

ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES

FINANCIAL PERFORMANCE ANALYSIS OF  
ETHIOPIAN MICRO FINANCING INSTITUTIONS

BY

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## DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Abebaw Kassie (PH.D), my thesis advisor. All sources of materials used for the thesis have been duly acknowledged, I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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## **ENDORSEMENT**

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a University advisor.

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## LIST OF ABBREVIATION

ACSI- Amhara Credit and Saving Institutions S.C

ADCSI -Addis Credit and Saving Institutions S.C

AEMFI- Association Ethiopian Micro-Finance institution

AVFS- African Village Financial Services

BG- Bussa Gonofa Microfinance S.C

CGAP- Consultative Group to Assist the Poor

DECSI- Dedebit Credit and Saving Institutions S.C

ETB- Ethiopian Birr

MFIs- Micro Finance Institution

NGOs- Non Governmental Organization

OCSSCO- Oromiya Credit and Saving S.C

OMO- Omo Microfinance S.C

OSS- Operational Self-Sufficiency

PAR- Portfolio at Risk >30 Days

PEACE- Poverty Eradication and Community Empowerment Microfinance S.C

ROA- Return on Asset

ROE- Return on Equity

SEPI- Specialized Financial and Promotional Institutions S.C

VF- Vision Fund Microfinance S.C

## Table of Contents

Declaration.....	ii
Endorsement .....	iii
Acknowledgements .....	iv
List of abbreviation.....	v
Table of conten .....	vi-vii
List of Tables .....	viii
Abstract.....	ix
CHAPTER ONE .....	1
Introduction.....	1
1.1 Background of the study .....	1
1.2 Statement of the Problem .....	2
1.3 Objective of the Study .....	4
1.3 Significance of the study.....	4
1.4 Scope of the study .....	4
1.5 Organization of the report.....	5
CHAPTER TWO .....	7
Literature Review.....	7
2.1. Theoretical Overview of Microfinance.....	7
2.1.1. Definition of Microfinance .....	7
2.1.2 Functions of MFIs.....	7
2.1.3 History of Microfinance: Global Perspective .....	8
2.1.4 History of MFI in Ethiopia .....	8
2.1.5 Sources of Finance in Ethiopia .....	10
2.2 MFIs Financial performance indicators .....	12
The Two Schools of Taught Regarding Depth and Width of Outreach .....	15
Repayment rates.....	16
Portfolio quality ratios .....	16
Arrears rate.....	16
Portfolio at Risk .....	16
Loan Loss Provision .....	17
Return on Asset.....	18
Return on Equity .....	19
OPERATIONAL SELF-SUFFICIENCY .....	19

Leverage.....	19
Operating cost ratio.....	21
Cost per Client / Loan Made.....	21
2.3 Empirical Review of Studies Conducted on the financial performance of MFIs ...	24
2.4 Summary of Empirical Review and knowledge gap.....	28
CHAPTER THREE .....	30
Research Design and Methodology .....	30
3.1 Research Design.....	30
3.2. Population Sample and Sampling Techniques Population .....	30
3.3 Sources of Data and Type .....	31
3.4 Data Analysis .....	32
CHAPTER FOUR.....	33
Result and Discussion .....	33
CHAPTER FIVE .....	44
CONCULUSION, FINDING & RECOMMENDATION.....	44
5.1 Conclusion .....	44
5.2 Finding.....	45
5.3 Recommendation .....	45

## List of Tables

Table 1: Summary of Financial performanceMeasurements: Variables .....	21
Table 2: Sample of MFIs categorized by Size .....	31
Table 3: Result on Depth of outreach.....	34
Table 4: Result of Breadth of outreach indicators.....	35
Table 5: Result of Portfolio quality.....	36
Table 6: Result of Financial sustainability and profitability Indicators .....	37
Table 7: Result of Efficiency Indicators.....	38
Table 8: Result of Productivity Indicators using one - sample t test.....	39
Table 9: Result of Capital structure Indicators using one - sample t test .....	39
Table 10: Result of Cost management Indicators using one - sample t test .....	40
Table 11: Result of Revenue Financial performanceIndicators using one - sample t test .....	41
Table 12: Comparison Mean of MFIs using ANOVA for Mean Ranking .....	42

## ***Abstract***

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*The Ethiopian Micro Finance sector is characterized by its rapid growth, an aggressive drive to achieve scale, a broad geographic coverage, a dominance of government backed MFIs, an emphasis on rural households, strong focus on outreach and reaching the poorest of poor especially of women. The main objective of this study is to analyze the financial performance of Ethiopian MFIs based on different measuring criteria by comparing against the bench mark. Although the actual number of Ethiopian MFIs is around 35 as per NBE data base, it was accessed the data for 24 MFIs and was selected 14 MFIs eligible to the current study sampling system. For data analysis it was used one sample t- test and one-way ANOVA with Scheffe post hoc comparison tests.*

*The result of the study shows that Ethiopian MFIs are good performers in breadth of outreach that is serving large number of borrowers, however, MFIs financial performance on gross loan portfolio (GLP) is very low compared to the bench mark. Regarding portfolio risk management Large and Small MFIs are poor performers as they have higher value than the industry average whereas Medium sized have lower value which is a good performer. On the other hand, large and small MFIs allocate low loan loss provision although they have higher PAR. Ethiopian MFIs are good performers on financial sustainability and profitability, efficiency and productivity. Ethiopian MFIs are not properly levered compared to the industry average. All MFIs are good performers on GLP to asset ratio, they allocated their portion of asset to loan portfolio, and thus MFIs are performing better in their capital structure and asset allocation. The implication of the finding showed that large and small MFIs have higher PAR value than the industry average, in addition large and small MFIs served lower number of female borrowers and Ethiopian MFIs are not properly levered and base on the study it suggested that large and small MFIs to adjust their loan loss reserve as per their PAR value and to serve better number of female borrowers and all MFIs better to be levered on their capital structure.*

**Key words: Microfinance Institution, financial performance indicator**

# CHAPTER ONE

## Introduction

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### 1.1 Background of the study

Ethiopia is one of countries which adopted Microfinance Institution (MFI) as means of alleviating poverty in early nineties. Amha (2013) reported that Microfinance (MF) in Ethiopia was commenced in 1991 at the time the current incumbent government took office. Like other development countries the role of development organizations in Ethiopia in terms of promoting the services of MFIs was significant. In this regard, Amaha has noted that later in the market towns development project financed by International Development Associations (IDA) and Ethiopian government that aimed at provision of small loans to the poor engaged in micro enterprise activities, living in selected towns and fulfill the screening can be mentioned as the first successful micro financing. As Wolday (2007) reported following the economic reform in 1991, some of the NGO and government pilot credit programs engaged in financial intermediation transformed into formal (specialized or non-bank) microfinance institutions.

The government proclamation on microfinance (NO.40/1996) paved the way for the establishment of microfinance institutions. Consequently, various MFIs have legally been registered and started delivering microfinance services.

In Ethiopia MFIs are share companies that are registered and regulated by the National Bank of Ethiopia (NBE). Wolday said almost all of the MFIs operating in the country have a dual mission of reaching poor clients and being financially sustainable.

On the other hand, many of the MFIs in Ethiopia provide similar financial products and use predominantly the group lending methodology, while individual lending is employed to a limited extent Amaha, (2012). As (Bayeh, 2012) stated, the objective of microfinance institutions as development organizations are to service the financial needs of un-served or underserved markets as a means of meeting development objectives such as to create employment, reduce poverty, help to develop existing business or diversify their activities, empower women or other disadvantaged population groups, and encourage the development of new business.

In order to meet the mentioned objectives MFIs' better financial performance will have a vital role. To improve MFIs' performance, they better know their weaknesses and gaps in which areas are they performing well and in which did poor. This will help for better decision making to perform in cost effective way with the available resources. As was reported by Wolday (2007), the challenges that MFIs in Ethiopia commonly face are three fold: it concerns, not only, financial sustainability, but also outreach - extending the services to greater numbers of poor, and depth of outreach - trying to reach the poorest members of society.

As per the annual report of AEMFI (2014), the Ethiopian MFI sector is unique: it is relatively young compared to the sector with the rest of world, with the average age of 10 years. However, the sector has witnessed for rapid growth, an aggressive drive to achieve scale, broad geographic coverage. As per the same report this was due to the dominance of government backed MFI, focus on rural house hold, provision of both credit and saving services and emphasis on sustainability. However the status financial performance of Ethiopian MFIs in relation to industry standard is not evaluated regularly. Therefore, this seeks to evaluate the financial performance of sample MFIs operating in Ethiopia.

## **1.2 Statement of the Problem**

The very rational behind for the emergency of MFIs was to help poor people who are financial constrained and vulnerable, with financial services to enable them to engage in productive activities or start small businesses as stated in Consultative Group to Assist the Poor (CGAP, 2009). MFIs provide financial services to low-income, economically active, borrowers who look for relatively small amounts to finance their businesses, manage emergencies, acquire assets, or smooth consumption (CGAP, 2003). But it is common that Borrowers might lack credit histories, collateral, or both, and thus, do not have access to financing from mainstream commercial banks. For this reason, MFIs are seen as playing a role in the creation of economic opportunity, and in poverty alleviation (CGAP, 2003).

Ethiopia's Micro Financing Business proclamation No. 626/2009 also supported that micro-financing institutions play important role in providing access to financial services to rural farmers and people engaged in other similar activities as well as micro and small-scale rural and urban entrepreneurs.

As MFIs have the objective to give financial service to the poor, financial performance effectiveness is necessary to reach large number of poor and to provide adequate financial service in sustainable fashion. To achieve their prime objective which is alleviating poverty, MFIs should be able to perform effectively in their outreach and sustainability.

Regarding MFI performance in Ethiopia different researches have been conducted. To mention some of them; assess the financial performance and challenges of MFI Ebsa et. al, (2012); However, this study has focused only selected issues such as the Legal frame work of micro-finance institutions, Licensing of micro-financing business, Operational and financial requirements, Structure of ownership of micro-finance institutions, The Financial performance of Microfinance Institutions and Challenges of the Micro Financing Industry, where financial performance of MFIs on this study focuses mainly on the number of clients and the amount of loan granted by the microfinance institutions and the market share of the big MFIs by 2011 in the country. Whereas the financial performance of MFIs can better be assessed compressively by considering detail and comprehensive indicators compared to the industry standard in this study.

Other studies by Befekadu, ( 2007) outreach and financial performance analysis of MFI in Ethiopia from NBE and financial performance analysis of a sample of Micro Finance in Ethiopia (Letenah, 2009). From the above studies, Letenah has conducted financial performance analysis on the MFIs operating in Ethiopia and indicates the status of financial performance of Ethiopian MFIs.

To the knowledge of the researcher, since 2009 no study was conducted regarding the financial performance of MFIs in Ethiopia comparing against the industry standard. Besides, the MFI environment in Ethiopia is changing every time in terms of number of MFI, size of investment and other economic factors, the researcher believes that conducting financial performance assessment on Ethiopian MFIs is appropriate. In this study the researcher dealt with on assessing the financial performance effectiveness of MFIs operated in Ethiopia by comparing with the financial performance standards set by Micro banking Bulletin (MBB) from MIX Market online website. In other words the study dealt on that whether MFIs of Ethiopia have good financial performance compared to the industry bench mark.

### 1.3 Objective of the Study

The general objective of this research is to assess the financial performance of Micro Finance Institutions in Ethiopia in relation to the industry standard. In light of general objectives, this study specifically seeks:

To assess the financial performance of these institutions using indicators such as

- Breadth of outreach & depth of outreach,
- Profitability and sustainability,
- Efficiency, productivity and portfolio quality.
- Revenue performance, expense management, and
- Capital structure and asset allocation of selected MFIs in Ethiopia

### 1.3 Significance of the study

The findings of this study are expected to be significant for the following reasons: The findings of this study will help MFIs, within an insight into the benefits of using different factors studied in this research to appraise their performances. Government and other parties concerned in the financial performance improvement of MFIs may use the findings of the study as additional information to address the problems uncovered in the area. In addition both graduate and undergraduate students may find the study relevant for their academic work. Therefore the above mentioned parties may use the study as a stepping-stone for further study in the area at an advanced level. Furthermore the findings may also be considered as important additions to the existing knowledge and literature in the area for the public at large.

### 1.4 Scope of the study

This study is confined only to evaluate the financial performance of selected Ethiopian MFIs appraising the financial performance from 2003 to 2010 whose data is found in the MIX market website. After 2010<sup>th</sup> the financial performance bench mark report that is issued by MIX Market is not uploaded / available on the website. Letenah's study conducted in 2009 for the time from 2001-2007 by using the standard issued by MIX Market as of 2007. Although some MFIs have data till 2015 on the website, the MIX market released the standard bench mark as of 2010. Therefore, to make fair analysis this paper is limited to analyze the financial performance of selected MFIs till 2010.

It is known that some of the MFIs do not submit their data to the MIX market web site consistently; therefore the analysis is limited to those MFIs that submit their data consistently from 2003 to 2010. There are 24 Ethiopian MFIs who have data on the MIX Market website that was accessed their data, however, 14 MFIs are found eligible and have consistent data to conduct the analysis for this specific study.

## 1.5 Organization of the report

The research report will organize four chapters. The first chapter will give introductions about the general background of the study, statement of the problem, basic research questions, objectives of the research, and significance of the study. Chapter two will about the literature review. This gives an insight issues related to the review of the theoretical and empirical literatures which has previously done on the area. Chapter three will describe the research methods. This part provides the types and sources of data, methods of data collection and analyzing the collected data. Chapter four will be about the analysis and discussion. This part discusses the overall part of the findings from analyzing the data which provides to give some suggestions regarding to the thesis in general and it becomes a stepping-stone for concluding the remarks. The conclusions drawn from the findings, the recommendations made to address the factors identified on the growth of MFI, and the implications of the findings for future research, practitioners, government and other support agencies.

### Operational Definition of terms

**Efficiency:** the ability to work well and produce good results by using the available time, money, supplies etc. in the most effective way(Oxford dictionary).

**Loan Portfolio:** loans that have been made or bought and are being held for repayment. Loan portfolios are the major asset of banks, thrifts, and other lending institutions. The value of a loan portfolio depends not only on the interest rates earned on the loans, but also on the quality or likelihood that interest and principal will be paid. (Free dictionary)

**Microfinance institution:** institution is an organization that offers financial services to low income populations. Almost all give loans to their members, and many offer insurance, deposit and other services. A great scale of organizations is regarded as microfinance institutes. (edify.org).

**Operational sustainability:** is a method of evaluating whether a business can maintain existing practices without placing future potential resources at risk (mbaskool.com)

**Poor:** lacking sufficient money to live at a standard considered comfortable or normal in a society.(www.ceres.org).

**Outreach:** refers to the financial service provision (reaching) to the large portion of the society who is poor and living in remote areas.

**Poverty:** Condition where people's basic needs for food, clothing, and shelter are not or little being met.([www.bussinesdictionary.com](http://www.bussinesdictionary.com))

**Productivity:** A measure of the efficiency of a person, machine, factory, system, etc., in converting inputs into useful outputs. [www.businessdictionary.com](http://www.businessdictionary.com).

**Self-sufficiency:** able to maintain oneself or itself without outside aid : capable of providing for one's own needs (Dictionery.org)

**Sustainability:** the ability to be sustained, supported, upheld, or confirmed. (Dictionery.org)

# CHAPTER TWO

## Literature Review

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Under this chapter the theoretical and empirical evidences focusing on the factors of microfinance institution financial performances are reviewed. The first section describes the overall theoretical overview of microfinance financial performance concepts. The second section presents review of empirical studies on the financial performance analysis and determinant factors of MFIs performance.

### 2.1. Theoretical Overview of Microfinance

The theoretical framework was, through a review of existing literature within the microfinance field, serve as a platform for the forthcoming empirical study.

#### 2.1.1. Definition of Microfinance

Ledgerwood (1999) defines microfinance as the provision of financial services like savings, credit, insurance and payment services to low-income clients, including the self-employed.

In addition, Ledgerwood presented microfinance activities as follows:

- Small loans, typically for working capital
- Informal appraisal of borrowers and investments
- Collateral substitutes, such as group guarantees or compulsory savings
- Access to repeat and larger loans, based on repayment performance
- Streamlined loan disbursement and monitoring
- Secure savings products.

#### 2.1.2 Functions of MFIs

MFIs provide financial services to low-income, economically active, borrowers who look for relatively small amounts to finance their businesses, manage emergencies, acquire assets, or smooth consumption (CGAP, 2003). These borrowers frequently lack credit histories, collateral, or both, and thus, do not have access to financing from mainstream commercial banks. For this reason, MFIs are seen as playing a role in the creation of economic opportunity, and in poverty alleviation (CGAP, 2003).

Getaneh (2002), in his study cited that a study conducted by IFAD indicated the most MFIs may be operationally sustainable in the coming few years. However, almost all MFIs will continue to depend on external donor agencies to finance their sustainable and outreach in the next ten years or so.

### **2.1.3 History of Microfinance: Global Perspective**

Microfinance arose in the 1980s as a response to doubts and research findings about state delivery of subsidized credit to poor farmers. In the 1970s government agencies were the predominant methods of providing productive credit to those with no previous access to credit facilities—people who had been forced to pay usurious interest rates or were subject to rent seeking behavior Ladgerwood (1999).

At the same time, local NGOs began to look for a more long-term approach than the unsustainable income generation approaches to community development. In Asia Dr. Mohammed Yunus of Bangladesh led the way with a pilot group lending scheme for landless people. This later became the Grameen Bank, which now serves more than 2.4 million clients (94 percent of them women) and is a model for many countries Ladgerwood (1999). This writer also mentioned that in Latin America ACCION International supported the development of solidarity group lending to urban vendors, and FundaciónCarvajal developed a successful credit and training system for individual micro entrepreneurs Since the 1980s the field of microfinance has grown substantially. The same source indicated also donors' active support and encouragement of microfinance activities, focusing on MFIs that are committed to achieving substantial outreach and financial sustainability.

### **2.1.4 History of MFI in Ethiopia**

As Ethiopia is one of the developing countries in sub Saharan countries, MFIs are considered as one the most important tools to bring in inclusive growth in the country. It was cited by Wolday, in 2003 that the survey conducted by Central Statistics Agency of Ethiopia in 1999/2000 which indicates that 42% of the population cannot afford to spend enough to buy the minimum food requirements. In the same survey, it was reported that 41% of the populations who live in rural areas are unable to acquire minimum food requirement while only 42% of the population who live in urban areas are unable to acquire this minimum food requirements.

Therefore, to address the need and the gap financial service for the poor the service of MFIs was very necessary. And this can be achieved through expansion of MFIs' services across the board to fill the need of the service among the poor. This required the MFIs' outreach capacity and sustainability to provide sustainable service to the poor. The development of microfinance institutions in Ethiopia is a recent phenomenon as mentioned by different researchers. The proclamation, which provides for the establishment of microfinance institutions, was issued in July 1996. Since then, various microfinance institutions have legally been registered and started delivering microfinance services (Wolday, 2000).

According to the study conducted by Muluneh (2005), the first group of few MFIs was established in early 1997 following the issuance of proclamation number. 40/1996. Muluneh added that prior to 1996, different parties including NGOs and different government programs were involved in delivering credit to the needy people residing in rural areas of the country. He argued that but such programs were not well organized to serve the public in sustainable and continuous way where the poor remains seeking the support of government/charity organization to sustain their lives. Taking the forgoing in to consideration, and as one tool to implement the poverty reduction strategy, the federal government has issued proclamation.

According to Wolday, (2003), the delivery of MF services to the rural poor in Ethiopia is one of the effective instruments of promoting food production and food security. All MFIs have a shared vision of poverty alleviation.

As Getaneh(2002) cited from SIDA and IFAD saying that the alternative for informal financial sector are mainly individual money lenders where this case, borrowers are required to provide guarantors and the interest rate is excessively high, varying from 50% to 120% per annum SIDA (2001). Recently IFAD study estimated that the Arata interest rate can go as high as 400% in some instances. Apparently such exploitive interest rate of the informal credit sector diminishes the potential return to factors of production. From this information it is understood that it was very costly and unaffordable to the poor people to get financial services from informal financial sectors. To solve this problem microfinance institutions are the right and appropriate institutions to be emerged and provide the intended services to the poor.

Therefore MFIs are expected to address the need of financial service for the active poor to reduce poverty. Expansion of MFIs is the key to increase the outreach and provide sustainable service to the poor.

Since 1996, NBE has registered 35MFIs to deliver financial services to the poor. As of 2014, these MFIs had an active loan portfolio of about ETB 4.5 billion delivered to 2.3 million active borrowers and 3 million total active clients. They also mobilized savings of about ETB 1.9 billion (USD 144 million). The average size of loans in 2014 was about USD 170, which indicates that MFIs target the active poor and also do a significant amount of their business (54 percent) with women. Despite their strong growth, MFIs provide less than seven percent of the total national loan portfolio, again with government-owned MFIs playing the major role (Wolday.*et al.*, 2010).

### **2.1.5 Sources of Finance in Ethiopia**

In Ethiopia there are different sources of financial services. According to Wolday (2007) the major sources of loans or financial services in Ethiopia are as follows;

- A. Commercial banks
- B. MFIs
- C. Cooperatives (savings and credit cooperatives and multipurpose cooperatives);
- D. NGOs which are involved in the delivery of financial services
- E. Governmental projects and programs involved in providing loans
- F. Semi-formal finance (Iqqub,Iddir,Maheber, etc)
- G. Informal finance (money lenders/traders, suppliers credit, friends, relatives, etc)

In his study the researcher mentioned the specific intervention that would contribute to the growth of MFIs as follows:

1. Improving the institutional capacity of the MFI by introducing an efficient organizational structure
2. Creating an enabling legal, regulatory and policy environment;
3. Selective donor support: and

MFIS in Ethiopia encounters different problems that hinder them to operate effectively to provide financial service to the poor.

Muluneh (2008) mentioned some of the problems encountered by MFIs in Ethiopia as follows.

- **Poor Management Information System (MIS):** Muluneh also added that the MIS of the MFIs in Ethiopia is not well organized to capture data and produce reliable report, which has led to weak internal control which opens loopholes for fraudulent activities.
- **Weak capital position:** Muluneh also documents that as MFI's shareholders have not paid their subscribed capital of the institution, MFI's capital position is weak
- **Poor saving mobilization:** The other major weakness that MFIs in Ethiopia commonly face is lack of proper voluntary saving mobilization strategy and effort from the public. It is reported that the MFIs are mainly engaged in mobilization compulsory saving for collateral purpose.
- Violations pertaining to the Proclamation and directive set by the NBE: as well as own policies and procedures;
  - Inappropriate provisioning for non-performing loans reporting
  - Untimely submission of financial reports and audit reports
  - Untimely renewal of MFIs' business license
  - Calculation of interest on past due loans exceeding one year
- **Governance problem:** Since the Board is established to oversee the activities of the management of the MFIs, it should fulfill the requirements of the shareholders, the NBE and other stakeholders. Some of the problems
  - Irregularities of meetings by GA and Bod due to preoccupation in other duties, lack of commitment & interest and lack of technical knowledge on the sector.
  - Poor follow up and supervision exercised by the management in overseeing implementation of P&P.
- Weak internal control of MFIs

- Distortion of MFI Market; there are many unlicensed operators that are providing credit services to the potential market of the licensed MFI.
- Lack of loanable fund to expand outreach by the industry
- Absence of efficient legal system to enforce contract

Alemu (2002) in his study mentioned that fraud is the challenge to institutional sustainability of MFIs in Ethiopia. Fraud practices in an MFI reduce its financial performance both in terms of the volume of saving and portfolio quality, and also decreases its reputation as a dependable micro finance institution in the eyes of its stakeholder mainly of clients.

## 2.2 MFIs Financial performance indicators

As Ledgerwood (1999) indicates, Financial performance indicators usually are in the form of ratios, that is, a comparison of one piece of financial data to another. Comparing ratios over a period of time is referred to as *trend analysis*, which shows whether financial performance is improving or deteriorating.

According to the writer, financial performance indicators are organized into six categories:

- Portfolio quality,
- Productivity and efficiency,
- Financial viability, Profitability,
- Leverage and capital adequacy, Scale,
- Outreach, and
- Growth.

On the other hand CGAP (2006) explained that the core financial performance indicators for MFIs recommended in Good Practice Guidelines for Funders of Microfinance categorized in to five by far relates to Ledger wood's categorization;

- Breadth of outreach: How many clients are being served?
- Depth of outreach: How poor are the clients?
- Loan repayment (portfolio quality): How well is the lender collecting its loans?
- Financial sustainability (profitability); Is the MFI profitable enough to maintain and expand its services without continued injections of subsidies? And
- Efficiency; How well does the MFI control its operating costs?

In another bulletin of CGAP (2009) justified that the five indicators suggested by CGAP (2006) do not capture all relevant aspects of MFI performance. It indicates that additional assessment indicators need to be set by most funding agency project officers and investment analysts, and certainly all MFI managers, for any given MFI. Besides it is also indicated to include other important dimensions, like governance quality, that simply cannot be quantified.

The main MFI financial performance indicators as explained by different writers are summarized as follows.

### **2.2.1 Breadth of Outreach: Number of clients served**

According to CGAP (2009) the best measurement of outreach is straightforward that is the number of clients or accounts that are active at a given point in time. The number of active clients includes borrowers, depositors, and other clients who are currently accessing any financial services. This indicator is more useful than the cumulative number of loans made or clients served during a period. Among other distortions, cumulative numbers make an MFI that offers short-term loans look better than one that provides longer term loans, even though the latter may be more valuable for borrowers. To reflect actual service delivery, membership-based organizations should report on active clients, not just the number of members: members may be inactive for long periods, especially in financial cooperatives.

As Ledger wood cited Paxton and Fruman (1998), providing financial services to those excluded from formal financial services, and then it is important to define which sectors of society have little or no access to formal finance.

### **2.2.2 Depth of Outreach: Client poverty level**

Rama and Tamrat (2013) explained outreach as the average loan size broken down by size dimensions. Average loan size by itself is a blunt and possibly inaccurate measure of depth. A more useful way to use average loan size is to break it down into its seven distinct dimensions, each of which can be measured: dollars disbursed, average balance, term to maturity, dollars per installment, time between installments, number of installments, and dollar years of borrowed resources. Smaller values along each dimension generally mean smaller loans and poorer borrowers.

According to Good Practice Guideline published by CGAP in 2006, Outreach depth or Client poverty level indicator refers to the average outstanding balance per client or account as a proportion of Gross National Income per capita as indicated in the following formula.

$$\text{Average Outstanding Balance} = \frac{\text{Gross Amount of Loans or Savings outstanding}}{\text{Number of active clients or accounts}}$$

This indicator is often shown as a percentage of per capita Gross National Income (GNI):

$$\text{GNI} = \frac{\text{Ave. outstanding loans or saving balance per client}}{\text{GNI per capita}}$$

The guide line explains that the average outstanding balance includes only loan amounts that clients have not yet repaid, or savings that clients have not withdrawn. This point-of-time number should not be confused with total amounts loaned or deposited during the reporting period, or with the average initial amount of the loans in the portfolio.

Average outstanding balance is roughly related to client poverty, because better off clients tend to be uninterested in smaller loans or deposit accounts. But the correlation between account balances and poverty is far from precise.

As per the same guide line, low account sizes do not guarantee a poor clientele and in a similar way growing in average loan size does not necessarily mean that an MFI is suffering from “mission drift.” It is obvious that most MFIs have a sequential ladder of loan sizes for clients. As an MFI matures and growth slows, a lower percentage of its clients are first-time borrowers, and average loan sizes will rise even if there has been no shift in the market it is serving. Likewise, MFIs sometimes discover that their limits on the size of initial loans are unnecessarily conservative; relaxing those limits produces loan size growth that has nothing to do with abandoning poorer clients

Ledger wood explained that the depth of outreach is proxied by average loan size or average loan size as a percentage of GDP per capita.

As Rama and Tamrat (2013) cited Degefe (2007) in that outreach depth is also measured by the following parameters.

- The extent of gender composition ( more women participation means deeper outreach)
- The urban – rural composition of clients ( the more rural, the deeper the outreach)

- Household characteristics ( female headed, large household size, high dependency ratio, and older population represent vulnerable groups and if reached indicates depth of outreach)
- Educational status (illiteracy and low level of education indicate vulnerability)

As Hulme and Musley (1996) cited in Bayeh (2012), without serving the poor the supposed objective of MFIs is no longer different from a bank. Their argument is that outreach should not be measured by just total number of clients but it should rather be based on the number of poorclients

## **The Two Schools of Taught Regarding Depth and Width of Outreach**

Letenah (2009) states that the different perspective on which the MF financial performance is measured has created two opposing but having the same goals schools of taught about the microfinance industry. The first one is called welfarists and the second one is institutionalism. As Robinson (2001) cited in Rama and Tamrat (2013) explained that Microfinance 1990s was marked by the major debate between the leading views, the financial systems approach and the poverty lending approach. The two major concepts in this definition, the financial systems approach and the poverty lending approach, are equivalent to width and depth of outreach, respectively.

### **2.2.3 Portfolio Quality**

According to CGAP (2009), a retail lender's ability to collect loans is critical for its success: if delinquency is not kept to very low levels, it can quickly spin out of control. Furthermore, loan collection has proved to be a strong proxy for general management competence. It was mentioned also ratios can be vague rather than clarify financial performance if they are not calculated according to international standards. Therefore, whenever any measure of loan repayment, delinquency, default, or loss is reported, the numerator and denominator of the ratio should be explained very precisely.

Ledger wood (1999) stated also Portfolio quality ratios provide information on the percentage of nonearning assets, which in turn decrease the revenue and liquidity position of an MFI. Various ratios are used to measure portfolio quality and to provide other information about the portfolio even though they are all referred to here as portfolio quality ratios. The ratios are divided into three areas: Repayment rate, Portfolio quality ratio and Arrears rate.

## Repayment rates

Repayment rates measure the amount of payments received with respect to the amount due, whereas other ratios indicate the quality of the current outstanding portfolio.

$$\text{Repayment rate} = \frac{\text{Amount received (including prepayments and past due amounts)}}{\text{Amount due (Excluding past amount)}}$$

## Portfolio quality ratios

Three ratios are suggested here to measure portfolio quality: the arrears rate, the portfolio at risk, and the ratio of delinquent borrowers.

### Arrears rate

The arrears rate is the ratio of overdue loan principal (or principal plus interest) to the portfolio outstanding:

$$\text{Arrears rate} = \frac{\text{Amount in arrears}}{\text{Portfolio outstanding (including amounts past due)}}$$

The arrears rate shows how much of the loan has become due and has not been received. However, the arrears rate understates the risk to the portfolio and understates the potential severity of a delinquency problem, because it only considers payments as they become past due, not the entire amount of the loan outstanding that is actually at risk.

### Portfolio at Risk

The portfolio at risk refers to the outstanding balance of all loans that have an amount overdue. Portfolio at risk is different from arrears because it considers the amount in arrears plus the remaining outstanding balance of the loan. The portfolio at risk ratio reflects the true risk of a delinquency problem because it considers the full amount of the loan at risk this is particularly important when the loan payments are small and loan terms are long.

$$\text{Portfolio at Risk (x days)} = \frac{\text{Outstanding Principal Balance of all loans with payments past due more than x days}}{\text{Portfolio outstanding (including amounts past due)}}$$

The number of days (x) used for this measurement varies. In microfinance, 30 days is a common breakpoint.

The PAR ratio should also include the outstanding value of all renegotiated loans, including rescheduled and refinanced loans, because they have higher than normal risk, especially if any payment is missed after the renegotiation.

## Loan Loss Provision

The loan loss provision is the amount expensed in a period to increase the loan loss reserve to an adequate level to cover expected defaults of the loan portfolio. It is based on the difference between the required loan loss reserve and the current outstanding loan loss reserve.

$$\text{Loan Loss Rate} = \frac{\text{Adjusted Write-offs} - \text{Value of Loans Recovered}}{\text{Adjusted Average Gross Loan Portfolio}}$$

There are two loan loss ratios that can be calculated to provide an indication of the expected loan losses and the actual loan losses for an MFI. The first is the loan loss reserve ratio and the second, the loan loss ratio.

$$\text{Loan Loss Ratio} = \frac{\text{Amount written off in the Period}}{\text{Average Portfolio Outstanding for the period}}$$

### 2.2.4 Financial Sustainability and Profitability

The term sustainability is a common term used in the microfinance industry, it is used interchangeably with self – sufficiency, financial self - sufficiency, profitability, financial sustainability, viability, financial efficiency, Ledgerwood, (1999). As Rama and Tamerat (2013) cited Degafe (2007) sustainability is defined as it is the long-term availability of the means required for the long-term achievement of goals. The same source also indicated that financial sustainability means that the MFI is able to cover all its present costs and the costs incurred in growth, if it expands operations. It would mean that the MFI is able to meet its operating expenses, its financial costs adjusted for inflation and costs incurred in growth.

According to CGAP (2009), in banks and other commercial institutions, the most common measure of profitability is return on assets (ROA), which reflects that organization’s ability to deploy its assets profitably, and return on equity (ROE), which measures the returns produced on the owners’ investment. CGAP also stated about the profitability ratio measurement as follows.

- Profitability ratios measure an MFI's net income in relation to the structure of its balance sheet.
- Profitability ratios help investors and managers determine whether they are earning an adequate return on the funds invested in the MFI.
- It assesses that does the MFI earn enough revenue excluding grants and donations to make a profit?

According to Ledgerwood (1999), Profitability ratios stated as a percentage of return on assets (ROA), a return on business (ROB), and a return on equity (ROE). It was explained also Business refers to the result of adding assets and liabilities together and dividing by two; this ratio is useful for MFIs that fund a majority of their assets with mobilized savings. The major ratios that help in measuring the profitability are briefly explained in the next text.

## Return on Asset

Return on asset (ROA) falls within the domain of profitability measures and tracks MFIs' ability to generate income based on its assets. The ratio excludes non-operating income and donation. ROA provides a broader perspective compared to other measures as it transcends the core activity of MFIs, namely providing loans, and tracks income from all operating activities including investment, and also assesses profitability regardless of the MFIs' funding structure. As per Katsushi *et al* (2011) ROA is expected to be positive as reflection of the profit margin of the MFI, otherwise it reflects non-profit or losses.

The return on assets (ROA) ratio measures the net income earned on the assets of an MFI. For calculating the return on assets, average total assets are used rather than performing assets, because the organization is being measured on its total financial performance, including decisions made to purchase fixed assets or invest in land and buildings (in other words, using funds that could be used for other revenue-generating investments) or invest in securities.

$$ROA = \frac{\text{After Tax Profits}}{\text{Starting (period - average) Assets}}$$

Factors that affect the return on assets ratio are varying loan terms, interest rates and fees, and changes in the level of delinquent payments. The split between interest income and fee income also affects this ratio if loan terms and loan amounts change.

## Return on Equity

The return on equity (ROE) ratio provides management and investors with the rate of return earned on the invested equity. It differs from the return on assets ratio in that it measures the return on funds that are owned by the MFI (rather than total assets, which by definition includes both liabilities and equity). If the return on equity is less than the inflation rate, then the equity of the MFI is reduced each year by the difference (net of the nonmonetary assets owned by the MFI). The return on equity ratio also allows donors and investors to determine how their investment in a particular MFI compares against alternative investments. This becomes a crucial indicator when the MFI is seeking private investors.

$$ROE = \frac{\text{After-tax profits}}{\text{Starting (or period-average) equity}}$$

*Starting (or period-average) equity*

## OPERATIONAL SELF-SUFFICIENCY

Operational self-sufficiency is generating enough operating revenue to cover operating expenses, financing costs, and the provision for loan losses. Operational self-sufficiency thus indicates whether or not enough revenue has been earned to cover the MFI's direct costs, excluding the (adjusted) cost of capital but including any actual financing costs incurred.

$$\text{Operational Self - Sufficiency} = \frac{\text{Operating Income}}{\text{Operating expense} + \text{Financing costs} + \text{provision for loan loss}}$$

## Leverage

Leverage refers to the extent to which an MFI borrows money relative to its amount of equity. Capital also serves as a base for borrowing. Two common sources from which MFIs borrow funds (leverage their capital base) are bank loans (commercial or central banks) and client deposits. An MFI's leverage is measured by calculating its debt to equity ratio. The debt to equity ratio states how much debt an MFI has relative to its equity Ledgerwood, (1999).

$$\text{Leverage (Debt Equity Ratio)} = \frac{\text{Debt}}{\text{Equity}}$$

As Bayeh cited, Kyereboah (2007) found that highly leveraged microfinance institutions have higher ability to deal with moral hazards and adverse selection than their counterparts with lower leverage ratios. As he also cited Ganka (2010), it states although how the capital has been structured affects the financial sustainability, having different sources of capital do not improve financial sustainability. He also mentioned that Ganka also identified that equity is a relatively cheaper source of financing and, therefore, improves financial sustainability.

### 2.2.5 Efficiency

According to Katsushi.*et.al* (2011), the major indicator used for measuring the financial performance of MFIs is efficiency. Efficiency of MFIs is measured by the share of operating expense to gross loan portfolio in most cases. The ratio provides a broad measure of efficiency as it assesses both administrative and personnel expense with lower values indicating more efficient operations,

As Bayeh (2012) explained, 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. This involves cost minimization and income maximization at a given level of operation, and it has an enduring impact on financial sustainability of microfinance institutions. Thus, efficiency can be measured by its productivity (for instance, number of borrowers per staff) and cost management (for instance, cost per borrower) dimensions.

Efficiency ratios measure the cost of providing services (loans) to generate revenue. These are referred to as operating costs and should include neither financing costs nor loan loss provisions. Total operating costs can be stated as a percentage of three amounts to measure the efficiency of the MFI: the average portfolio outstanding (or average performing assets or total assets—if an MFI is licensed to mobilize deposits, it is appropriate to measure operating costs against total assets; if the MFI only provides credit services, operating costs are primarily related to the administering of the loan portfolio and hence should be measured against the average portfolio outstanding) per unit of currency lent, or per loan made.

Ledgerwood (1999) showed that operating costs can also be broken down to measure the efficiency of specific cost elements such as salaries and benefits, occupational expenses such as rent and utilities, or travel. Since salaries and benefits generally make up the largest portion of operating costs, the ratio of salaries and benefits to the average portfolio

outstanding is often calculated, as well as the average credit officer salary with the country's per capita GDP. Some of the ratios that measure efficiency are explained hereunder.

## Operating cost ratio

It allows a quick comparison between an MFI's 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.

CGAP (2009) presented that operating cost ratio is the most commonly used indicator of efficiency expresses nonfinancial expenses as a percentage of the gross loan portfolio:

$$\text{Operating expense ratio (OER)} = \frac{\text{personnel \& Administrative cost}}{\text{Perio – Average Loan Portfolio}}$$

Christen *et.al* (1995), explained that successful MFIs tend to have operating cost ratios of between 13 and 21 percent of their average loan portfolios and between 5 and 16 percent of their average total assets. The following are components to determine the ratio.

## CostperClient / Loan Made

Cost per loan provides an indication of the cost of providing loans based on the number of loans made. It is difficult to compare efficiency ratios among MFIs because the average loan size and loan term are so significant in these calculations.

$$\text{Cost per loan} = \frac{\text{Operating costs for the period}}{\text{Total number of loans in the period}}$$

**Table 1: Summary of Financial performanceMeasurements: Variables**

Financia l perform anceIndic ators	Variables	Definition	Measurement
<i>Breadth of Outreach</i>	Number of borrowers	the number of poor loan clients served by microfinance institutions.	Number of borrowers with loans outstanding, adjusted for standardized write-offs

	Gross Loan Portfolio (GLP)	Gross Loan Portfolio, adjusted for standardized write-offs	Gross Loan Portfolio, adjusted for standardized write-offs
<i>Depth of Outreach</i>	Average loan balance per borrower	It is the adjusted gross loan per adjusted number of active borrowers	Adjusted Gross Loan Portfolio/ Adjusted Number of Active Borrowers
	Average loan balance per depositor per GNI per capita	Is the average outstanding balance per client or account as a proportion of Gross National Income per capita	Adjusted Average Loan Balance per Borrower/ GNI per Capita
	Percent of female Borrowers	The extent of gender composition of women clients or proportion of women from total loan clients.	Number of active women borrowers/ Adjusted Number of Active Borrowers
<i>Portfolio Quality</i>	Portfolio at risk $\geq 30$ days	Is the outstanding balance of all loans that have an amount overdue	Outstanding balance, portfolio overdue > 30 Days + restructured portfolio/ Adjusted Gross Loan Portfolio
	Loan loss rate	If a loan that was previously written off is recovered	(Adjusted Write-offs - Value of Loans Recovered)/ Adjusted Average Gross Loan Portfolio
<i>Financial Sustainability and Profitability</i>	Return on assets	measures and tracks MFIs' ability to generate income based on its assets	(Adjusted Net Operating Income - Taxes)/ Adjusted Average Total Assets
	Return on equity	it measures the return on funds that are owned by the MFI	(Adjusted Net Operating Income - Taxes)/ Adjusted Average Total Equity
	Operational self sufficiency	MFIs generating enough operating revenue to cover operating expenses, financing	Financial Revenue/ (Financial Expense + Impairment Losses on Loans + Operating Expense)

		costs, and the provision for loan losses.	
<i>Efficiency</i>	Operating expense/ GLP ratio	comparison between an MFI's portfolio yield with its personnel and administrative expenses—how much it earns on loans versus how much it spends to make them	Operating expense/gross Loan Portfolio
	Cost per borrower	the cost of providing loans based on the number of loans made	Adjusted Operating Expense/ Adjusted Average Number of Active Borrowers
<i>Productivity</i>	Borrowers per staff member	Measures the number of borrowers that got service per a staff member.	Adjusted Number of Active Borrowers/ Number of Personnel
<i>Capital Structure &amp; Asset Allocation</i>	Debt Equity ratio	It measures to the extent to which an MFI borrows money relative to its amount of equity.	Total Liability/Total Equity
	Gross Loan Portfolio to Total Asset ratio	It measures the portion of loan to the total asset the MFI owns.	Adjusted Gross Loan Portfolio/ Adjusted Total Assets

Source: Own summary from the literature review

## 2.3 Empirical Review of Studies Conducted on the financial performance of MFIs

There are some studies conducted on the financial performance and related issues of MFIs operated in Ethiopia. Some of the studies, which are found more relevant to this particular study, are reviewed as follows.

Relatively recent research was conducted by Letenah (2009) on Financial performance analysis of sample MFIs in Ethiopia. The study has tried to review various criteria by comparing with MBB bench mark and for some relative ratios comparison among them. The researcher found data from online only for 16 MFIs from the MIX Market website. For data analysis, he has used one sample t test, one way ANOVA with Scheffe Post Hoc Comparison tests, Kruskal-Wallis test and Pearson correlation coefficients.

The research concluded that Ethiopian MFIs in general are poor performers on depth of outreach. They are not reaching the poorest of the poor. It was noted that the MFIs are also poor in terms of the ratio of GLP to assets, allocating a lower proportion of their total assets in to loans. They are also not using their debt capacity properly. The large and smaller MFIs are allocating more loan loss provision expense than the industry average and the related PAR is high for these MFIs. All the MFIs are good at breath of outreach, cost management, efficiency and productivity. They also charge low interest rates. The profitability and sustainability of the MFI depend on their size. From a simple correlation analysis it is found that there is a tradeoff between serving the poor and being operationally self-sufficient. MF age correlates positively with efficiency, productivity, the use debt financing (commercialization) and OSS. It is also found that the use of debt financing makes firms more efficient and productive.

The study conducted by Adino (2007) Outreach and Sustainability of the Amhara Credit and Saving Institution (ACSI), Ethiopia by using both primary and secondary data the operational and the audited financial reports for the period 2001 to 2005. The field survey was conducted with a sample size of 118 clients selected randomly from two sub branch offices and the descriptive statistics was analyzed using SPSS. The study showed that ACSI has covered 77% of the Amhara region in its operation by the end of 2005. It served more than half a million clients. Over 1.6 million loans had been disbursed worth Birr 1.5 billion. ACSI financed more than half of its portfolio from savings in 2005. By the end of 2005, the institution was operationally and financially self-sufficient at 119.9% and 115.3%

respectively. ACSI is among a few microfinance institutions which are able to achieve the highest efficiency at the lowest cost per borrower. The operating cost per Birr lent was as low as five cents in 2005. ACSI has a high portfolio quality. Loans infected with delinquency virus account only 1.9% of the portfolio in 2005. The repayment rate was at average 98.8% over the five year period. Such a remarkable financial performanceshows the attainment of the twin targets of institutional sustainability and serving the poor who are excluded from banking services.

Another study conducted by Befekadu (2007) entitled outreach and financialperformanceanalysis of microfinance institutions in Ethiopia. It aims to assess the financial performanceof micro finance institutions in Ethiopia from different angles using data obtained from primary and secondary sources. Both secondary and primary data (obtained from questionnaire distributed to representative sample MFIs) has been employed in the study.

The study finds that the industry's outreach rise in the period from 2003 to 2007 on average by 22. 9%. It identified that while MFIs reach the very poor; their reach to the disadvantages particularly to women is limited (38.4 Percent). From financial sustainability angle, it finds that MFIs are operational sustainable measured by return on asset and return on equity and the industry's profit financial performanceis improving over time. Similarly, using dependency ratio and Non-performing Loan (NPLs) to loan outstanding ratio proxies the study also finds that MFIs are financial sustainable. Finally, it finds no evidence of trade-off between outreach and financial sustainability for Ethiopian case, rather positive correlation was observed between them.

Bayeh (2007) studied on the Financial Sustainability of Microfinance Institutions (MFIs) in Ethiopia, which aimed at identifying factors affecting financial sustainability of MFIs in Ethiopia. The study followed a quantitative research approach using a balanced panel data set of 126 observations from 14 MFIs over the period 2002-2010. The researcher the researcher used panel data model which is deemed to have advantages over cross section and time series data methodology.

The researcher concluded that microfinance breadth of outreach, depth of outreach; dependency ratio and cost per borrower affect the financial sustainability of microfinance institutions in Ethiopia. However, the microfinance capital structure and staff productivity have insignificant impact on financial sustainability of MFIs in Ethiopia for the study periods.

Ebisa *et.al* (2012) did a research on the topic filling the breach: Microfinance with the objective to assess the financial performance and challenges of micro finance institutions. Relevant data for the study were based on secondary data from different Microfinance Institutions currently operating in the country. The method of analysis used in the study is descriptive statistics and linear regression methods.

The researchers conclude that Microfinance institutions are decisive way outs from the vicious circle of poverty particularly for the rural and urban poor segment of the society especially in a country like Ethiopia where many people live barely below the absolute poverty line. The micro financing industry of Ethiopia is escalating in the face of the growing deep concerns for inflation and low interest rate in the microfinance industry affecting the financial health and viability of MFIs. The National Bank of Ethiopia though supporting the industry it needs to smooth out the regulations and supervisions. For instance, the regulations requiring the microfinance institutions to operate in a tightened manner particularly their capital requirements. On the other hand, upgrading of the microfinance institutions' scale of operation such as graduating to the level of banking institution should be backed by a strong regulatory frame work from the National Bank of Ethiopia.

Tilahun and Dereje (2012) conducted a research on the topic the financial performance and sustainability of microfinance institutions during the current financial crisis: The case of Amhara Credit and Saving Institution (ACSI) in Ethiopia. The objective of the research is to assess the financial performance and sustainability of Ethiopian MFIs during the current financial crisis with particular reference to Amhara Credit and Saving Institution (ACSI), the largest MFI in the country. The study employed a descriptive research design. The data is quantitative and obtained from the MIX market website. For data analysis, descriptive statistics such as percentages and graph are used.

The researchers concluded that there was a negative shift in the financial performance indicators particularly in the year 2009. The gross loan portfolio has declined by 15.73% in the year 2009. As a result a decline in ROA and ROE had occurred due to lost financial revenue. The portfolio at risk rose during 2008 and 2009 indicating deterioration of portfolio quality. The number of active borrowers (outreach) declined in the year 2009 by 4.37%. However, there was an increase in number of staff members by 5.48% in the same year. Thus, the firm's productivity was poor during 2009.

Katsushi *et.al* (2011) conducted a research on Financial performance of Microfinance Institutions Macroeconomic and Institutional perspective. The objective of the study is to investigate the effect of both institutional and the macro economy on the financial performance of MFIs drawing upon the Microfinance Information Exchange (MIX) as well as cross country data macro economy, finance and institutions. The researchers used models three stage least square (3SLS) fixed effect vectors decomposition (FVED) to take account of the indigeneity of key explanatory variables.

The researchers conclude that institutional factors affect MFIs' financial performance, in particular, profitability operational expense and portfolio quality. They also found that macroeconomic and financial factors such as GDP and share of domestic credit to GDP, have positive impacts on MFIs' financial performances such as profitability, operating expense ratio and portfolio quality

Letenah *et.al* (2010) studied on Determinants of Sustainability and Outreach of Ethiopian microfinance Institutions: The case of Operational characteristics of Microfinance Institutions. The researchers collected data from 15 MFIs for the year 2003-2007 was taken from Association of Ethiopian Microfinance Institutions (AEMFI) annual reports. They used Linear Panel data models for the analysis.

The result of the study reveals that there is a clear tradeoff in serving the poor clients and being financially self-sufficient. They also found that MFIs that have a poverty focus (MFIs with small average loan size) charge high interest rate, have high labor cost to asset ratio and are small in size. The commercially oriented MFIs (large average loan size) charge lower interest rate and are large in size.

Gashaw (2014) conducted a research on Loan Outreach to the Poor and the Quest for Financial Viability on Microfinance Institutions in Ethiopia, Kenya and Uganda. The objective of the research contextualizes microfinance depth-of-outreach and financial viability issues in three countries; analyses depth of loan outreach and financial viability nexus; and quantifies the path from depth to viability. The methodology is Hausman-Taylor Instrumental Variable Technique (H-T) and Generalized Structural Equation Model (GSEM) are employed on unbalanced panel dataset of 31 MFIs (2003-to-2012) sampled from the three countries.

The researcher found out that Operating-Expense-Per-Loan-Portfolio and Debt-to-Equity-Ratio relate inversely with viability while 'Real-Yield' relates directly. The GSEM revealed positive association between lending to the poor and size of operating expenses, which indirectly hampers viability. Support to MFIs targeted to ensuring efficiency through reduced operational costs can reinforce a complementary outreach-viability nexus otherwise, tradeoff would be inevitable.

## 2.4 Summary of Empirical Review and knowledge gap

From the above empirical reviews, the researcher identified the knowledge gaps and summarized as follows.

The study conducted by Adino (2007) dealt on financial performance of outreach and sustainability by considering some financial performance indicators such as: number of borrowers, gross loan breadth of outreach, sustainability and efficiency for one specific MFI, ACSI. Thus the study was limited to consider other financial performance indicators like productivity, profitability, and portfolio quality capital structure and asset allocation by taking in to account for different MFIs.

Befekadu (2007) study conducted on outreach and financial performance of MFIs, which the financial performance assessment was mainly focused on outreach to the poor and their financial sustainability. The study was not consider other financial performance indicators like portfolio quality, productivity, efficiency, capital structure and other related financial performance indicators in comprehensive way.

Ebsa *et.al* (2012) to assess the financial performance and challenges of MFIs. And the financial performance assessment part covers few areas of indicators mainly of breadth of outreach: number of clients and the amount of loan grant to borrowers. However, other financial performance indicators such as profitability, sustainability, efficiency, and portfolio quality capital structure and asset allocation were not get attention.

Tilahun & Dereje (2012) conducted assessment of financial performance & sustainability of MFIs by considering one MFI: ACSI specifically at financial crisis period. And this study was restricted on the crisis time for one MFI.

Katushi. *Et.al*(2011)deals on the effect of institutional and Macro economy on financial performanceon MFIs. Similarly Gashaw (2014) studied on the relation on Loan Outreach to the Poor and the Quest for Financial Viability on Microfinance Institutions in three countries. Both studies dealt on the relationship of variables and limited to see the performances of MFIs.

Therefore, by understanding the above mentioned gaps, the researcher preferred to conduct financial performanceanalysis by comparing with the industry standards set by MIX Market bulletin comprehensively.

# **CHAPTER THREE**

## **Research Design and Methodology**

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This chapter sets to explain the research design and methodology. It specifically contains the research design, target population, sampling technique and sample size, methods of data collection, data analysis and techniques.

### **3.1 Research Design**

Research design is the arrangement of conditions and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure, Kothari (2004). For this particular study, a descriptive research design is employed. Descriptive financial analysis to describe, compare and classify the financial performance of Ethiopian MFIs. Descriptive information often provides a sound basis for tracking growth and comparing growth (Shajahan, 2004). Descriptive research is marked by prior formulation of a specific research questions.

### **3.2. Population Sample and Sampling Techniques**

As the study focuses on the financial performance of the MFIs in Ethiopia, the population of the study is the total number of MFIs operating in the country. According to the information obtained from the National Bank of Ethiopia (NBE, 2015), currently there are about 35 MFIs which are licensed and offering microfinance services.

#### **Sampling technique and sample size**

The sampling technique employed for this specific study was stratified sampling. Even though there are 35 MFIs operating in the country, there are only 24 Ethiopian MFIs in the MIX market website to which I have access to their data. And some of these MFIs were not submitting the data required by MIX regularly. Hence, it was selected 14 MFIs out of the 24 which have been consistently submitting the data to the MIX website. The sample size of this study is categorized based on the standard classification of MFIs in terms of size as to the Micro banking Bulletin (MBB) categorized. That is those having a Gross Loan Portfolio (GLP) of less than 2 million dollars are small, those having GLP between 2 and 8 million dollars are medium and those above 8 million dollar GLP are large. For the

purpose of this study, MFIs are categorized under small size are 4, under medium are 5 and under large are 5. In this regard, the categorization is made as follows

**Table 2: Sample of MFIs categorized by Size**

<b>Category</b>	<b>MFIs</b>	<b>Remark</b>
Large MFIs	Amhara Credit and Saving Institutions (ACSI),	Government backed; largest MFI; and works in Amhara and Addis Ababa
	Dedebit Credit and Saving Institution (DECSI)	Government backed; works in Tigray region and Addis Ababa
	Addis Credit and Saving Institution (ADCSI),	Government backed; works in Addis Ababa
	Oromia Credit and Saving Share Company (OCSSCO)	Government backed; works in Oromia region
	Omo MFIs	Government backed MFI; works in the SNNP region
Medium MFIs	BusaGonofaa (BG),	Works on Oromia region
	Poverty Eradication and Community Empowerment (PEACE),	Initiated by NGO Works in three region
	Specialized Financial and Promotional Institution (SFPI),	Focuses urban based businesses
	WASSASSA MFI	Work in Oromia region
	Vision Fund MFI	Formerly called wisdom MFI
Small MFIs	Metemamen,	Works in different regions
	Gasha,	
	Africa Village Financial Service (AVFS),	Works in Addis Ababa and Oromia region
	Eshet MFI	Initiated by a local NGO; works in Oromia region

### 3.3 Sources of Data and Type

The data used for this specific study is purely secondary taken from the MIX Market Inc. Website ([www.themixmarket.com](http://www.themixmarket.com)). The MIX Market is a global non-profit company that works to support the growth and development of a healthy microfinance sector. Although some MFIs have data since 2009, the data was irregular as there is missing of data. Due to the

missing data by most MFIs, the data reported from 2003 onwards is relatively consistent; except for the year 2010 majority of selected MFIs did not submit their data. The researcher has used all the data available till 2010. For the data that have missing points, it is left as it is because an averaging SPSS will take care of the missed data (Morina, 2013).

The data were down-loaded from the mentioned web site and analyzed. The web site provides the MIX market standard bench mark and also provides the detail data for the selected sample MFIs based on the criteria required for this study. As per the researcher, the standard bench mark issued by MBB is only up to 2010, no recent standard bench mark wasn't uploaded and unable to find latest standard after 2010 on the website of the MIX Market. Therefore for the sake of getting consistent data to do reasonable and fair computation against the bench mark issued close to the period, the researcher used the 2010 standard and the data for selected MFIs from 2003 to 2010 to analyzing of the MFIs performance.

### **3.4 Data Analysis**

For data analysis the researcher has used one sample t tests, for comparing each category of MFIs with the MBB benchmark, ANOVA test for comparing each category of MFIs. For conducting the t test normality of data was checked using Kolmogorov-Smirnova and Shapiro-Wilk test. The test is run for each category of MFIs: large, medium and small sized MFIs.

For the ANOVA, the assumption of normality and homogeneity of variance are checked at the total data set including the large, mid-sized and small MFIs. And all was found normal.

## **CHAPTER FOUR**

### **Result and Discussion**

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The Micro Banking Bulletin (MBB) issued by the MIX Market set MFIs financial performance standards. The standard used for this study comparison purpose is the one which was set in 2010. The standard includes different parameters' benchmarks on the basis of age of the MFI, Charter type, the level of financial intermediation, lending methodology, outreach, profit status, region, scale, sustainability and target market. However, for this particular study, the researcher has used the scale (small, medium and Large) as a criteria to compare financial performance analysis as per the MBB bench mark.

The following discussion explains the various financial performance measures of the selected MFIs by comparing their financial performance with the MBB benchmark in each category of MFIs in terms of size. The details of the tests are also indicated in different tables and the annexes attached at the end of this research report.

#### **4. 1 Breadth of Outreach: Number of clients served**

As mentioned earlier in chapter 2, breadth of outreach is measured by number of borrowers and Gross Loan Portfolio (GLP). As indicated in the ensuing table, the research revealed that Ethiopian MFIs of all categories covered in this study (Small , Medium and Large MFIs) have large number of borrowers compared to the MBB bench mark. This means that based on this indicator (number of clients), the Ethiopian MFIs are performing well. The same result was indicated in Letenah's study.

When we analyze the level of financial performance among the different size of the sample MFIs, Large MFIs are performing better than others: Small and Medium MFIs. Because large MFIs are older than the two and this helps large MFIs develop customer relationships to maintain them and being preferred by new ones.

**Table 3:Result on Breadth of outreach**

<b>Breadth Outreach Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Large MFIs</b>				
Gross Loan Portfolio	54,765,681.91	82,543,145.83	-3.638	<b>0.001</b>
Number of active borrowers	311,701	72,070	6.907	<b>0.000</b>
<b>Medium</b>				
Gross Loan Portfolio	2,605,314	3,995,224	-4.153	<b>.000</b>
Number of active borrowers	22,883	13,222	3.918	<b>.000</b>
<b>Small</b>				
Gross Loan Portfolio	1,163,267	641,597	2.700	<b>.012</b>
Number of active borrowers	10977	3701	4.959	<b>.000</b>

**Note that bold signs. shows values significant at 5%**

Source: Spss computation based on data from MIX market website

Regarding Gross Loan Portfolio (GLP) performance Small size MFIs have greater portfolio compared to the industry average, whereas Large and Medium sized MFIs have less GLP compared to the industry average as indicated on Table 3. But Letenah (2009) was found that Large MFIs had more GLP value than the industry average. In this study especially Large MFIs have big difference from the industry bench mark. That is the bench mark is USD82,543,146 and the average is USD54,765,682 and it lowers by USD 27,777,464. This is probably large MFI provide big size of loan with long loan term for its clients, as borrowers stayed in the MFI, the loan size and loan term increased and this reduces the loan cycle and frequency, thus results that the loan fund will stay in the hands of borrowers for prolonged time which may have impact on loan size of Large MFIs. And small sized MFIs can provide small size of loan for large number of people and they perform better than the industry average. In general Ethiopian MFIs have poor financial performance in their GLP.

### **4.3 Depth of Outreach: Client poverty level**

Depth of outreach is measured by average loan size, average loan size per GNI per capita for cross country comparisons and the percentage of women borrowers. The lower value for the two variables, i.e. average loan size and average loan size per GNI per capita, indicates that MFIs are good at reaching the poor and a larger value for percentage of women borrowers indicate a good depth of outreach as women are considered to be poorer than men.

As indicated in the following table, the one sample t-test run on the sample MFIs shows that the sample MFIs are generally performing well in terms of average loan balance per borrower and average loan balance per GNI per capita. However, the MFIs are less performing in terms of percentage of women borrowers whereby the average women borrowers percentage for large, medium and small MFIs is computed to be 38.49% (versus 53.73% of MBB), 60.65% (versus 61.41% for the MBB), and 50.29% (versus 66.61% for the MBB), respectively. When we compare the financial performance of MFIs regarding the percent of women borrowers among the MFIs, the medium size MFIs are performing better than the other two and the medium size MFIs are almost in par with the MBB value.

**Table 4: Result of Depth of outreach indicators**

<b>Depth Outreach Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Large MFIs</b>				
Average loan balance per borrower	163.03	1177.70	-96.849	<b>0.000</b>
Average loan balance per depositor / GNI per capita	82.36	233.32	-2784.85	<b>0.000</b>
Percent of female borrowers	38.49	53.72	-5.122	<b>0.000</b>
<b>Medium MFIs</b>				
Average loan balance per borrower	110.28	616.26	-84.072	<b>0.000</b>
Average loan balance per depositor / GNI per capita	55.16	100.53	-12.545	<b>0.000</b>
Percent of female borrowers	60.65	61.41	-.270	.789
<b>Small MFIs</b>				
Average loan balance per borrower	102.38	538.07	-33.862	<b>.000</b>
Average loan balance per depositor / GNI per capita	53.26	59.38	-1.151	.261
Percent of female borrowers	50.29	66.61	3.743	<b>.001</b>

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market standard report*

In this regard, generally we can say that Ethiopian MFIs have good financial performance at reaching the poor as they have lower average loan size and average loan size per GNI per capita compared to the industry average. Mostly this is due to the fact that Ethiopia is one of the world poorest countries and has a large number of poor with the poverty level is high so that MFIs provided the intended aim to reach and serve a large number of poor.

## 4.4 Portfolio Quality

Portfolio quality is measured by portfolio at risk  $\geq$  30 days and Loan loss rate. The lower value for the two parameters is an indication that MFIs are maintaining good portfolio quality. As presented in the table, the medium size MFIs have lower values of portfolio at risk (PAR) compared to the industry average but Large and Small sized MFIs have higher values.

Large MFIs' average PAR was 8.57 and the industry average was 6.32 which is a big difference as indicated. This is an indication that Large and Small MFIs need to give attention to manage their portfolio risk.

**Table 5: Result of Portfolio quality**

<b>Portfolio Quality Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Large MFIs</b>				
Portfolio at risk $\geq$ 30 days	8.57	6.32	0.913	0.370
Loan loss rate	.1064	1.97	-49.479	<b>0.000</b>
<b>Medium MFIs</b>				
Portfolio at risk $\geq$ 30 days	3.17	5.60	-5.670	<b>.000</b>
Loan loss rate	1.39	2.70	-2.683	<b>.011</b>
<b>Small MFIs</b>				
Portfolio at risk $\geq$ 30 days	12.69%	11.41	.590	.561
Loan loss rate	.5627%	3.25	-3.754	<b>.001</b>

**Bold signs. Shows values significant at 5%**

Source: Spss Computation based on data from MIX market website

Regarding the loan loss rate, all MFIs under this study have lower loan loss rate than the industry average as shown above on Table 5. Particularly Small MFIs have an average of 0.563% whereas the industry standard is 3.25% which means that Small MFIs are best performers among the category as the difference is big. This was due to the MFIs are better in providing their loan because they might have good screening mechanism and good credit management practices or stringent credit policy. We can say that Ethiopia's MFIs are in good condition of their loan loss management.

## 4.5 Financial Sustainability and Profitability

As explained earlier in chapter 2, financial sustainability and profitability of MFIs is measured by the Return on Asset (ROA), Return on Equity (ROE), and operational self-sufficiency (OSS). The analysis on the indicators shows that all MFIs under this assessment have higher value of ROA and ROE compared to the industry average bench mark. This results from that MFIs are earning interest incomes as they charge higher interest rates from the loan they provided. There is also good saving mobilization from the community which helps the organization as source of fund for loan with small cost of capital. Regarding operational self-sufficiency (OSS), Large and Medium sized MFIs have greater value compared to the industry average while the small sized MFIs are at par with the industry average. This shows that the MFIs can cover their direct costs from the revenue they earned. Since MFIs are performing good in reaching the poor as they have higher number of borrowers than the MBB average Ethiopian MFIs are met their intended objective to help poor people who are financial constrained and vulnerable, with financial services. From these we can conclude that Ethiopia's MFIs are in good position of maintaining their profitability and sustainability.

**Table 6: Result of Financial sustainability and profitability Indicators**

<b>Financial sustainability/profitability Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Large MFIs</b>				
Return on assets	4.53%	-0.854	10.660	<b>0.000</b>
Return on equity	15.69%	-8.75	12.789	<b>0.000</b>
Operational self sufficiency	167.85%	109.33	7.426	<b>0.000</b>
<b>Medium MFIs</b>				
Return on assets	2.84%	-2.80	7.578	<b>.000</b>
Return on equity	4.70%	2.32	.629	.534
Operational self sufficiency	123.24%	101.16	4.024	<b>.000</b>
<b>SmallMFIs</b>				
Return on assets	-2.99%	-9.24	3.128	<b>.005</b>
Return on equity	-1.20%	-326.21	117.597	<b>.000</b>
Operational self sufficiency	94.05%	98.64	-3.754	<b>.001</b>

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market website*

## 4.6 Efficiency

Efficiency is measured in terms of operating expense to GLP ratio and cost per borrower. MFIs under this study have lower value of operating expense to GLP ratio compared to the industry benchmarks stated on the below table. Particularly medium sized have high difference (17.21 MFI and 187.11 MBB) followed by Small (27.66 MFI, 63.86 MBB) and Large with (5.85 MFI, 31.34MBB)..

Large and Small MFIs have lower value cost per borrower, where Large MFIs with 7.67 MFI and 303.24 MBB and Small MFIs with 18.95 MFIs and 362.32 MBB. However, Medium MFIs have higher value than the MBB benchmark. From these results it is concluded that Ethiopia's MFIs are efficient enough in their cost management. This is probably MFIs in Ethiopia are operated mostly in rural areas, costs like office rent is very low besides the major cost of MFIs is salary and it is lower compared to other countries.

**Table 7: Result of Efficiency Indicators**

Efficiency indicators	Mean	MBB	T	Sig. (2-tailed)
<b>Large MFIs</b>				
Operating expense/ GLPratio	5.85%	31.34	-51.346	<b>0.000</b>
Cost per borrower	7.67	303.24	-718.814	<b>0.000</b>
<b>MediumMFIs</b>				
Operating expense/ GLPratio	17.21	187.11	-195.013	<b>.000</b>
Cost per borrower	165.88	143.51	2.519	<b>.017</b>
<b>SmallMFIs</b>				
Operating expense/ GLPratio	27.66%	63.86	-4.731	<b>.000</b>
Cost per borrower	18.95	362.32	-165.726	<b>.000</b>

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market website*

## 4.7 Productivity

Productivity is measured in terms of number of borrowers per staff member. All MFIs under this assessment have higher value of borrower per staff member compared to the industry average benchmark as indicated on the following table. This is an indication that all MFIs are productive in the sense that large number of borrowers are served with a staff. However this may show that the quality of service rendered to the borrower is lower as a staff provides service for large number of borrower. Therefore care need to give to improve customer service in adjacent to the number of borrowers.

**Table 8: Result of Productivity Indicators using one - sample t test**

*Large*

<b>Productivity Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
Borrowers per staff member	291.30	94.28	3.196	<b>0.003</b>
<i>Medium</i>				
Borrowers per staff member	165.88	143.51	2.519	<b>.017</b>
<i>Small</i>				
Borrowers per staff member	152.30	106.75	3.876	<b>.001</b>

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market standard report*

## 4.8 Capital structure and asset allocation

As mentioned in Chapter 2, Capital structure of MFIs is measured by Debt to equity ratio (leverage). It is indicated also highly leveraged microfinance institutions have higher ability to deal with moral hazards and adverse selection than their counterparts with lower leverage ratios. All MFIs have a lower debt equity ratio than the industry average. The result shows that MFIs are not properly levered when compared to their industry standard. So we can say that Ethiopia's MFIs are not properly using their debt capacity. This might be due to the fear of commercial sources of capital such as commercial banks in lending to MFIs or due to leverage limits imposed by the National Bank of Ethiopia.

**Table 9: Result of Capital structure Indicators using one - sample t test**

<b>Capital structure and Asset allocation indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>T</b>	<b>Sig. (2-tailed)</b>
<i>Large MFIs</i>				
Debt to equity ratio	2.70	5.23	-6.708	0.000
Gross loan portfolio to total assets	74.40%	66.82	6.356	0.000
<i>Medium MFIs</i>				
Debt to equity ratio	1.44	2.32	-4.427	.000
Gross loan portfolio to total assets	73.89%	63.50	5.134	.000
<i>Small MFIs</i>				
Debt to equity ratio	1.28	6.87	-27.351	.000
Gross loan portfolio to total assets	68.46%	-49.77	40.962	.000

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market website*

All MFIs under this study have greater value of GLP to asset compared to the industry average. This indicates they are productively using their assets to generate more interest income and a higher proportion of loan portfolios in the total asset which is good for financial sustainability as interest are earned from loans and providing loans to the poor for better outreach. These results show that MFIs are performing well in their capital structure and asset allocation.

## 4.9 Cost management

Cost management is measured in terms of total expense ratio, operating expense and financial expense ratio. For this study the result shows as per the following table is total expense ratio financial expense and operating expense ratio of MFIs under this consideration have lower value than the industry average. This is an indication of better performance. This indicates good cost management practices are followed by MFIs.

**Table 10: Result of Cost management Indicators using one - sample t test**

<b>Cost Management indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Large MFIs</b>				
Financial expense/ assets	1.88	4.90	-19.065	<b>0.000</b>
Operating expense/ assets	4.24	20.06	-47.588	<b>0.000</b>
Total expense/ assets	6.73	27.53	-69.295	<b>0.000</b>
<b>Medium MFIS</b>				
Financial expense/ assets	12.68	23.90	-13.832	<b>.000</b>
Operating expense/ assets	18.06	38.97	-14.833	<b>.000</b>
Total expense/ assets	16.15	30.56	-16.370	<b>.000</b>
<b>Small MFIS</b>				
Financial expense/ assets	2.43	7.21	-8.225	<b>.000</b>
Operating expense/ assets	14.48	33.60	-11.326	<b>.000</b>
Total expense/ assets	19.43	41.83	-15.385	<b>.000</b>

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market website*

## 4.10 Revenue performance

From the result shown below Large MFIs have better revenue to Asset ratio compared to the standard whereas Medium and Small MFIs have lower value of revenue to asset ratio. The result of yield on gross portfolio is much lower compared to the industry average for all MFIs

considered to this particular study. From the result the MFIs are not performing well in revenue generation. This is due to the fact that most MFIs mainly operate in rural and semi-urban areas, often in remote areas, where risks and transaction costs are very high even if MFIs lending interest rates (12 per cent to 24 per cent per year) are obviously higher than the formal market rate (7.5 percent to 14 per cent).

**Table 11: Result of Revenue performance Indicators using one - sample t test**

<i>Large</i>				
<b>Revenue performance Indicators</b>	<b>Mean</b>	<b>MBB</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
Financial revenue/ assets	11.2046%	27.05	38.960	0.000
Yield on gross portfolio	-1.16	29.12	-12.277	0.000
<i>Medium</i>				
Financial revenue/ assets	19.07	27.86	-10.399	.000
Yield on gross portfolio (real)	7.70	29.19	-9.165	.000
<i>Small</i>				
Financial revenue/ assets	16.44	33.18	-18.923	.000
Yield on gross portfolio	6.64	35.51	-13.617	.000

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market website*

## 4.11 Comparison among the Different Size of MFIs

The large size MFIs are better than other MFIs by debt equity ratio, return on asset, return on equity, loan loss provision, cost per borrower, total expense to asset ratio, efficiency and productivity. They are better in the use of commercial capital sources. Besides they are the leader in ROA, ROE and OSS. This is clearly the effect of size of MFIs on the profitability and sustainability of MFIs and the effect of economies of scale.

The midsized MFIs are better than the other MFIs in terms of percent of female borrower, financial revenue ratio and portfolio at risk ratio (PAR). Thus, serving large number of female seems to relate with low PAR, as female borrowers are good in returning loan on time than men.

The small sized MFIs are better than the other MFIs in terms of average loan size and average loan size per GNI. It is thought that small MFIs are serving more of female clients because loan to women borrowers are small in size as women considered poorer than men. Therefore Small MFIs are reaching the poor in better way than the large and medium sized ones.

**Table 12: Comparison Mean of MFIs using ANOVA for Mean Ranking**

Variables		Mean / Mean Ranks
Gross Loan Portfolio	Small	1163266.96
	Medium	2605314.19
	<b>Large</b>	<b>54765681.91</b>
Debt to equity ratio	Small	1.35
	Medium	1.38
	<b>Large</b>	<b>2.63</b>
Average loan balance per borrower	<b>Small</b>	<b>102.38</b>
	Medium	110.28
	Large	163.03
Average loan balance per depositor / GNI per capita	<b>Small</b>	<b>53.26</b>
	Medium	55.15
	Large	82.36%
Return on assets	Small	-2.99%
	Medium	2.84%
	<b>Large</b>	<b>4.53%</b>
Return on equity	Small	-1.20%
	Medium	4.70%
	<b>Large</b>	<b>15.69%</b>
Financial revenue/ assets	Small	16.44%
	<b>Medium</b>	<b>19.07%</b>
	Large	11.20%
Financial expense/ assets	Small	2.43%
	Medium	2.11%
	<b>Large</b>	<b>1.88%</b>
Operating expense/ assets	Small	14.48%
	Medium	12.68%
	<b>Large</b>	<b>4.24%</b>
Operating expense/ loan portfolio	Small	27.66%
	Medium	18.06%
	<b>Large</b>	<b>5.85%</b>
Cost per borrower	Small	18.95
	Medium	17.21
	<b>Large</b>	<b>7.67</b>
Borrowers per staff member	Small	152.30
	Medium	165.88
	<b>Large</b>	<b>291.30</b>
Portfolio at risk $\geq$ 30 days	Small	12.69%
	<b>Medium</b>	<b>3.17%</b>
	Large	8.57%
Number of active borrowers	Small	10,977
	Medium	22,883
	<b>Large</b>	<b>311,701</b>

Gross loan portfolio to total assets	Small	68.46%
	Medium	73.89%
	<b>Large</b>	<b>74.40%</b>
Loan loss rate	Small	0.56%
	Medium	1.39%
	<b>Large</b>	<b>0.11%</b>
Operational self sufficiency	Small	94.05%
	Medium	123.24%
	<b>Large</b>	<b>167.85%</b>
Percent of female borrowers	Small	50.29%
	<b>Medium</b>	<b>60.65%</b>
	Large	38.49%
Total expense/ assets	Small	19.43%
	Medium	16.15%
	<b>Large</b>	<b>6.73%</b>
Yield on gross portfolio	Small	6.64%
	<b>Medium</b>	<b>7.70%</b>
	Large	-1.16%

**Bold signs. Shows values significant at 5%**

*Source: Spss Computation based on data from MIX market standard report*

## **CHAPTER FIVE**

### **CONCLUSION, FINDING & RECOMMENDATION**

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#### **5.1 Conclusion**

- Ethiopian MFIs are allocating more proportion of asset to loans which has dual benefit as it helps to earn more interest revenue and to allocate the resource to more clients which helps for better outreach
- MFIs are generally performing well in terms of average loan balance per borrower and average loan balance per GNI per capita which is an indication for better depth of outreach. However, the MFIs are less performing in terms of percentage of women borrowers.
- Ethiopian MFIs are good performers on financial sustainability and profitability, efficiency and productivity
- Large and small MFIs are poor performers in serving women borrowers but medium sized have better financial performance as serving more women also relates with poverty alleviation mission indicated by low average loan size and NGO form of structure and less commercialization of the MF industry.
- All MFIs serve large number of borrowers than their industry average as breadth of outreach measured by number of borrowers. This is what should be encouraged.
- All MFIs are good at cost management as they have low expense ratios as compared to their industry benchmarks. Between them the large MFIs have best cost management strategy and the same is true in loan loss provision.

## 5.2 Finding

- Large and Small MFIs have higher PAR value than the Industry average which indicates that they are at risk especially the Large ones with a big difference from the Industry average.
- All MFIs are efficient as measured by operating expense to GLP and cost per borrower ratio and also productive measured by borrower per staff which is an encouraging performance.
- Although Large MFIs are better levered than Medium and Small MFIs, it is concluded that Ethiopian MFIs are not levered properly compared to the industry standard.

## 5.3 Recommendation

- Large and Medium sized MFIs are encouraged to reduce their average loansize in order to serve large poor borrowers especially of females.
- Large and Small sized MFIs need to give attention manage their portfolio risk by designing different mechanisms. And also advised to adjust their loan loss provision accordinglywith PAR.
- Large and small sized MFIs served lower percent of female borrowers compared to the industry average, therefore they need to give attention to increase the number of female borrowers as women are poorer than men and this helps to meet the objective of poverty alleviation by reaching more females.
- The researcher recommends further studies focused on advancing performance evaluation framework in the context of Ethiopian microfinance industry.

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### Annex 1: Large MFIs: ACSI, DECSI, ADECSI, OCSSCO, & OMO

Indicators	Mean	MBB	t	Sig. (2-tailed)
Gross Loan Portfolio	54765681.91	82543146	-3.638	<b>0.001</b>
Debt to equity ratio	2.699688	5.23	-6.708	<b>0.000</b>
Average loan balance per borrower	163.03	1177.70	-96.849	<b>0.000</b>
Average loan balance per depositor / GNI per capita	82.3597%	233.317	-27.848	<b>0.000</b>
Return on assets	4.5263%	-0.854	10.660	<b>0.000</b>
Return on equity	15.6863%	-8.75	12.789	<b>0.000</b>
Financial revenue/ assets	11.2046%	27.05	38.960	<b>0.000</b>
Financial expense/ assets	1.8783%	4.90	-19.065	<b>0.000</b>
Operating expense/ assets	4.2413%	20.06	-47.588	<b>0.000</b>
Operating expense/ loan portfolio	5.8480%	31.34	-51.346	<b>0.000</b>
Cost per borrower	7.67	303.24	-718.814	<b>0.000</b>
Borrowers per staff member	291.30	94.28	3.196	<b>0.003</b>
Portfolio at risk ≥ 30 days	8.5708%	6.32	0.913	0.370
Number of active borrowers	311701.35	72069.84	6.907	<b>0.000</b>
Gross loan portfolio to total assets	74.3966%	66.82	6.356	<b>0.000</b>
Loan loss rate	.1064%	1.97	-49.479	<b>0.000</b>
Operational self-sufficiency	167.8537%	109.33	7.426	<b>0.000</b>
Percent of female borrowers	38.4948%	53.72	-5.122	<b>0.000</b>
Total expense/ assets	6.7275%	27.53	-69.295	<b>0.000</b>
Yield on gross portfolio (real)	-1.1583%	29.12	-12.277	<b>0.000</b>

**Bold signs.**Shows values significant at 5%

### Annex 2: Medium MFIs: BussaGonofa, PEACE, SFPI, Wassasa, and vision fund

Indicators	Mean	MBB	t	Sig.(2-tailed)
Gross Loan Portfolio	2605314.19	3995224	-4.153	.000
Debt to equity ratio	1.444865	2.32	-4.427	.000
Average loan balance per borrower	110.28	616.26	-84.072	.000
Average loan balance per depositor / GNI per capita	55.1592%	100.53	-12.545	.000
Return on assets	2.8391%	-2.80	7.578	.000
Return on equity	4.6976%	2.32	.629	.534
Financial revenue/ assets	19.0670%	27.86	-10.399	.000
Financial expense/ assets	2.1085%	4.47	-15.349	.000
Operating expense/ assets	12.6782%	23.90	-13.832	.000
Operating expense/ loan portfolio	18.0570%	38.97	-14.833	.000
Cost per borrower	17.21	187.11	-195.013	.000
Borrowers per staff member	165.88	143.51	2.519	.017
Portfolio at risk &gt; 30 days	3.1674%	5.60	-5.670	.000
Number of active borrowers	22883.39	13222.27	3.918	.000
Gross loan portfolio to total assets	73.8856%	63.50	5.134	.000
Loan loss rate	1.3945%	2.70	-2.683	.011
Operational self-sufficiency	123.2403%	101.16	4.024	.000
Percent of female borrowers	60.6509%	61.41	-.270	.789

Total expense/ assets	16.1509%	30.56	-16.370	.000
Yield on gross portfolio (Real)	7.6959%	29.19	-9.165	.000

**Bold signs.Shows values significant at 5%**

### Annex 3: Small MFIs: Metemamen, Gasha, AVFS, andEshet

Indicators	Mean	MBB	t	Sig.(2-tailed)
Gross Loan Portfolio	1163266.96	641597	2.700	<b>.012</b>
Debt to equity ratio	1.2777	6.87	-27.351	<b>.000</b>
Average loan balance per borrower	102.38	538.07	-33.862	<b>.000</b>
Average loan balance per depositor / GNI per capita	53.2627%	59.38	-1.151	.261
Return on assets	-2.9887%	-9.24	3.128	<b>.005</b>
Return on equity	-1.1991%	-326.21	117.597	<b>.000</b>
Financial revenue/ assets	16.4404%	33.18	-18.923	<b>.000</b>
Financial expense/ assets	2.4309%	7.21	-8.225	<b>.000</b>
Operating expense/ assets	14.4804%	33.60	-11.326	<b>.000</b>
Operating expense/ loan portfolio	27.6635%	63.86	-4.731	<b>.000</b>
Cost per borrower	18.95	362.32	-165.726	<b>.000</b>
Borrowers per staff member	152.30	106.75	3.876	<b>.001</b>
Portfolio at risk &gt; 30 days	12.6895%	11.41	.590	.561
Number of active borrowers	10976.81	3701.16	4.959	<b>.000</b>
Gross loan portfolio to total assets	68.4619%	-49.77	40.962	<b>.000</b>
Loan loss rate	.5627%	3.25	-3.754	<b>.001</b>
Operational self-sufficiency	94.0539%	98.64	-3.754	<b>.001</b>
Percent of female borrowers	50.2852%	66.61	3.743	<b>.001</b>
Total expense/ assets	19.4300%	41.83	-15.385	<b>.000</b>
Yield on gross portfolio (real)	6.6396%	35.51	-13.617	<b>.000</b>

**Bold signs.Shows values significant at 5%**

### Annex 4 : One way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Debt to equity ratio	Between Groups	37.62	2	18.808	7.852	<b>.001</b>
	Within Groups	220.38	92	2.395		
	Total	258.00	94			
Average loan balance per borrower	Between Groups	69953.64	2	34976.821	11.769	<b>.000</b>
	Within Groups	276400.35	93	2972.047		
	Total	346353.99	95			
Average loan	Between Groups	16672.24	2	8336.122	11.811	<b>.000</b>

balance per depositor / GNI per capita	Within Groups	64933.80	92	705.802		
	Total	81606.04	94			
Return on assets	Between Groups	740.08	2	370.039	10.378	<b>.000</b>
	Within Groups	2745.63	77	35.658		
	Total	3485.71	79			
Return on equity	Between Groups	3492.63	2	1746.313	6.415	<b>.003</b>
	Within Groups	20961.95	77	272.233		
	Total	24454.58	79			
Financial revenue/ assets	Between Groups	866.60	2	433.299	25.749	<b>.000</b>
	Within Groups	1295.76	77	16.828		
	Total	2162.36	79			
Financial expense/ assets	Between Groups	3.62	2	1.808	.664	.518
	Within Groups	209.70	77	2.723		
	Total	213.31	79			
Operating expense/ assets	Between Groups	1458.92	2	729.459	25.555	<b>.000</b>
	Within Groups	2197.97	77	28.545		
	Total	3656.88	79			
Operating expense/ loan portfolio	Between Groups	5761.35	2	2880.674	7.051	<b>.002</b>
	Within Groups	31868.59	78	408.572		
	Total	37629.94	80			
Cost per borrower	Between Groups	1775.07	2	887.535	24.674	<b>.000</b>
	Within Groups	2697.80	75	35.971		
	Total	4472.87	77			
Borrowers per staff member	Between Groups	337717.32	2	168858.658	4.051	<b>.021</b>
	Within Groups	3459758.68	83	41683.840		
	Total	3797476.00	85			
Portfolio at risk $\geq$ 30 days	Between Groups	1258.90	2	629.449	8.151	<b>.001</b>
	Within Groups	6023.15	78	77.220		

	Total	7282.04	80			
Number of active borrowers	Between Groups	1,897,691,830,230	2	948,845,915,115	64.902	<b>.000</b>
	Within Groups	1,359,635,854,766	93	14,619,740,374		
	Total	3,257,327,684,997	95			
Gross loan portfolio to total assets	Between Groups	624.47	2	312.234	2.314	.105
	Within Groups	12413.56	92	134.930		
	Total	13038.03	94			
Loan loss rate	Between Groups	24.82	2	12.411	1.960	.148
	Within Groups	487.50	77	6.331		
	Total	512.32	79			
Operational self sufficiency	Between Groups	69946.55	2	34973.273	27.083	<b>.000</b>
	Within Groups	104599.17	81	1291.348		
	Total	174545.72	83			
Percent of female borrowers	Between Groups	7468.45	2	3734.227	12.490	<b>.000</b>
	Within Groups	23620.10	79	298.989		
	Total	31088.55	81			
Total expense/ assets	Between Groups	2094.48	2	1047.240	41.555	<b>.000</b>
	Within Groups	1940.49	77	25.201		
	Total	4034.97	79			
Yield on gross portfolio	Between Groups	974.70	2	487.348	3.557	.034
	Within Groups	9591.37	70	137.020		
	Total	10566.07	72			

**Bold signs. Shows values significant at 5%**

## Annex 5 : Normality Test

Tests of Normality							
	scale	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Borrowers per staff member	large	0.223	16	0.032	0.884	16	0.045
	medium	0.145	29	0.122	0.941	29	0.103
	small	0.115	21	.200*	0.98	21	0.924
Portfolio at risk > 30 days	large	0.259	16	0.005	0.806	16	0.003
	medium	0.15	29	0.096	0.91	29	0.017
	small	0.211	21	0.016	0.889	21	0.021
Number of active borrowers	large	0.092	16	.200*	0.97	16	0.839
	medium	0.149	29	0.101	0.927	29	0.046
	small	0.198	21	0.03	0.833	21	0.002
Gross loan portfolio to total assets	large	0.154	16	.200*	0.948	16	0.459
	medium	0.142	29	0.142	0.925	29	0.041
	small	0.164	21	0.147	0.889	21	0.021
Loan loss rate	large	0.298	16	0	0.744	16	0.001
	medium	0.309	29	0	0.78	29	0
	small	0.336	21	0	0.692	21	0
Operational self sufficiency	large	0.172	16	.200*	0.91	16	0.118
	medium	0.136	29	0.183	0.929	29	0.051
	small	0.112	21	.200*	0.975	21	0.835
Percent of female borrowers	large	0.209	16	0.06	0.917	16	0.153
	medium	0.128	29	.200*	0.932	29	0.06
	small	0.109	21	.200*	0.983	21	0.966
Total expense/ assets	large	0.133	16	.200*	0.958	16	0.624
	medium	0.131	29	.200*	0.914	29	0.022
	small	0.211	21	0.015	0.82	21	0.001
Yield on gross portfolio (real)	large	0.185	16	0.148	0.908	16	0.109
	medium	0.122	29	.200*	0.951	29	0.2
	small	0.213	21	0.014	0.885	21	0.018

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction