many definitions given for credit management by different scholars. Among these some are here cited as follows Credit management is implementing and maintaining a set of policies and procedures to minimize the amount of capital tied up in debtors and to minimize the exposure of the business to bad debts (http://www.smallbusiness.wa.gov.au/assets/ SmallBusiness-Briefs/small-business-brief-credit-management.pdf).

Credit Management, from a debtor's point of view, is managing finances especially debts so as not to have a tail of creditors lurking behind your back. Credit management is responsibility that both the debtor and the creditor should seriously take (http://www.selfgrowth.com). When it functions efficiently, credit management serves as an excellent instrument for the business to remain financially stable.

*2.*6 Process of Credit Management

The process of credit management begins with accurately assessing the credit-worthiness of the customer base and his/her business viability. This is particularly important if the company chooses to extend some type of credit line or revolving credit to certain customers. Hence, proper credit management is setting specific criteria that a customer must meet before receiving the proposed credit arrangement. As part of the evaluation process, credit management also calls for determining the total credit line that will be extended to a given customer. Several factors are used as part of the credit management process to evaluate and qualify a customer for the receipt of some form of commercial credit. This includes gathering data on the potential customer's current financial condition, including the current credit track record that discloses the character of a customer in meeting obligations as well as collateral value. The current ratio between income and outstanding financial obligations will also be taken into consideration.

Competent credit management seeks to not only protect the bank or any financial institution involved from possible losses, but also protect the customer from creating more debt obligations that cannot be settled in a timely manner. When the process of credit management functions efficiently, everyone involved benefits from the effort. The financial institution such as banks has a reasonable amount of assurance that loans granted to a client will be paid back within terms, or that regular minimum payments will be received on credit account balances. Customers have the opportunity to build a strong relationship with the creditor and thus create a solid credit reference.

2.6. Credit Risk management Indicators

Risk and liquidity are other words for the quality of portfolio. According to Ayayi, Ayi Gavriel et. al., (2010) there are several risk management methods are used by MFI‟s, such as sequential loans, credit scoring etc. E.g. when a borrower stops making payments on a loan, on MFI has two options. First, it can keep the loan on its books and try to collect the outstanding payments, thereby keeping the loan registered in the portfolio. Delinquent loans are tracked in the portfolio -at-risk ratios, depending on how long they have been in non-payment status. The other option for the MFI is to decide that it cannot collect the loan and write the loan off its books. In this case the loan registers in the write off ratio, thereby reducing the loan portfolio by the

remaining balance of the loan. Due to the critics on the issue of repayment, these variables are considered less valid, since many MFIs are suspected of misreporting this issue. Yet the hypothesis on the quality of portfolio is that good quality, i.e. low portfolio at risk and low write off ratio, means high profitability since the MFI s get high repayment (Ayayi, Ayi Gavriel et. al., 2010).

Portfolio quality is a crucial area of performance analysis, since the largest source of risk for any financial institution resides in its loan portfolio (Wolday et. al. 2014) The loan portfolio is, by far, the largest asset and, in addition, the quality of that asset and therefore, the risk it poses for the institution can be quite difficult to measure. For microfinance institutions, whose loans are typically not backed by bankable collateral, the quality of the portfolio is absolutely crucial (Wolday et. al 2014).

Loan portfolio is the most important asset of an MFI. Portfolio quality reflects the risk of loan delinquency and determines future revenues and an institution's ability to increase outreach and serve potential and existing clients. Many MFIs have learned how to maintain loan portfolios of very high quality. In fact, leading MFIs are typically better at maintaining a higher portfolio quality than commercial banks in many countries (Wolday et. al., 2014).

2.7.1 Portfolio at Risk (PAR)

According to the Wolday et. al., (2014), the most widely used indicator of portfolio quality in the microfinance industry is Portfolio at Risk (PAR), which measures the portion of the loan portfolio "contaminated" by arrears as a percentage of the total portfolio. Although various other measures are used, PAR has emerged as the principal indicator. It is easily understandable, do not undertake risk, and is comparable across MFIs. A microenterprise loan is considered to be at risk if a payment on it is more than 30 days late from the due date. This rule could be much stricter due to lack of bankable collateral in microfinance (Wolday et. al 2014).

Apart from this, PAR is also a sound measure of Credit Risk management which also provides information about portfolio quality of a firm. It tries to measure the amount of loan outstanding that an MFI stands to lose in case an overdue client does not pay a single installment from the day of calculation of PAR. PAR is the proportion of loan with overdue clients to the total loan outstanding of the organization. Portfolio at risk > 30 days, which has

replaced the repayment rate, is the leading measure of loan portfolio quality, following the lead of traditional commercial banks. This relatively new and valuable measure of loan portfolio quality compares the remaining outstanding balance of loans with at least one installment overdue for a specific period, here 30 days, to the total loan portfolio. In microfinance, 30 days is a common breakpoint (Wolday et al., 2014). PAR is calculated as: PAR = (Outstanding balance on arrears over 30 days + Total gross outstanding Refinanced (restructured) portfolio) / Total outstanding gross portfolio

2.7.2 Write-Off ratios (WOR)

In addition to PAR, Wolday et al (2014) has also included Write-Off ratio (WOR). According to Stauffenberg & Ramirez (2003), WOR is a significant indicator of portfolio quality. This indicator simply represents the loans that the institution has removed from its books because of a substantial doubt that they will be recovered. The writing off of a loan is an accounting transaction to prevent assets from being unrealistically inflated by loans that may not be recovered. The writing off of a loan affects the gross loan portfolio and loan loss reserves equally. So unless provision reserves are inadequate, the transaction will not affect total assets, net loan portfolio, expenses or net income. Write-offs have no bearing whatsoever on collection efforts or on the client's obligation to repay.

Some institutions will take aggressive write-offs to attempt to sanitize their portfolios. They will then show a low portfolio at risk, and only the write-off ratio will allow an analyst to detect that this improvement is more apparent than real (Stauffenberg & Ramirez, 2003). Other MFIs, particularly NGOs resist writing off their seriously delinquent loans because, they argue, collection efforts continue.

Write-off policies vary widely among MFIs. For example, (Stauffenberg & Ramirez, 2003) writes off loans if they have been delinquent for 90 days. The write-off ratio is therefore better understood in the context of the portfolio at risk of an institution. In fact, its main purpose is to serve as a control indicator that will allow better understanding of portfolio at risk. Write Off is the final thing the MFIs do to remove the persistently overdue accounts from the books of accounts of MFIs. In the write off the outstanding balance of the overdue accounts are reduced by making book adjustment drawing the balance from the Loan Loss Reserve. Thus after

the write off, equal amount (equivalent to the overdue loan amount getting written off) is reduced both from asset side and liability side of the balance sheet (Wolday et al., 2014). Writing-off of loan is and accounting transaction to prevent assets from being unrealistically overstated with loans that may not be recovered . Write-Off ratio is calculated as follows: WOR = Write-Off amount for a given period/ Average gross portfolio (Wolday et al., 2014).

2.7.3 Loan Loss Provision Ratio (LLPR)

LLPR, This measure gives an indication of the expense incurred by the institution to anticipate future loan losses (Stauffenberg & Ramirez, 2003). One should expect this expense to increase in step with overall portfolio growth. For formalized MFIs, local banking and tax laws will prescribe the minimum rate at which they must make provisions to allow for loan losses. NGOs on the other hand can follow a wide variety of practices, including making no provisions at all (this is rare), provisioning a certain percentage of new loans, or relating provisions to the quality of the portfolio. Loan Loss Provision Ratio or LLPR is a percentage (%) that reflects accumulated provision expenses (minus write-offs) and gives an indication of the management's expectation of future loan losses. It is a rough indicator of the overall quality of the portfolio, and it represents the loan loss reserve amounts maintained by an MFI to offset the default risk in its total (outstanding) loan portfolio. LLPR can be calculated using the following formula; LLPR = Principal Amount Written Off-During Period Average Outstanding Loan Portfolio. Ramesh S. Arunachalam (2006).

2.7. Credit Risk management

Credit risk management in financial institutions has become crucial for the survival and growth of these institutions (Afriyie & Akotey, 2012, p. 3). It is a structured approach of uncertainty management through risk assessment, development of strategies to manage it and mitigation of risk using managerial resources. The strategies of credit risk management involves transferring risk to other parties, avoiding risks, reducing the negative influence of risk and accepting some or all of the consequences of a particular risk (Afriyie & Akotey, 2012, p. 3). According to Van Gestel and Baesens, credit risk is managed in various ways. The most important method starts with appropriate selection of the counterparts and products

(Gestel & Baesens, 2008, p.43). And good risk assessment model and qualified credit officers are key requirements for selection strategy (Gestel & Baesens, 2008, p.43).

For counterparts with higher default risk, banks may need more collateral to reduce risk. And the pricing of product should be in line with the estimated risk. Secondly, limitation rule of credit risk management restricts the exposure of bank to a given counterpart (Gestel & Baesens, 2008, p.43). It avoids the situation that one loss or Limited number of losses endangers the bank's solvency (Gestel & Baesens, 2008, p.43).

Bank's determinants on how much credit a counterpart with a given risk profile can take need to be limited. Thirdly, the allocation process of banks provides a good diversification of the risks across different borrowers of different types, industry, and geographies (Gestel & Baesens, 2008, p.43). As a result, diversification strategy spreads the credit risk thus avoids a concentration on credit risk problems. These techniques are translated in the daily organization by written procedures and policies which determine how counterparts are selected, risk profile loans are granted and above which level an expert evaluation is required (Gestel & Baesens, 2008, p.43).

In summary, a strong credit risk management avoids significant drawbacks like credit concentrations, lack of credit discipline, aggressive underwriting to high-risk counterparts and products at inadequate prices (Gestel& Baesens, 2008, p.44). And an effective credit risk management is verified by internal risk control and audit which monitor credit discipline, loan policies, approval policies, facility risk exposure and portfolio level risk .Van Gestel & Baesens, 2008, p. 44) .

2.8. Credit Analysis

Credit analysis is the primary method in reducing the credit risk on a loan request. This includes determining the financial strength of the borrowers, estimating the probability of default and reducing the risk of non-repayment to an acceptable level. In general, credit evaluations are based on the loan officer's subjective assessment (or judgmental assessment technique).Once a customer requests a loan, bank officers analyze all available information to determine whether the loan meets the bank's risk-return objectives. Credit analysis is essentially default risk analysis, in which a loan officer attempts to evaluate a borrower's ability and

willingness to repay. Similarly Compton (1985) identified three distinct areas of commercial risk analysis related to the following questions:

1. What risks are inherent in the operations of the business?

2. What have managers done or failed to do in mitigating those risks?

3. How can a lender structure and control its own risks in supplying funds?

The first question forces the credit analyst to generate a list of factors that indicate what could harm a borrower's ability to repay. The second recognizes that repayment is largely a function of decisions made by a borrower. Is management aware of the important risks, and has it responded? As Tomothy (1995:665) quoted, the last question forces the analyst to specify how risks can be controlled so the bank can structure to an acceptable loan agreement. A MFI's credit analysts often use the five C's of credit to focus their analysis on the key dimensions of an applicant's credit worthiness identified five C's of credit (Lawrence 1997:776-777) They include: Character, Capacity, Capital, Collateral, and Conditions.

1. **Character**: The applicant's record of meeting past obligations, financial, contractual, and moral. Past payment history as well as any pending or resolved legal judgments against the applicant would be used to evaluate its character.

2. **Capacity**: The applicant's ability to repay the requested credit. Financial statement analysis, with particular emphasis on liquidity and debt ratios, is typically used to assess the applicant's capacity.

3. **Capital**: The financial strength of the applicant as reflected by its ownership position. Analysis of the applicant's debt relative to equity and its profitability ratios are frequently used to assess its capital.

4. **Collateral**: The amount of assets the applicant has available for use in securing the credit. The larger the amount of available assets, the greater the chance that a firm will recover its funds if the applicant defaults A review of the applicant's balance sheet, asset value

appraisals, and any legal claims filed against the applicant's assets can be used to evaluate its collateral.

5. **Conditions**: The current economic and business climate as well as any unique circumstances affecting either party to the credit transaction. For example, if the firm has excess inventory of the items the applicant wishes to purchase on credit, the firm may be willing to sell on more favorable terms or to less creditworthy applicants. Analysis of the general economic and business conditions, as well as special circumstances that may affect the applicant or firm is performed to assess conditions.

2.9. Default Problems

Non-payment of loans has several undesirable consequences. It gradually destabilizes the credit system. Costs of loan administration of overdue loans are high. And defaults push up lending costs without any corresponding increase in loan turnover. Defaults reduce the resource base for further lending, weaken staff morale, and affect the borrower's confidence. After a comprehensive survey of defaults in Sri Lanka, identified six factors which contributed to defaults: Sanderatne, (1978)

a. Variability in incomes caused by fortuitous, seasonal, or unforeseen factors;

b. Defects and inadequacies in the organization disbursing credit;

c. Attitudinal conditions not conducive to repayment;

d. Misallocation of borrowed funds;

e. Miscellaneous reasons such as illness, death. Etc.

According to Pandmanabhan (1986: 26-31), causes of delinquencies and defaults are classified as relating to three levels: borrower level, financing institution level, and economy level.

a) Causes at borrower level:

- Borrowers who deliberately divert loans to non-essential consumption find it difficult to meet repayment commitments on time.
- Investments fail to generate sufficient incomes due to improper technical advice; absence of supporting services, inadequate marketing, etc. investments also fail due to unforeseen causes like floods, drought, etc. in both cases repayment would be affected.
- When borrowers have liabilities towards informal lenders, they get precedence over institutional lenders.
- Contingencies at borrower household like death, sickness, etc, affect repayment performance. Formal institutions which do not extend consumption and emergency loans are liable to have higher default rates.

b) **Causes at financing institution level:**

- Defective procedures for loan appraisal in the financing institutions could lead to the financing of bad projects and consequent defaults.
- Quality of loan officers, their ability and knowledge in the field, and their capacity to judge borrowers as also the incentive packages available to them affect repayment performance.
- Fixing of inappropriate repayment schedules and lack of flexibility often result in defaults. Similarly, when the procedure for repayment is cumbersome borrowers tend to delay repayments.

- Defaults have a spread effect particularly in the marginal cases. When lenders show reluctance to enforce sanctions against conspicuous defaulters, defaults tend to increase through a process of imitation.

c) **Causes at economy level:**

- When overall government policies, particularly those relating to pricing of inputs and outputs, marketing, etc., discriminate against the specific sector.

- Faulty monetary and fiscal policies of governments could result in high inflationary conditions. Borrowers tend to delay repayments in such a situation to take advantage of the fall in value of currency.

- Interest rate policies of government have a vital role in the promotion of repayments. When the real rate is excessively low, borrowing and consumption will be much more profitable than saving and repayment.

- Excessive government intervention in the day-to-day administration of financial institutions could result in bad loans.

- Calamities like droughts, floods, market glut, etc… could result non-performing loans.

2.10. Credit Collection Techniques

Effective credit collection techniques are one of the necessities for financial institutions in any economic climate. Knowing how to encourage customers to pay their outstanding debts to financial institutions like banks on time can increase the cash flow of MFI. Therefore a number of collection techniques are employed. Under normal circumstances loan clients are expected to pay in cash or deposit or keep their installment repayment as per the agreement made. As the loan account becomes past due or overdue the collection effort becomes more personal and strict. The basic techniques are:

- **Telephone Calls**: If the loan client passes the due date, a telephone call may be made to the customer to request immediate repayment and up to date his or her account.

- **Personal visits**: - If the telephone call made is not resulted positive response vesting his business and discussing the issue with the customer can be a very effective collection procedure.

- **Letters**: - If the efforts made so far is unsuccessful and not resulted positive response a polite letter is to be served reminding the customer of its obligation followed by warning letters for the action to be taken in future and its consequence. Collection letters are the first step in the collection process for past due and overdue loan accounts.

- **Using Collection Agencies**: Firms can turn uncollectible accounts over to a collection agency or an attorney for collection. The fees for this service are typically quite high; the firm may receive less than fifty percent on accounts collected in this way.

- **Legal Action**: legal action is the most stringent step in the collection process. It is an alternative to the use of a collection agency not only is direct legal action expensive, but is may force the debtor in to bankruptcy, thereby reducing the possibility of future business without guarantying the ultimate receipt of overdue amount.

2.11. Strategies to Minimize Defaults

Because of the vulnerability of the microcredit sub-sector, lending institutions continue to adopt different techniques to improve repayment frequency and grant more credit access to borrowers who pay their credits on time (Christoph 2002). The Kenya, Women Finance Trust believes that small credits are expensive to administer and that the institution can survive only by charging competitive interest rates, lending to women, and keeping defaults to a bare minimum. Women are targeted as clients by this trust because they have been found to have a high propensity to repay (Ibid). According to Mann (1993), some lenders prefer known clients to avoid default. People on a loan committee will give preference to an applicant with whom they have dealt previously. Hence; lending institutions will give money based on previous banking experience with the client. The same study also showed that institutions lend to profitable businesses that have cash flow available to pay back the credit.

Another strategy for dealing with default is lending to groups. The collective coming together of individuals is useful in a number of ways, including peer pressure that obliges the members to work within agreed norms. Although studies indicate that such schemes work well if groups are homogeneous and jointly liable for defaults, the practice of denying credit to all group members in case of default is the most effective and least costly way to enforce joint liabilit y (Huppi and Feder 1990).

2.12. Empirical literature

As Nagarajan (2001) in his study of risk management for microfinance institutions in Mozambique found that risk management is a dynamic process that could ideally be developed during normal times and tested at the wake of risk. It requires careful planning and commitment on part of all stakeholders. It is encouraging to note that it is possible to minimize risks related losses through diligent management of portfolio and cash-flow, by building robust institutional infrastructure with skilled human resources and inculcating client discipline, through effective coordination of stakeholders.

Achou and Tenguh (2008) also conducted research on bank performance and credit risk management found that there is a significant relationship between financial institutions performance (in terms of profitability) and credit risk management (in terms of loan performance). Better credit risk management results in better performance. Thus, it is of crucial importance that financial institutions practice prudent credit risk management and safeguarding the assets of the institutions and protect the investors interests. This is also true for micro finance institutions. Method used by the researchers is mixed research method. Matu (2008) carried out a study on sustainability and profitability of microfinance institutions and noted that efficiency and effectiveness were the main challenges facing Kenya on service delivery.

Soke Fun Ho and Yusoff (2009), in their study on credit risk management strategies of selected financial institutions in Malaysia the majority of financial institutions and banks losses stem from outright default due to inability of customers to meet obligations in relation to lending, trading, settlement and other financial transactions. Credit risk emanates from a bank's

dealing with individuals, corporate, financial institutions or sovereign entities. A bad portfolio may attract liquidity as well as credit risk.

The aim of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable boundary The efficient management of credit risk is a vital part of the overall risk management system and is crucial to each banks bottom and eventually the survival of all banking establishments. It is therefore important that credit decisions are made by sound analyses of risks involved to avoid harms to banks profitability. They held effective management of credit risk is an essential component of a comprehensive technique to risk management and critical to the long-term success of all banking institutions.

Sindani (2012) in her study 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.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

This chapter describes in detail, how the study was carried out, what activities were done, research design, subjects or data sources, sample size, sample method, and the analysis particular procedures.

3.1. Research Design

A research design is a plan showing how the research problem will be solved (Mugenda & Mugenda, 2003). This study was used descriptive research design. This design aimed at collecting data without manipulating the research variables or the respondents in an attempt to get the information required (Mugenda and Mugenda, 2008). The descriptive design was used in this study because of its appropriateness in establishing relationships between variables and facilitating the collection of information for achieving the objectives of the study. Further, Mugenda and Mugenda (2003) denoted that descriptive research enables subjects to give more information on the issue of interest under study. This research design was therefore appropriate in investigating credit risk management in the MFIs.

The research approach that was employed in this study is quantitative approach that would much for the research to address the objectives. Even though the research starts with the description about credit risk management of the selected microfinance institutions the ultimate goal is to test an analysis of credit risk management and how it exists in microfinance institutions.

3.2. Type and source of data

Generally, the study was used secondary data through documents. The study was used 9 years performance of the MFIs from 2010-2018. The researcher used 2018 as the last year of operation because some of the MFIs data was not be able to include data of 20-19. This served by guarantying uniformity for all the 27 MFIs. Using that secondary data the study was analysed credit risk management by applying accounting ratios.

3.3. Population

According to Snijders and Bosker, (1999), a population is the entire group of persons having the characteristic or characteristics that interest a researcher. For this study, the population of the study comprised of thirty nine (39) MFIs which found in Ethiopia (Muluken, 2019)

3.4. Sample size and sampling procedure

Kombo and Tromp (2009) and Kothari (2008) described a sample as a collection of units chosen from the universe to represent it. Levy & Lemeshow (2013) defined sample as subset of the population to be studied. Sampling design is the strategy used to select study participants or respondents (Kothari, 2008).

Among the 39 MFIs 27 micro finance institutions was selected using purposive sampling technique. Purposive sampling was used to select the MFIs which has better performance based on recent performance report in order to analyse credit risk management. Besides the purposive sampling was used to select the MFIs which have reports up to the end of June, 2018.

3.5. Data analysis

The secondary data to be collected from the MFIs was analysed using the financial ratios to analyse the credit risk management

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0. Introduction

As stated by National Bank of Ethiopia (NBE), there are 38 microfinance institutions registered to provide microfinance activities. To achieve these objectives MFIs should be viable and sustainable. This chapter presents analysis, interpretations and findings of data that discuss in view of empirical works and conceptual frame works. The findings stated below are extracted and analyzed from the financial statements of each microfinance institutions under considerations. In order to increase the reliability of data, audited reports were used.

4.1. Outreach indicators

Outreach is a very important indicator to understand the ability of microfinance institutions' to reach the poor society. MFIs' contribution in the overall poverty reduction can be seen from the perspective of the scope of outreach by measuring the no of poor clients they have reached. This regard, this section analyzes the No. of active borrowers being served by MFIs, the total volume and growth of outstanding loan, the size and growth trends of average loan size per borrower and deposit mobilization capacity and trends of MFIs selected for the study.

4.1.1. Breadth (number of clients served)

It is the number of clients that are active at a given point of time. This includes borrowers, deposits, and other clients who are currently accessing any financial services. The number of saving accounts of MFIs in Ethiopia is reaching to 17,719,292 as of June 2018.

Table 1: Outreach (breadth) trends in Ethiopia (2010-2018)

Year	Outstanding loan	% age change	Saving Balance	% age change	Active borrowers	% age change
2010	5,706,372,461		2,023,443,931		2,325,914	
2011	7,157,811,931	25.44	3,711,987,024	83.45	2,502,773	7.60
2012	9,272,171,887	29.54	5,179,365,011	39.53	2,727,889	8.99
2013	12,893,173,319	39.05	7,519,026,335	45.17	3,157,423	15.75
2014	16,976,417,223	31.70	11,768,797,655	56.52	3,479,225	10.15
2015	21,342,818,400	25.72	14,432,836,700	26.05	4,270,887	22.75
2016	24,514,569,700	14.86	18,432,836,700	74.49	4,326,422	1.30
2017	31,423,192,900	28.18	26,323,963,400	42.81	4,695,393	8.53
2018	43,772,362,200	39.30	33,213,124,600	26.17	5,130,115	9.26

Source: Researcher's own computation from data (2020).

As it is shown in the above table, the growth pattern of outstanding loan is encouraging. But percentage changes of some years are decreasing.

As shown from the Table 1 above, the outstanding loan increased from 5.7 billion in the year 2010 to 43.7 billion in the year 2018. This indicated that the outstanding loan remarkably increased consecutively. However, the pattern of increments of the outstanding loan is inconsistent from year to year. As it was shown on table 1 above, pattern of percentage change for the first three consecutive years (2010-2013) increased, whereas, there is a trend of decrement for the next three years (2014-2016), and then increased in the last two years (2017-2018). This revealed that, the growth of outstanding loan is encouraging. However, the rate changes of some years are fluctuating.

Regarding the saving amount of money and number of active clients, trends of continuous increment was observed. But as it can be seen from the tables the percentage change of increasing is fluctuating from year to year. The percentage change of saving balance is decreasing in year 2012, 2015, 2017 and 2018. The total saving of the MFIs increased from 2.02 billion ETB in 2010 to 33.2 billion ETB in 2018. Thus the collected data describes that the Ethiopian deposit-taking MFIs have shown a remarkable growth. This revealed that the performance of MFIs in Ethiopia with respect to saving is encouraging. And it can be regarded as it favors to minimize the credit risk.

On the other hand, the number of active client increased from 2.3 million in the year 2010 to 5.1 million in the year 2018. Though, the percentage change of active clients increased from 2010-2013, there is fluctuation in the remaining years. Particularly, the percentage change in 2016 is very low as compared to other years, which is 1.30 %. This shows even though the outreach in terms of breadth is increasing but it is not continuous. It is assumed that the larger the number of clients, the better the outreach and thus, it leads the MFI to become more sustainable. According to data collected from the National Bank of Ethiopia, the number of borrowers of 27 MFIs in Ethiopia is reaching to 5,130,115 people in June 2018. Therefore, the status of MFIs in Ethiopia is promising and appreciable, though there is fluctuation from year to year.

4.1.2. Outreach – Depth (client poverty level)

There are various techniques for measuring client poverty level reports. Henceforth, the following rough proxy for poverty level of loan or savings at a point in time,

$$Average\ outstanding\ balance\ per\ borrower = \frac{\text{Gross amount of loans of outstanding}}{\text{Number of active borrowers}}$$

$$\text{Average outstanding balance per borrower}(2011) = \frac{6{,}825{,}148{,}900}{2{,}495{,}660} = 2{,}735$$

$$Depth\ of\ outreach = \frac{\text{Average loan balance per borrower}}{\text{GNI per capita/exchange rate}}$$

$$Depth\ of\ outreach = \frac{2{,}735}{716/27.579} = 0.1385 = 13.85\%$$

Table 2: Trends of depth of outreach indicators (2010-2018)

Indicators	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Average**
Avg. outstanding loan balance per borrower	NA	2,735	3,139	3,525	4,541	4,622	5,688	6,713	8,465	4,929
Depth of outreach (USD) (%)	NA	13.85	15.89	17.85	23	23.41	28.81	34	42.8	24.95

Sources: Researchers' own construction from data (2020)

GNI = 716 USD as of 2017, 1 USD = 27.579 as of June 2018

As per the above mentioned table, average outstanding loan balance per borrower is birr 4,929 and percentage of depth of outreach per capita GNI on average of the 27 MFIs in Ethiopia is 24.95%. According to (CGAP, 2009), average outstanding balance is roughly related to client poverty. An average outstanding loan below 20 % of per capita GNI is a rough indication that clients are very poor. Therefore, based on this definition, the clients of the Ethiopian MFIs are not poor because their outstanding loan of GNI per capita that varies between 23% to 42.8% particularly in the last 5 years (2014-2018) and 24.95% for (2010-2018) in average which is greater than 20%.

Moreover, the percentage is increasing from year to year which revealed that the institutes are deviating from their mission. Therefore, the finding substantiates the mission drift where MFIs serves relatively non poor clients. This favors the MFIs in minimizing the credit risk hence it means that the borrowers have the capacity to return their debt.

4.2. Loan repayment (portfolio quality)

Portfolio quality performance is the highest vital asset of microfinance institutions. Loan payment of microfinance reviews how the MFI measures, monitors and manages its loan portfolio together with delinquency and write-offs. Portfolio quality indicates the risk of loan delinquency and influences the future earnings and the microfinance institution's ability to extend outreach and serve current clients. A money lender's ability to collect loans is essential for its success. If delinquency not maintained to very low levels it can rapidly spin out of control.

The international measure of portfolio quality in banking is portfolio at risk (PAR) beyond specific number of days.

$$\text{PAR (x days)} = \frac{outstanding\ principal\ of\ all\ loans\ past\ due\ more\ than\ x\ days}{outstanding\ principal\ balance\ of\ all\ loans}$$

The number of x days used for measurement varies. In microfinance, 30 days is a common break point. As a rough rule of thumb when dealing with uncollateralized loans, PAR (30 days or one payment period) above 10 percent must be reduced quickly or they will spin out of control. Portfolio at risk (PAR) 30 days of 27 MFIs in Ethiopia from 2010-June 2018 is summarized as follows:

Table 3: Portfolio at risk >30 days (Non-performing loans)

Indicators	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
PAR>30 days rates (%)	3.9	4.8	3.3	4.3	2.9	3.3	4.9	5	4.0	4.5

Source: NBE (2019)

As it indicated on the table 3 above the values of PAR >30 days obtained from collected data of MFIs in Ethiopia for the last 9 years is between 3.3 % to 5% and in an average 4.5% which revealed that, there is a healthy loan portfolio. Therefore, the result of PAR reflects that MFIs of Ethiopia from 2010-June 2018 had very acceptable throughout the years. In addition it indicates the presence of better follow up activities made to clients throughout the nine years, however, in some years it shows trend of increase. The MFIs were very acceptable through those time periods means that they are adapted in controlling their credit risk.

4.3. Sustainability and profitability of MFIs

Sustainability of MFIs is the ability of an institution to carry out activities and services in pursuit of its objectives. Sustainability is a very crucial factor for healthy expansion of MFIs in Ethiopia. In this research study operational sustainability (OSS), financial self-sufficiency (FSS), return on equity (ROE) and return on asset (ROA) were assessed to evaluate financial sustainability of MFIS in Ethiopia and the analysis and interpretations of data gathered is presented in the following section.

4.3.1. Operational Sustainability (OSS)

It measures operating revenues as a percentage of operating and financial expense, including loan, expense and the like. Operational self-sustainability takes into account the extent that financial revenue covers financial expenses, impairment losses on loans and operating expenses without performing adjustments for non-lending activities or other revenue like donations or grant and government support. Operational self-sufficiency ratio is a measure of operational sustainability and if this ratio is greater than 100 percent, the MFI is covering all of its costs throughout own operations and is not relying on contributions or subsidies from donors to survive.

It is defined as: $$OSS = \frac{\text{Financial Revenue}}{\text{Finance expense} + \text{impariment loss} + \text{operating expense}}$$

4.3.2. Financial sustainability (FSS)

Financial self-sufficiency refers to the ability for MFI to survive in the long run by means of its own income generating activities, i.e. without any contributions from donors. Financial

sustainability (FS) describes the ability to cover all costs on adjusted basis and indicates the institutions ability to operate without ongoing subsidy (i.e. including soft loans and grants.) or losses. Financial self-sufficiency (FSS) is a subsidy-adjusted indicator frequently applied by donor funded microfinance NGOs. It measures the ability of the MFI to cover its adjusted costs from adjusted revenues without grants (donations). Based on the claim of most scholars, MFIs with FSS exceeding 100% rates is indicating of a long-run sustainability (financial self-sufficient) whereas, if the FSS is below 100 %, at that point of the MFI has not still attained financial breakeven.

$$\text{FSS} = \frac{\text{Financial Revenue}}{\text{Adjusted financial expense + adjusted net impairment+ loss on loans+ adjusted operating expense}}$$

Table 4: Operational self-sufficiency (OSS) and financial self-sufficiency (FSS) (2010-2018)

Indicators	**Years of Operation**									
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Average**
(OSS) (%)	144.1	156.3	171.6	163.6	163.8	158.2	158.2	162.8	161.4	168.6
(FSS) (%)	60	67.7	75.3	85	91	98.3	74	124.2	101	79.6

Source: Researcher's own computation of data (2020)

As it was shown in the above table 4, concerning operational self –sufficiency there is trend of inconsistency from year to year. For instance there is increment from 2010-2012, whereas, there is trend of decrement from 2013-2016 and again raised in the last two years with an average of 168.6 for nine years for 27 MFIs in Ethiopia. Though there is inconsistence from year to year MFIs on Ethiopia performed well in terms of operational self-sufficiency for the year 2010-2018 because on average they performed more than the threshold level which is 100%. Therefore, the MFI is covering all of its costs throughout own operations and is not relying on contributions or subsidies

from donors to survive, as result, their sustainability with respect to operating self-sufficient is encouraging. And this performance can be interpreted that the MFIs are well controlling the credit risk of their operation.

Concerning financial self-sufficiency as it is shown on the table 4 above, there is a trend of increments from the year 2010 to 2016 whereas unexpectedly declined in 2016 and radical increment was observed in the last two years. Though an increment observed in the last two years (2017 and 2018) is encouraging, the MFIs should give due attention why the change is fluctuating. In addition, the average value of FSS for the last nine year is 79.60% which is much lower than the breakeven point which implies that the ability of the MFI to cover its adjusted costs from adjusted revenues (largely interest reclined) without grants (donations) is under questions. Therefore, the sustainability of MFIs in the Ethiopia will face difficulty in this regard.

4.3.3. Return on Equity (ROE) and return on asset (ROA)

Return on equity (ROE) is a measure of profitability that calculates how much money (birr) of profit a company generates 1ETB of shareholder equity. Profitability measures, such as return on equity and return on asset are applied to summarize the performance in all areas of the company. If portfolio quality is poor or its efficiency is low, this will be reflected in profitability.

Moreover, ROE is more than a measure of profit; it's a measure of efficiency. A rising ROE suggests that a company is increasing its ability to generate profit without needing as much capital. It also indicates how well a company's management is deploying the shareholders' capital. However, it is important to note that if the value of the shareholders' equity goes down, ROE goes up. Thus, write-downs and share buybacks can artificially boost ROE. Likewise, a high level of debt can artificially boost ROE; after all, the more debt a company has, the less shareholders' equity it has (as a percentage of total assets), and the higher its ROE is.

The formula for ROE is:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}} \quad \text{Or ROE} = \frac{\text{After tax profit}}{\text{Starting (or period} - \text{average) equity}}$$

Financial Self-Sufficiency (FSS) is a subsidy-adjusted indicator often used by donor funded

microfinance. It measures the extent to which MFI's business revenue; mainly interest received covers the MFI's adjusted costs. If the FSS is below 100%, then the MFI has not yet achieved financial break-even. It is measured by dividing business revenue excluding grants for operating expenses.

Return on asset (ROA) measures how well the MFIs used all their assets. It measures the profitability of the institutions which reflects both the profit margin and the efficiency of the institutions. Therefore, return on assets (ROA), in basic terms, tells you what earnings were generated from invested capital (assets). Moreover, ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or against a similar company's ROA.

The ROA figure gives an idea of how effective the company is in converting the money it invests into net income. The higher the ROA number, the better, because the company is earning more money on less investment. ROA is most useful for comparing companies in the same industry, as different industries use assets differently. For example, the ROA for service-oriented firms, such as banks, will be significantly higher than the ROA for capital intensive companies, such as construction or utility companies.

Both return on asset (ROA) and return on equity (ROE) are measures of how a company utilizes its resources. Essentially, ROE only measures the return on a company's equity, leaving out the liabilities. Thus, ROA accounts for a company's debt and ROE does not. The more leverage and debt a company takes on, the higher ROE will be relative to ROA.

Generally, return on equity (ROE) provides information on how much net income was earned on the equity of MFIs. In other words, ROE measures how the MFI has earned on the funds invested by the shareholders (donors). While their purposes are similar, ROE and ROA calculate different information about your business. Thus, to measure business's financial performance, calculating both ROA and ROE is paramount.

$$\text{ROA} = \frac{\text{After tax profits}}{\text{Starting (or period average) assets}}$$

Because the numerator does not include non-operation items or donations and is net of taxes, the ratio is frequently used as a proxy for commercial viability.

Table 5: ROA and ROE trend analysis (2010-2018)

Indicators	Years of Operation									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
ROE (%)	3.5	14.7	19	22.8	20	21.5	20.3	20.7	22.7	18.5
ROA (%)	12.1	4.3	5.4	6.1	4.8	5	4.9	4.9	4.8	5.3

Sources: Researcher's own construction from data of NBE (2019).

As it is shown on the table 5 above, ROE of 27 MFIs in Ethiopia for the last 9 years (2010 - June 2018) 18.5% in an average, though they achieved below average general and breakeven point in particular as of the year 2010 and 2011, i.e. 3.5 and 14.7% respectively. This means that the 27 MFIS in Ethiopia generated 0.185 of profit for every 1ETB of shareholders' equity in the last 9 year as an average, giving the stock a ROE of 18.5%. Therefore, this revealed that MFIs in Ethiopia is increasing their ability to generate profit without needing as much capital. And this also revealed the MFIs in Ethiopia are not affected by credit risk.

Regarding the ROA value of MFIs in Ethiopia for the year 2010-2018 achieved 5.3% on average. But the achievement fluctuates from year to year, which in some years it achieves higher than average and again it goes down to below average. Industry average of ROE is > 15 %, and that of ROA is > 6%.

Accordingly, the Ethiopian MFIs achieved better in terms of return on equity, whereas, they achieved below best practices of the industry in terms of return on asset.

4.4. Efficiency and productivity of MFIs (2010-2018)

The efficiency refers to the ability to produce maximum output at a given level of input, and it is the most effective way of delivering small loans to the very poor in microfinance context (Woller, 2000).To measure efficiency and productivity we can use Operating Expenses, Cost per Borrower, Personnel Productivity and Loan Officer Productivity as indicators (Micro Rate & Inter-American Development Bank, 2003). The performance of an MFI can also be measured by the number of borrowers per staff. This is a ratio of borrowers to staff indicating staff productivity. All things being equal the larger the number of borrowers a staff serves the higher will be his or her productivity (CGAP, 2003).

Efficiency and productivity indicators give an indication how well an institution performs operationally. Productivity indicates reflect the amount of output per unit of input while efficiency indicator also takes into account the cost of the input and/or the price of outputs.

Since these indicators are not easily manipulated they are more readily comparable across institutions than profitability indicates such as return on Asset and return on equity on the other hand, productivity efficiency indicators measures are less comprehensive indicators of performance than those of profitability. The most commonly used indicator of efficiency expresses non-financial expenses as a percentage of the gross loan portfolio.

$$\text{Operating expense ratio} = \frac{\text{personnel and administrative expense}}{\text{Period} - \text{average gross loan portfolio}}$$

$$\text{Cost per borrower ratio} = \frac{\text{Operating expense}}{\text{Average number of active borrowers}}$$

$$\text{Personnel productivity ratio} = \frac{\text{Number of active borrower}}{\text{Number of personnel}}$$

$$\text{Loan office productivity} = \frac{\text{Number of active borrowers}}{\text{Number of loan officers}}$$

Table 6: Trends in efficiency and productivity ratio (2010-2018)

Indicators	**Years of Operation**									
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Average**
Operating expense ratio (%)	10.9	10.8	10.9	13.5	10.8	11.2	11.9	11.7	11.7	11.5
Cost per borrowers (%)	NA	277	308	416	380	411	594	647	842	433
Personnel productivity ratio	NA	NA	NA	178	180	159	141	147	150	159

Source: Researcher's own computations of data (2020).

Operating expense ratio (OER):- is the most widely used indicator of efficiency. It allows a quick comparison between a MFIs portfolio yield with its personnel and administrative expenses how much it earns on loans versus how much it spends to make them and monitor them.

Its substantial drawback is that it will make MFI doing small loans look worse than MFI done large loans, even if both are efficiently managed. The institutional cost of providing loan is

measured by operating expense ratio. When operating expense is lower, the institution experience higher efficiency.

In this regard, MFIs in Ethiopia for last 9 years (2010-2018) achieved 11.5% on an average. According to (CGAP, 2009), only a few extremely efficient MFIs have an OER below 10 percent. According to this explanation, the OER of Ethiopia MFIs looks slight increasing, for example from 10.9 % in 2012 to 13.5 % in 2013 and 10.8 % in 2014 to 11.2 % and 11.9 % in 2015 and 2016 respectively. In general it shows a slight little fluctuation.

As it is shown in the above table, MFIs of Ethiopia incurred an average cost of Birr 433 to serve a single borrower. Besides, during the year 2011 to 2013 and from 2015 to 2018 the cost per borrower is increasing continuously. Therefore, Ethiopian MFIs were paying highest cost to serve a single borrower.

Personnel productivity ration is a very important ratio for any financial institution since personnel costs are mostly the highest operating expense.

As it is observed from the above table and figure, on average a single loan officer served 159 clients per year. In the year 2013 and 2014 the loan officers served higher number of clients. But after that the increment of productivity is declined until 2017. In 2016 to 2018 they served below average.

4.5. Peer group performance measurement of MFIs

As mentioned above National Bank of Ethiopia (NBE) grouped MFIs into 3 groups according to their performances, i.e. category A,B, and C). Some researchers also used this classification to measure performance indicators of MFIs (Gebrehiwot, 2016) and (Abdi & Batra, 2018). Thus, this researcher also tried to study the performance of MFIs in group.

4.5.1. Return on Asset and Return on Equity

The common measurement that is widely applied for profitability that reflects the institutions' efficiency and profit margin is return on asset (ROA), which is the ability of the organization to use its well assets of institutions have been used and return on equity (ROE) in which the produced returns on investment of owners are measured.

Table 7: ROA and ROE of MFIs category A, B and C (2010-2018)

Indicators	Categories	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
ROE in Percent	Category A	18.4	19.9	23	25.2	27.8	30.5	20.8	21	13	**22.18**
	Category B	32.6	31.8	31	37.7	41.8	45	39.1	35.3	30.3	**36.07**
	Category C	-5	4.32	12.2	16.6	13.1	17.1	17.1	15.8	15.7	**11.88**
ROA in Percent	Category A	6.13	5.57	6.17	6.45	6.35	7.25	4.92	8	9.2	**6.67**
	Category B	14.2	13.7	12.5	15	16.6	17.2	14.7	13.7	10.8	**14.27**
	Category C	-3.3	2.4	6.69	5.72	4.93	6.17	5.97	7.92	7.96	**4.94**

Source: Researcher own computation based on data (2020).

Based on ROA and ROE formula, the collected data of 9 years of audited financial report of 27 MFIs from NBE was calculated for the three categories of MFIs as shown on table 8. Accordingly ROE and ROA of category A MFIs has shown impressive improvement from year 2010 to 2015.

Even though it has shown fluctuating from 2016 to 2018, overall the microfinance institutions in category A have shown in improving in the last nine years.

Similarly, concerning ROA and ROE of the category B MFIs, significant improvement have been seen in the years 2013-2015and in the year 2016-2018 it experienced a little decline. Thus in both case there was fluctuating from year to year.

Moreover for category C as it is indicated on table 8 above significant improvements of ROA have been achieved from -3.3 % in 2010 to 6.69% in 2012. But from 2013 it shows little fluctuation and inclined nature in 2017 and 2018.

In comparisons, in both return on asset and return equity category B is better than category A and category C whereas category C is poor relative to the two categories. Moreover in technical language, Category A generated 0.2218 of profit for every 1ETB of shareholders' equity in the last 9 year as an average giving the stock an ROE of 22.18%, category B generated 0.3607 of profit for every 1ETB of shareholders' equity in the last 9 year as an average giving the stock an ROE of 36.07% and category C generated 0.1188 of profit for every 1ETB of shareholders' equity in the last 9 year as an average giving the stock an ROE of 11.88%. Thus, this revealed that category B is generating more profit than the two and category C generates less profit than the two.

4.5.2 Operational & Financial self-sufficiency

4.5.2.1 Operational self-sufficiency (OSS)

OSS measured the operating revenue as a percentage of operating expense; it includes expenses of loan provision. MFIs can only cover their all costs with their own revenue that generating from their financial or operation when this ratio (OSS) is greater than 100 %. It means that MFIs should not be dependent on the subsidies from donors so as to cover their operation costs.

4.5.2.2 Financial self-sufficiency (FSS)

FSS of institutions is very important for MFIs to get funds that are required to reach a large number poor society. FSS and OSS of category A MFIs in Ethiopia is summarized below.

Table 8: Operational self-sufficiency (OSS) & financial self-sufficiency (FSS) of category A, B and C MFIs (2010-2018)

Indicators	Categories	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
OSS in Percent	**Category A**	195	214	211	206	204	212	166	219	220	**205.22**
	Category B	200	178	188	207	213	223	193	189	181	**196.89**
	Category C	85	111	127	141	156	160	162	165	175	**142.44**
FSS in Percent	**Category A**	95	114	111	106	104	112	66	65	74.4	**94.16**
	Category B	100	78	88	107	113	123	93	92	96	**98.89**
	Category C	-15	11	27	41	56	60	62	65	75	**42.44**

Source: Self-computation from NBE and other sources.

As it can be observed from the above table, category A MFIs is achieving greater improvement from 2010 to 2018 in the case of OSS, with exception of 2016 which is 166 % and the average OSS for the last 9 year is 205.22% which revealed that encouraging change was observed from year to year in particular. In additions OSS values are greater than the breakeven value which is 100%. This revealed that the MFIs under category A cover operational cost by their operating income. With regard to FSS values, trend of fluctuation was observed and the average values for the last 9 year is below breakeven point. Since FSS measures the adjusted income of the MFI relative to its adjusted costs, when adjusted income is lower than adjusted costs, the FSS measure is below 100% and the MFI is defined as subsidy dependent. Accordingly, since FSS value of MFIs of category A is less than 100%, it revealed that adjusted income is less than adjusted costs, as result the long run sustainability is uncertain. More over in the year 2016, 2017 and 2018 it is highly declined which in turn confirms that sustainability of category A is under big question. Therefore, we can conclude that the category A is subsidy dependent.

Concerning category B, though the OSS value fluctuate from year to year, the value of each year is greater than breakeven point with an average value of 196.89% for the last 9 years. This revealed that the operating income is sufficient enough to cover operational costs like salaries, supplies, loan losses, and other administrative costs. With regard to FSS values, it is below breakeven point, so that, sustainability of MFIs in category B are also subsidy dependent as to Category A.

With regard to category C, OSS is greater than breakeven point, therefore this group of MFIs are also cover their operating cost by their operating income, however, the FSS value is by far less than breakeven point, which revealed that these group of MFIs are highly subsidy dependent ,therefore their sustainability is at risk.

4.5.3 Efficiency of peer category

The operating expense ratio is one of the commonly applied efficiency indicators that express expenses that are non-financial as a percentage of the gross loan portfolio and can be calculated by dividing all expenses related to the MFIs' including all salary and administrative expenses, depreciation and board fees by period average gross portfolio. However, expenses that are extra ordinary are not included.

Table 9: Peer group OER of category A, B and C Ethiopian MFIs (2010-2018)

Indicators	Category	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
OER (%)	Category A	8.5	7.2	8.2	8.5	9	9.2	11.1	6.5	5.5	**8.19**
	Category B	18.8	23.1	19.6	18.6	19.6	18	20.8	14.4	13.7	**18.51**
	Category C	38.5	36.9	34.2	23	19.6	21	25.6	18.5	21	**26.48**

Source: NBE (2019)

As it is shown in the above table, OER of category A fluctuated from year to year and in the years 2017 to 2018 it was decreasing which is encouraging because low ratios of operating expenses to gross loan portfolio imply a high efficient management.

Concerning category B, as it can be observed from the above table 10, the OER fluctuated over the study years and declining in the years 2017 and 2018. Though, decrement of OER at the end of study years (in 2017 and 2018), it is still large which negatively impact the efficiency of MFIs under this category.

According to grouping of NBE, OER of MFIs' under category C is higher than the other categories (A & B). Though, it is decreasing in 2017 and 2018 still it is inefficient in relative to category A and Category B.

Generally, category A is more efficient than category B and category B is more efficient than category C.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0. Introduction

The result of the data analysis and discussions, and pertinent interpretations based on the discussion were presented in chapter four. This last chapter first summarizes the study carries out on the performance of MFIs in Ethiopia from the year 2010-June 2018 and the conclusions and possible recommendations on major findings have been forwarded.

5.1. Summary and Findings

The following conclusions are drawn from this study.

- The growth of outstanding loan of the MFIs is encouraging. However, the rate changes of some years are fluctuating.
- The Ethiopian deposit-taking MFIs have shown a remarkable growth. This revealed that the performance of MFIs in Ethiopia with respect to saving is encouraging. And it can be regarded as it favors to minimize or control the credit risk.
- The number of borrowers of 27 MFIs in Ethiopia is reaching to 5,130,115 people in June 2018. Therefore, the status of MFIs in Ethiopia is promising and appreciable, though there is fluctuation from year to year.

- The finding substantiates the mission drift where MFIs serves relatively non poor clients. This favors the MFIs in minimizing the credit risk hence it means that the borrowers have the capacity to invest and return their debt.
- The result of PAR reflects that MFIs of Ethiopia from 2010-June 2018 had very acceptable throughout the years. In addition it indicates the presence of better follow up activities made to clients throughout the nine years, however, in some years it shows trend of increase. The MFIs were very acceptable through those time periods means that they are adapted in controlling their credit risk.
- The MFIs are covering all of their costs throughout own operations and is not relying on contributions or subsidies from donors to survive, as result, their sustainability with respect to operating self-sufficient is encouraging. And this performance can be interpreted that the MFIs are well controlling the credit risk of their operation.
- The average value of FSS for the last nine year is 79.60% which is much lower than the breakeven point which implies that the ability of the MFI to cover its adjusted costs from adjusted revenues (largely interest reclined) without grants (donations) is under questions. Therefore, the sustainability of MFIs in the Ethiopia will face difficulty in this regard.
- The MFIs in Ethiopia is increasing their ability to generate profit without needing as much capital. And this also revealed the MFIs in Ethiopia are not affected by credit risk.
- The Ethiopian MFIs achieved better in terms of return on equity, whereas, they achieved below best practices of the industry in terms of return on asset.
- In both return on asset and return equity category B is better than category A and category C whereas category C is poor relative to the two categories.
- The OSS values of Category A are greater than the breakeven value which is 100%. This revealed that the MFIs under category A cover operational cost by their operating income. Accordingly, since FSS value of MFIs of category A is less than 100%, it revealed that adjusted income is less than adjusted costs, as result the long run sustainability is uncertain. More over in the year 2016, 2017 and 2018 it is highly declined which in turn confirms that sustainability of category A is under big question. Therefore, we can conclude that the category A is subsidy dependent.
- Concerning category B, though the OSS value fluctuate from year to year, the value of each year is greater than breakeven point with an average value of 196.89% for the last 9 years. This revealed that the operating income is sufficient enough to cover operational

costs like salaries, supplies, loan losses, and other administrative costs. With regard to FSS values, it is below breakeven point, so that, sustainability of MFIs in category B are also subsidy dependent as to Category A.

- With regard to category C, OSS is greater than breakeven point, therefore this group of MFIs are also cover their operating cost by their operating income, however, the FSS value is by far less than breakeven point, which revealed that these group of MFIs are highly subsidy dependent, therefore their sustainability is at risk.
- Generally, category A is more efficient than category B and Category B is more efficient than category C.

5.2. Recommendations

Based on the findings of the study, the following recommendations are suggested.

- Even though the number of clients of MFIs in Ethiopia is increasing from year to year, it is a very little compared to the population of Ethiopia. Therefore, maximum effort must be done to make society at large the beneficiary of the service of MFIs. The MFIs should have work hard to get more motivated borrowers and savers all over the country.
- In addition the number of MFIs in Ethiopia is very small for the country which has more than one hundred million people. The Government should also give various incentives to make the outreach of MFIs because outreach is the central purpose of successful MFI.
- Since MFIs average financial self-sufficiency was below breakeven point during the study period of years (2010-2018), they should have to work on it in order to increase it. They also must work hard to increase personnel productivity ratio by giving training and education to their employees.
- In general, to increase outreach service productivity and sustainability efficiency and experience, massive effort must be applied. For this to happen, higher saving mobilization, product expansion , efficient loan management and better resources management should be sighted in depth by the MFIs to achieve better performances. New technologies like e-mobile, software and other infrastructures needs special attentions by the government, the MFIs and other concerned bodies.

REFERENCE

Abhay.N. (2010) Microfinance Sector.Nidia Ltd: India

Andenet A. (2011)"Microfinance Institutions operating in Addis Ababa: Institutional Viability and Financial Performance" the case of ADCSI, SFPI and Wisdom MFIs.

Anthony M. Santomero (1997), Commercial Bank Risk Management: an Analysis of the Process, Wharton Financial Institution Center.

Afriyie & Akotey, 2012, p. 3 credit risk management in financial institution

Ayayi, A.G. (2011). Credit risk assessment in the microfinance industry: An application to a selected group of Vietnamese microfinance institutions and an extension to East Asian and Pacific microfinance institutions. Economics of Transition Volume 20(1) 2012,

Befkadu B. Kereta (2007) 'Outreach and Financial Performance Analysis of

Muluken Melese, 2019: MFIs given more power: Capital Magazine Article

Microfinance Institutions in Ethiopia', National Bank of Ethiopia, Economic Research and Monetary Policy Directorate, Addis Ababa, Ethiopia

Cielens, M. 2010. Risk assessment and Risk management. Washington, D.C.

Churchill, C. and Coster, D. (2001). Microfinance Risk Management Handbook. CARE.

Chua, Paul Mosley, Graham A.N. Wright, Hassan Zaman Ronald T. (2000) 'Microfinance Risk management and Poverty'

Christoph Wagner, 2002, _An Introduction to credit risk modeling', Chapman and Hall/CRC, McGraw Hill, ISBN 978-1584883265.

Craig Churchill and Dan Coster (2001). CARE Microfinance Risk Management Handbook. Available online: http://www.adb.org/doc./books/interest. Retrieved on 11 July 2015.

Fernando, N.A. (2008). Understanding and Dealing with High Interest Rates on Micro credit. A Note to Policy Makers in the Asia and Pacific Region. Asian Development Bank. Retrieved http://www.adb.org/documents/books/interest on 20 August 201

Gebrehiwot A. (2002) Microfinance Institutions in Ethiopia: Issues of Portfolio Risk, Institutional Arrangements and Governance, in Microfinance Theory, Policy and Experience in Zaid N. et al. (eds). Mekelle University: Mekelle, Ethiopia.

Gyamfi,G.D. (2012). Assessing the Effectiveness of Credit Risk Management Techniques of Microfinance Firms in Accra. Journal of Science and Technology, Vol. 32, No. 1 (2012), pp 96-103.

Haneef, S., Riaz, T., Ramzan, M., Rana, M. A. Ishaq, H. M. and Karim Y. (2012). Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector

Huppi M and G Feder, 1990. _The Role of Groups and Credit Cooperatives in Rural Lending', World Bank Research Observer 5 (2): 187–204.

Hull, J. C. (2007), Risk Management and Financial Institutions, Pearson Prentice Hall, New Jersey, pp. 1-10. Institutions,Washington D.C.: Microfinance Network and GTZ) Intermediation. West Hartford, CT: Kumarian Press.

Laurent Cleck (2004), Credit risk management and financial stability

Mann, P 1993, _Forum on Barries Facing Banks in Lending to Many Small and Disadvantaged Businesses', Entrepreneurial Institute, Florida International University, Miami, available at <http://www.gdrc.org/icm/micro/bank-barrier.html> accessed on March 2, 2011.

Mersland, R. & Strom, R.O. 2007. Performance and corporate governance in microfinance institutions. [Online] Available: http://mpra.ub.uni -muenchen.de/3887/. Accessed: 20 June, 2015.

Michael Addisu (2006) 'Micro-finance Repayment Problems in the Informal Sector in Addis Ababa', Ethiopian Journal of Business & Development Vol1, No2.

Muriu, P. (2011)""Microfinance Profitability: What explains the low profitability of African microfinances?"", PhD thesis, Birmingham Business School, University of Birmingham.

Oldfield, G. S., and Santomero, A. M. (1997), "Risk Management in Financial Institutions," Sloan Management.

Padmanabhan, K.P. (1986) Rural Credit: Lessons for Rural Bankers and Policy Makers, Great Britain: Intermediate Technology Publications Ltd.

Sanderatne Nimal (1978) Analytical approach to loan defaults by small farmers, savings and development. 2, 4

Samuel (2006) 'Impact of Microfinance in Addis Ababa: The Case of Gasha Microfinance Institutions'.

Sara A. (2014). Determinants of microfinance institutions loan portfolios quality: empirical evidence from Ethiopia.

Sinkey, J. F. (2002), Commercial Bank and Financial in the Financial-Services Industry, Prentice Hall.

Schwartz K. (2001) Success in Insurance, Daily Graphic 29th April, 2001

Stauffenberg & Ramirez Determinants of microfinance institutions loan portfolios quality: empirical evidence

Turnbull approach", Balance Sheet, Vol. 9(3). "Effective risk management in financial institutions:

Watson, Jeff (2001). How to Determine a Sample Size: University Park, PA: Penn

Wolday (2001) 'Corporate Governance of the Deposit Taking Microfinance Institutions in Ethiopia'.

Van Gestel & Baesens, 2008, p. 44). Credit Risk in MFIs

Zigiju (2008) 'The role of Micro credit Institutions in Urban Poverty Alleviation in Ethiopia