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Dynamics of Financing Structure & Financial Performance of Ethiopian Micro Banks (MFIs)

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Abstract
Studies indicates that the financing structure of Microfinance Institutions (MFIs) have significant impact on the performance of these organizations. Hence, studying the factors that drive the financial structure of these organizations is imperative. Although the financial structure of financial firms have been studied by some scholars, such types of studies are rare in the MFI sector. Thus the purpose of this study is to investigate the factors of financial structure in the Ethiopia industry and relate to the performance MFI. To accomplish the objective of the study a qualitative research design is employed. The researcher used data of 15 sample MFIs that fulfill the criteria of data availability from the NBE database covering the period of 2003–2009 and additional data is also obtained by interviewing key informants MFI industry. This includes finance managers of sample MFIs, financial analysts of AEMFI and supervisory authority of Ethiopian MFIs division in the NBE. The results show there exists positive and significant correlations between profitability and leverage, size of MFI, growth of MFI, the size of MFI and their growth rate. There could also be policies intended to encourage and creating conducive environment for MFIs to utilize debt as a viable source of finance in the era of increased commercialization of microfinance to meet their financial objective. Finally, focus should be placed on the relationship between ownership and governance structure and their effects on the capital structure on MFIs industry left for further studies to be conducted in the future.
Keywords: Factors, Financing Structure, MFI, Ethiopia

1. INTRODUCTION

In this chapter the background of the study, problem statement, and objectives of the study, research questions, scope of the study, need of the study, significance of the study and the organization of the study are presented as they serve as foundations for other chapters which ultimately build on this chapter.

1.1 Background of the study

Definitions of microfinance institutions (MFIs) proposed by some scholars and experts vary widely. Microfinance refers to provision of small scale financial services to low income or unbanked people (Hartarska, 2005). It is also about provision of "a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to the poor and low income households and their farm or non-farm micro-enterprises" (Mwenda and Muuka, 2004, p.145). Asian Development Bank (ADB) defines microfinance as the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households and their micro-enterprises (ADB, 2000).

Microfinance refers to broad range of financial services made available to low-income clients, particularly women. The services include loans, saving, insurance, and remittance. The clients of microfinance institutions (MFI), mostly belonging to low income households, have limited access to formal financial services.

MFIs operate in a niche market. They cater to the needs of those clients who are considered 'high-risk' by formal banks. Small households possess fluctuating income, very few assets and require very small loan size, high degree of close follow-up, business appraisal. Financial transaction with them calls for careful appraisal and close post-disbursement follow up. MFIs offer much needed financial service to the unorganized sector which otherwise depends on exploitative money lenders.

Development of MFIs in Ethiopia has a legal back up now. The Govt. proclamation (No.40/1996) paved the way for the establishment of microfinance institutions. Consequently, various MFIs have legally been registered and started delivering microfinance services (Wolday 2000). MFIs, spread across rural and urban areas, extend legitimate deposit services to the public with power to draw and accept drafts, and to manage funds for the microfinance business (Getaneh 2005).

The Ethiopian microfinance sector is unique. It is relatively young compared to the sector in the rest of Africa. The average age of Ethiopian MFIs is 10 years. It has witnessed rapid growth, has an aggressive drive to achieve scale, broad geographic coverage , dominance of government backed MFIs, focus on rural household , provision of both credit and saving services and emphasis on sustainability. On top of it, the sector is 'Ethiopian-Owned'.

Ethiopian microfinance is no longer confined to microcredit. Broad range of services like micro savings, micro insurance, remittance and micro pension are provided. The sector, thus, has progressed from microcredit

to microfinance and now to financial inclusion. For becoming a sustainable development tool, microfinance needs prudential regulation. The challenge remains for the regulator to find ways to regulate the sector with heterogeneous players with social mission and with plethora of operating models, size and scale.

As of 2012, 31 are MFIs registered with the National Bank of Ethiopia. They serve 2.7 million borrowers with portfolio of Birr 9.2 Billion (AEMFI,2012)

The factors of financing structure in MFIs are one of the most important debatable issues in the fields of corporate finance. A number of capital structure theories have been developed after the work of Modigliani and Miller (1958) to explain many matters as the relationship between capital structure and firm value. Given the contribution of microfinance in the development process, factors that affect their capital structure have been overlooked by empirical studies. The study tries to borrow the factors of financing structure that were studied under banking industry and examines to what extent these factors affect financial performance of MFI in Ethiopia.

Various studies examined factors that determine the financing structure of financial firms in general such as banks (Berger 2002, Benston et al 2003, Gropp and Heider 2009, Octavia and Brown 2008, Iwarere and Akinleye 2010). However, there is scanty literature in the financing structure of MFIs. But to mention a few (Kyereboah-Coleman, 2007; Bogan, 2008, Kar, K.A., 2011) addressed capital structure issues in this sector. Kyereboah-Coleman, A. (2007) investigated the impact of capital structure on performance of Ghanian MFIs for the period 1995-2004 for 52 MFIs. Bogan (2008) addressed capital structure issue in the global microfinance industry using a sample of top 300 MFIs for the year 2003.Kar K.Ashim (2011) studied the impact of capital structure on the performance of MFIs from an agency theory point of view using a panel data set of 782 in 92 countries for the period 2000-2007.

Despite an extensive empirical works that have been conducted on the topic for non-financial firms, little empirical is known in the financial firms sectors. A few research findings have focused on the determinants of capital structure of banking industry only. The financing structure of MFI is, however, still a relatively under explored area in the literature. Currently, there is no clear understanding, on how MFI choose their financing structure and what factors affect their financing by comparing it with financial performance of MFIs. In order to understand the financing structure of MFI their unique characteristics require separate study. The factors affecting of financing structure of MFI are undone in Ethiopia. This study addresses to fill this gap using a qualitative approach.

Therefore, more or less MFI industry is much related to the financial sector. As a starting point the determinants of financing structure of banking industry result would be taken to study the determinants of financing structure decisions of MFI. Additionally, a few literatures have provided evidence that are converged on a number of standard variables of financial firms that are reliably related to the financing structure of non-financial firms as reported by Gropp and Heider (2009). Especially, MFI would need to share some characteristics of nonfinancial firms. So this indicates there are common determinants of financing structure of MFI other than regulation that affect their financing decision.

The purpose of this study is to empirically examine determinants of financing structure 15 Ethiopian MFI that meet the criteria of data availability and to analyze using descriptive technique with a secondary data covering from 2003-2009.

1.2 Objectives of the Study

1.2.1 General Objective

The general objective of the study is to investigate the factors affecting of financing structure of Micro Finance Institutions in Ethiopia.

1.2.2 Specific Objectives

=> To identify the MFI specific characteristics that affects the financing structure decisions of Ethiopian MFIs
=> To assess the dynamics of financing structure decisions of Ethiopian MFIs by comparing it across MFIs, over time or using industry average and the factors that affect the leverage &performance of the MFIs industry.

1.3 Research Questions

- What MFIs specific variables that affect the financing structure of Ethiopian Micro Banks?
- How the dynamics of capital structure of Ethiopian MFIs look like from 2003-2009?
- Is the MFIs use of debt financing increasing overtime?
- Currently what are the factors hindering the MFI industry not to utilize debt financing?

2. LITERATURE REVIEW

2.1 Review of Dynamics in Financing Structure of Microfinance Industry in Ethiopia

In the Ethiopian context, MFIs are institutions that are licensed under the microfinance law (proclamation 40/96) to provide financial services to the unbanked community. Unlike other countries in Africa, they can mobilize

saving from day one of their registration by the National Bank of Ethiopia. The NBE is legally empowered to supervise the activities of MFIs. Currently, there are 28 microfinance institutions operating in the country. Most of them operate in both urban and rural areas. These institutions now boast over 1,000 branches and sub-branches. In contrast the traditional banks have merely 568 branches, which are primarily located in urban areas. The branch availability data therefore denotes the significant stance microfinance institutions have in providing financial services to the undeserved and their potential as an intermediary for related financial and social services, particularly in rural areas. However, the institutions are excluding millions of poor households from formal financial services, particularly in rural areas where over 80% of household reside. In fact, a recent Women's World Bank study estimates that only 1% of Ethiopian rural households maintain bank accounts.

Evolution of MFI source of finances, classification of Ethiopian MFI on the basis of their size, saving mobilization (voluntary and compulsory) trend of the industry, asset, capital and financial leverage trends of Ethiopia's MFIs for the year 2003-2010 are reviewed to give us an overview about the performance and dynamics of capital structure of the industry. The overall data on Ethiopian MFI is obtained from AEMFI and computed by the researcher.

Microfinance in Ethiopia began largely as a philanthropic effort or a quasi-philanthropic effort characterized by government mandated programs and non-governmental organizations (NGOs) whose supply of capital was principally derived from donors. These organizations have since transformed in to microfinance institutions that are seen today which are largely characterized by a donor funded equity base-exceptions include Aggar, PEACE and Wisdom who rely on a combination of quasi-commercial debt, paid-in capital, retained earnings and other equity accounts to fuel their growth.

Ethiopian microfinance institutions are classified into 3 peer groups relative to their size to allow for comparison. The bases of classification of the size of MFI as defined in the report analysis MFIs with less than or equal to 15,000 active borrowers are small MFIs (Metemamen, AVFS, Meklit and Gasha). MFIs with 15,001 to 50,000 active borrowers are medium MFIs (Buusaa, Eshet, PEACE, Wasasa, SFPI and Wisdom). MFIs with more than 50,000 active borrowers are categorized as large MFIs (ACSI, DECSI, OCSSCO, ADCSI and OMO) are of the sampled MFIs which are included in the category classifications. The report has shown that Ethiopian microfinance institutions industry has performed well despite the tumultuous events in the global financial markets, not to mention the global food crisis and the high inflationary pressures the country has experienced over the last two years.

Ethiopia's microfinance industry has shown steady growth trends over the last ten years that are marked by an industrial asset holding of Birr 8.6 billion as of fiscal year ending 2010 (refer total asset trend of Ethiopian MFIs attached at appendix section). However, the largest microfinance institutions (ACSI, DESCI, OCSSCO, OMO, ADSCI and Wisdom) completely dominate the sector's market share. Such market dominion is not unusual, existing studies indicate that the size distribution of microfinance institutions in developing countries is highly skewed, while outreach remains very limited-below 1% of the population in most countries. For example, according to one study conducted in Ethiopian microfinance sectors the two largest institutions namely ACSI and DESCI dominate 62% of the entire market share and if the remaining four institutions were included the market shrink by 93%. It worthy to note that the occurrence of such a highly skewed market is happening in a setting in which regional positioning prevails.

Savings can play a significant role in increasing levels of institutional sustainability and enhancing levels of outreach. The institutions were able to mobilize Birr 2.70 billion in total savings in the year 2010.

According to AEMFI the WWB report denotes leverage as one of the key indicators for measuring financial integration, since it reflects how successful a microfinance institution has been in accessing debt relative to its equity base. Leverage is also an indicator of how well an institution is maximizing its earnings, since for traditional company's debt is a cheaper source of capital than equity. Ethiopian microfinance institutions have not made the shift away from donor subsidies (donated equity and subsidized loans) to fully leverage commercial capital (commercial debt, deposits and equity investments). Consequently, commercial debt is a marginal portion of institutional funding structure; and although institutions have increased their deposits intermediation they have not fully maximized its potential. Moreover, the current regulatory environment constraints institutions from exploring the full range of available equity investment options. However, investors have recognized the potential of the microfinance sector, which is evident from Aggar's ability to fund its capital base solely through public shareholder investment.

According to a financing strategies report issued by the USAID, some microfinance institutions have successfully used development funding to leverage commercial finance. The report indicates that some institutions use grant from development agencies to guarantee commercial bank loans.

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Qualitative Research Design, Methodology and Method of Analysis

According to Nenty, J.H. (2009) for those research questions that were not convertible to hypothesis answers to

them must be sought through descriptive analyses of relevant data. These might involve the use of pie chart, histogram, trend analysis, graphs and in general descriptive analysis of the variables most relevant to the study. As the second objective of the study is intended to thoroughly study the dynamics of capital structure of Ethiopian MFI, the maximum effort has been exerted by the researcher to understand the issue at hand. The data for this approach requires the combination of primary and secondary sources so that the triangulation of the finding with quantitative approach is gained. To achieve this objective unstructured in depth interview with key informants in the sector has been performed.

The researcher has discussed with 10 key informants in the industry using unstructured in-depth interview method of data collection. The sampling technique used to select the key informants were using convenience sampling techniques in which the researcher judge for the MFI sector the key informants were the finance managers of the all the largest on the basis of convenience to the researcher and some medium MFI according to AEMFI classifications based on the size of Ethiopian MFI in to three (Largest, medium and Smallest). Due to their lack of experience the smallest category were excluded from the sample. Additionally, other stakeholders who are working collaborate with the institution are also involved such as the regulatory body (NBE) and AEMFI.

Accordingly, for the unstructured interview based on the convenience of the researcher the finance managers of ASCI, DESCI, OSCCO were interviewed because their head office were located in Addis from the largest category. OMO and DEDEBIT MFI were not reached because of budget limitations. From the medium institutions the WISDOM, ESHET and BUUSSAA GONOFAA finance managers were again convenient to the researcher to address from the second category. Besides, the supervisor directorate director of Ethiopian MFI of NBE and financial analyst of AEMFI were also the participants of the study as a major stakeholder of the industry. In general the researcher interviewed 10 key informants (4 finance managers from the largest MFI, 4 finance managers from the medium MFI category, 1 financial analyst from AEMFI, and 1 supervisory authority from the NBE).

Hence, in this regard the qualitative design the discourse analysis are reported for the results obtained by interviewing the key informants and with the help of graphs, trends, descriptive statistics related to proportions of Ethiopian MFIs sources of funding in general, the saving trend of Ethiopian MFIs, the debt-equity trend of each MFI versus the industry average and finally the major factors that are described by the interviewees are also reported.

3.2 Statistical Tools and Methods of Data Presentation

The researcher employed STATA version 11, and SPSS version 16 for the major two parts of the finding section namely correlational statistics and empirical result. The first section presents correlational analysis helps to measure the central tendency and dispersion among the factors. In the second section of the empirical result of the study are reported.

4. RESULTS AND DISCUSSION

4.1.2 CORRELATION ANALYSIS

This section discusses the correlation matrix, which reports the relationship among the various factors and the financing structure of the study.

A correlation analysis was performed in order to investigate the possible degree of collinearity among the factors. Correlation explains the dependence of one variable to other. When one variable are highly correlated they both express the same information. As depicted in Table 4.1 the correlation matrix result shows the relationship among the 7 factors of the study. The results show significant positive correlations are found between leverage and profitability, leverage and age of MFIs, leverage and MFIs ownership and negative correlations are found between leverage and tangibility, leverage and growth of MFI and finally leverage and business risk of MFI.

As the ownership variable is correlated with all the variables identified including the profitability of MFI with 10% level of significance, care should be taken on these highly correlated variables. Especially the high correlation coefficient that exists between the ownership of MFI and the size of MFI indicates the potential multicollinearity problems they have though it is not serious problem as per the benchmark requires the coefficient to exceed > 0.80 to state as a problem of multicollinearity which is not the case in here. To check the multicollinearity problem, the researcher also employed another statistical test known as VIF as it confirmed the absence of serious multicollinearity problem (refer in the following sections). For true estimation of the separate effect of the variables have on the leverage of MFI the researcher believed to separately regress their impacts independently.

The correlation matrix also shows the negative correlation tangibility of MFI with profitability of MFI, size of MFI, leverage of MFI, age of MFI and ownership of MFI with statistically significant at 5% level of significance for all the variables except the business risk of the MFI.

The high magnitude of the correlation coefficients between size and ownership of MFI indicates the presence of collinearity. The suggested rule of thumb is that if the pair-wise or zero-order correlation coefficient between two regressors is high, in excess of 0.8, then multicollinearity is a serious problem(Gujarati,2003). Thus in overall, the magnitude of the correlation coefficient indicates that multicollinearity is not a potential problem in the regression model (refer Table 4.1).

Table 4.1 Correlation Matrix for Capital Structure Factors

	DE	ROA	SZ	TGB	GRW	AG	OWN	CV
DE	1.0000							
ROA	0.2083* (0.0356)	1.0000						
SZ	0.3480* (0.0003)	0.3683* (0.0001)	1.0000					
TGB	-0.2831* (0.0039)	-0.3703* (0.0001)	-0.5588* (0.0000)	1.0000				
GRW	-0.0588 (0.5569)	0.1977* (0.0432)	0.2566* (0.0082)	-0.1500 (0.1267)	1.0000			
AG	0.2784* (0.0046)	0.3174* (0.0010)	0.6431* (0.0000)	-0.2542* (0.0089)	0.0872 (0.3766)	1.0000		
OWN	0.4309* (0.0000)	0.1701 (0.0828)	0.7932* (0.0000)	-0.4044* (0.0000)	0.2795* (0.0039)	0.4214* (0.0000)	1.0000	
CV	0.0616 (0.5384)	0.2741* (0.0047)	0.1989* (0.0419)	-0.1900 (0.0523)	0.1387 (0.1582)	0.0068 (0.9451)	0.1766 (0.0716)	1.0000

N.B Level of significance *refers statistically significant at 5%
Source: Author's Own Computation Using Stata Package 11

The results provided in Table 4.1above indicate the correlation analysis of financial structure of MFIs in Ethiopia indicates the existence of significant correlations among the explanatory variables. As it is observed from matrix there exists positive and significant correlations between profitability and leverage, size of MFI and leverage, size of MFI and profitability, growth of MFI and profitability of MFI, the size of MFI and their growth rate. The Age of MFI and their leverage, Profitability of MFI and age of MFI, the age of MFI and the size of MFI, the risk of MFI and their profitability, the size of MFI and the MFI risk are also positively correlated and it is statistically significant at 5% level of significance.

Surprisingly, the ownership of MFI is positively correlated with the leverage of MFI, the size of MFI, the growth of MFI and the age of MFI which is statistically significant at the same level of significance for all the variables mentioned at 1%. This indicates that the importance of this variable influencing the capital structure of these institutions that makes it difficult to observe the separate effect of these variables in the regression result.

4.2 Findings of Qualitative Analysis

In order to triangulate the empirical result of the previous study the researcher also employed a primary data sources as deemed necessary. To accomplish this task unstructured depth interview were conducted with key informants that are related with topic in the industry. Among these finance managers of the sampled MFI, financial analysts of AEMFI and directorate supervisor of MFI division of NBE are the major participants that were involved in the study. This qualitative analysis part mainly reports the findings from interview result thematically using discourse analysis. Besides trend analysis of the dynamics of capital structure of the sector are also descriptively analysed with secondary data obtained from AEMFI.

To understand and address the dynamics of capital structure of Ethiopian MFI which is the second objective of the study, the regulatory framework of Ethiopian MFIs in relation to their capital structure, sources of financing of Ethiopian MFI (proportions of equity capital, borrowing and savings), saving trend and debt equity ratio are descriptively analysed using graphs and time series (trend analysis) of Ethiopian MFI capital structure over time and industry average and finally summary of factors that affect debt financing in Ethiopian MFI are presented (reported) using discourse analysis in this section.

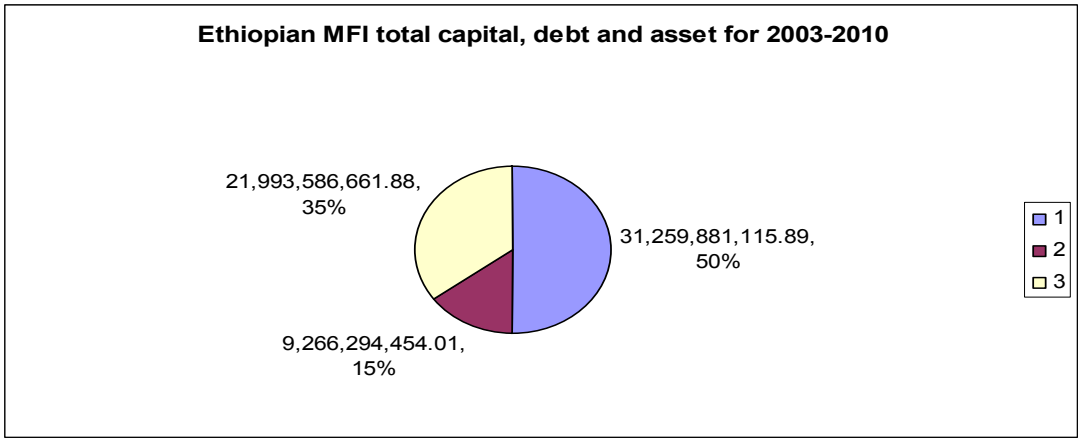
4.2.1 Proportion of Sources of Financing for Ethiopian MFI

Obviously microfinance institutions have two major sources of financing namely debt and equity. Mainly equity sources of financing that are exercised in Ethiopian MFI in general. These are classified as shareholder's capital, retained earnings and donated equity. The shareholder's capital consists of institutional investors and individual investors depending on the ownership structure of the MFI. In the government backed MFI, the regional governments and development agencies in the region who own share are the institutional investors. In the case of NGO driven MFI the mother NGO and the individual shareholders, not in real sense of owners rather for the sake of administration only, are the investors. There is contractual agreement between the NGO and the

nominal owners. In addition to the above two driven types of owners, currently there are also individual shareholders who are investing in MFI in real sense of ownership like that of the business.

The commercial funding liabilities ratio measures an institution's core liabilities (voluntary deposits and borrowings at commercial interest rates) against its gross loan portfolio, thereby depicting how an organization funds its portfolio (AEMFI, 2009). The data that is available for the industry is the composition of total asset and total capital of Ethiopian MFI industry. The remaining composition indicates the total debt of the industry. From the pie chart we observe that the equity capital of MFI is the largest source of Ethiopian Microfinance institutions. The highest proportions of sources of funding for the industry are obtained from equity capital (retained earnings, donated equity and shareholder's equity) which accounts an average of 50% of the total over the ten years. This followed by the total commercial borrowings which accounts 35% of the total funding for the industry over the period. The remaining proportions which accounts 15% of the total funding comes from both voluntary deposits and compulsory deposits.

Figure 4.1 Ethiopian MFIs Source of Funding Proportions



Source: Author's Own Using Excel

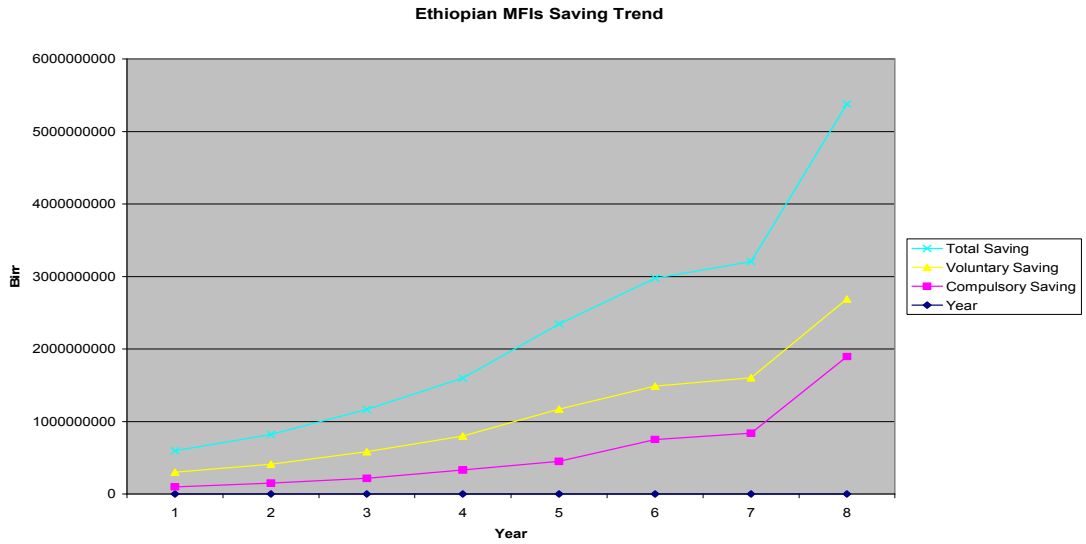
However, regardless of the equity source of financing that are available for the industry MFI in Ethiopia suffers from critical shortage of loanable funds in order to achieve their noble objective. To overcome this problem, the use of debt financing becomes crucial in the era of commercialization of MFI (transformation of MFI ownership from donor based (NGO) to business type). Therefore, filling the gap of loanable funds especially in case of deficit MFIs use debt financing and these days it is also customary in Ethiopia. The existing major debt financing sources are classified as short term debt and long term debt. Short-term debt in MFI consists of saving mobilizations and short term borrowings. The long-term debt demand is increasing from time to time by the MFIs however due to a number of factors they failed to satisfy their need of leverage. So the main purpose of this study is to address the factors affecting debt financing of Ethiopian MFIs.

Currently, there are three institutions that provide the commercial debt and guarantee for Ethiopian MFI industry on their respective criteria. These are Commercial Bank of Ethiopia (CBE), Rural Financial Intermediation Program (RUFIP) and International French Development Agency (IFAD). However, commercial debt that could be obtained from international finance organizations globally is missing in the country due to the foreign exchange transaction complexity and risk that would affect the operations of MFIs.

4.2.2 Ethiopian MFIs saving trend analysis

Though saving in Ethiopia is showing a low performance rate, now days the saving trend has been increasing over time. The performance of saving trend of Ethiopian MFI industry is depicted in trend analysis with the discussion of the factors that affect their performance.

Figure 4.2- Ethiopian MFIs voluntary, compulsory and total saving trends



Source: Author's Own Using Excel

The total saving is the combination of voluntary and compulsory savings. The 2010 voluntary saving represents Birr 1.897 billion in deposits and 70% of total savings. The institutions mobilized Birr 792 million in compulsory saving which represented 30% of total saving. The saving mobilizations take two forms that is voluntary saving and forced saving. Currently, 15% of savings have been practiced by MFI in Ethiopia. Which indicates low performance of the industry when compared to the banking sector which raises saving mobilizations up to 80%. Although deposits are the cheapest of funds for MFIs as they are easier to obtain than other forms of debt a number of factors attribute their performance.

Savings Product & MFIs Sustainability

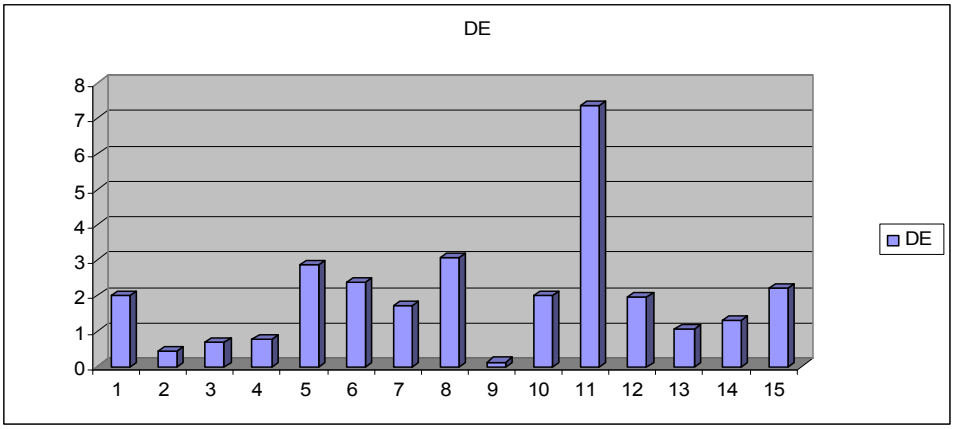
Savings deposits provide a relatively stable source of funds that could enable an MFI to become a sustainable. Savings is less expensive than commercial debt; it also improves the organization's client outreach by offering products and services that meet the need of a wide range of market segments. Savings mobilization increases the supply of internally generated funds that can be invested in housing, microenterprise and small business loans. Benefits of savings mobilizing small and micro savings can help MFIs to attain self-sustainability. Some of benefits of saving to MFIs are:

- Deposits can be an attractive source of funds as their financial costs are normally lower than funds from the interbank market.
- Withdrawals from small amounts on deposit do not expose the financial institution to liquidity risks such as larger savings would do.
- Small savings are also a more stable funding source, compared to bulk deposits from large clients whose single withdrawal would exert strain on MFI liquidity.
- Deposit-taking would put up strong governance system, as also in response to imposition by the regulator as well, to win the confidence of depositors and to avoid run (panic withdrawal of deposits by clients leading to abrupt liquidity crunch) on MFIs.

4.2.3 Trend Analysis of Ethiopian MFI Financing Structure

The second source of debt financing is the commercial debt (soft loans) that is obtained from commercial organizations at concessional rate. RUFIP provides long term loans for 7 years at the concessional rate and the institution extend loans at the rate of which enables to cover their costs and be profitable. Commercial banks also provide long term loans for 5 years. The IFAD is also another provider of long-term loans to Ethiopian MFI. The use of debt financing is highly beneficial as long as the MFI is managing its loans properly that means (forecasting cash flows to be paid as per the schedule) otherwise it may affect the business. The benefits of debt have a limit just like the tax advantage to be expected. Optimality of debt can be viewed from two view points on one hand when MFI is in deficit and the need to meet the objectives of outreach and on the other hand the failure to pay the debt (principal and interest) according to the schedule which leads to bankruptcy cost (liquidation of the MFI) otherwise.

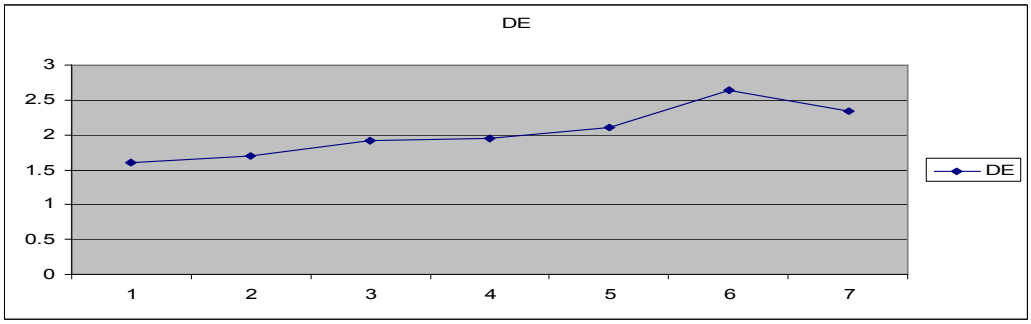
Figure 4.3– A trend of Ethiopian MFI mean debt equity ratio by firms



Source: Author's Own Using Excel

First of all, notice that in this bar chart there are 15 MFIs on the X axis corresponds to the midpoints of the interval of debt-equity ratios on the Y axis. On average Ethiopian Microfinance were able to obtain debt financing at amounts equivalent to 0.95 times of their equity. Besides including deposit the leverage ratio remain at 2.01 times. This means the sampled MFI uses debt financing 200% of their equity. However, these ratio values are very low compared to other industry reports which indicated 4-8 times as a target. Even it is very low compared to Basel Accord which allows up to 11 times. Exceptional MFI in the sample reached this requirement. This institution was maintaining until 7 times over the period. For example, notice the eleventh firm MFI (K) in this trend. The ninth firm in the bar chart has a mean of 0.127 debt-equity ratio over seven years. The lowest leverage ratio is 0.01 during the year 2003 and the highest leverage is 11.15 times during the year 2007.

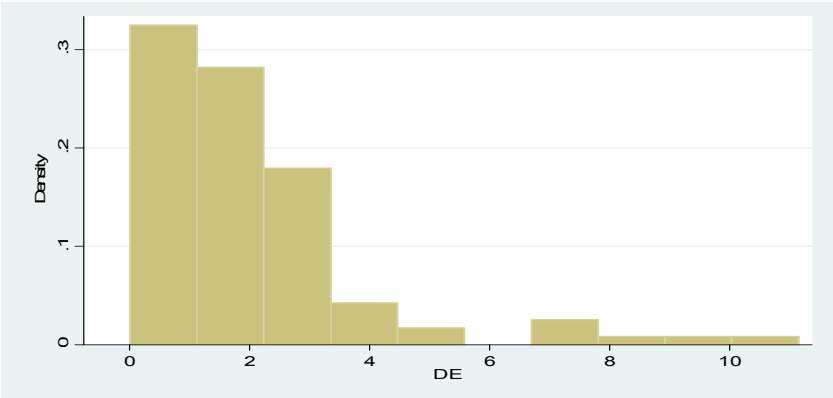
Figure 4.4- Ethiopian sampled MFI industry average debt equity ratio over time



Source: Author's Own Using Excel

The mean debt-equity ratio of the sampled MFI from 2003-2009 looks like the above trend. From this trend as we can see the debt-equity ratio were increasing from year to year of 1.6 value in 2003 to 2.64 in 2008 and decreased to 2.34 in 2009. Though the mean value of debt-equity ratio of the sampled MFI were showing increasing trend when this result is compared to other industry average report it implies that Ethiopian MFI debt financing is very low. The graphical analysis of Ethiopian MFI capital structure shows the industry is less geared over time when compared to other average industry gearing value of other parts of the world.

Figure 4.5- shows the distribution of debt –equity ratio of the sampled MFI



Source: Author's Own Using Excel

As the figure 4.5 above shows Ethiopian MFI mean debt equity ratio of the sampled MFI is densely populated between 0 and 2.5 as depicted in the histogram. More than 33% of the density area is populated by debt-equity value between 0 and 1. Again more than 30% of the density populated between 1 and 2. Less than 23% of the density of debt-equity ratio is scattered between 2 and 4. Finally the remaining density consists of debt-equity of greater than 4 and less than 11.5.

FINANCING STRUCTURE

MFIs in Ethiopia have come under regulation now making them eligible for commercial funding. All of them have access for taking public deposits from date of commencement of operation. Besides, their share holding pattern is amenable for equity participation.MFI liquidity and financial management have improved due to deposit mobilization resulting in overall profitability.

Most of Ethiopian MFIs started out as NGOs with entirely a social vision, funding operations with grants and concessional loans from donors, government, and international financial institutions that effectively serve as the primary sources of risk capital for the microfinance sector. The literature on microfinance in the rest of the world also devotes considerable attention to this process of "NGO transformation" as a life cycle model outlining the evolution of a microfinance institution (Helms, 2006). The life cycle theory posits that the sources of financing are linked to the stages of MFI development. Donor grants and "soft" loans comprise the majority of the funding in the formative stages of the organization. As the MFI matures, private debt capital becomes available but the debt structures have restrictive covenants and/or guarantees. In the last stage of MFI evolution, traditional equity financing becomes available (Fehr & Hishigsuren, 2004). Many MFIs also look to deposit financing and commercial debt as essential elements of funding future growth in the microfinance sector. Commercial debt financing is an important tool in MFI funding and management.

Debt financing is one of the most prevalent ways that funders support microfinance, representing more than half of all cross-border funding for microfinance. Easy debt availability may divert MFI attention away savings mobilization, which is not desirable. Debt is important for helping financial service providers diversify their funding mix, allowing them to better manage liquidity and address maturity mismatches.

Equity can be an important instrument in supporting savings mobilization. Development finance institutions have used equity investment to help microfinance banks/MFIs to transform themselves into regulated deposit-taking institution. Capital to be for at least medium term to help MFIs to mobilize savings. Investors' oversight of MFIs will ensure appropriate governance needed for savings-MFIs. Investors can bring in needed equity and debt to help financial service providers to meet minimum capital requirements. Investors can also prioritize savings-led institutions as investees, given their resilience to financial market fluctuations and their ability to better serve the needs of customers.

FINANCIAL PERFORMANCE

Financial performance, such as return on equity and return on assets, operational self-sufficiency and financial self-sufficiency tend to summarize performance in all areas of the MFIs. Poor portfolio quality affects profitability of MFIs. Profitability indicators are difficult to interpret as they are results of complex managerial factors. High return on equity says little about the reasons for the high profitability. All performance indicators, esp. profitability ones, may be misleading if looked at in isolation. To understand how an institution achieves its profits or incurs losses, we need to reckon the operational performance of the institution, say operational efficiency and portfolio quality. Measuring profitability precisely becomes complex as MFIs accounting practices vary and they also receive grants and subsidy. This section analyses the profitability indicators of MFIs.

According to LOGOTRI (2006) larger number of borrowers found to be the biggest sustainability factor. Ganka concludes on the result that increased in number of borrower itself does not improve financial sustainability of microfinance institutions. The reason could be increased inefficiency as a result of increased number of borrowers. However, Hartarska (2005) reports that number of borrowers had no significant impact on financial sustainability.

According to Woller and Schreiner (2002) the relationship between depth of outreach and financial self-sustainability is multidimensional. In this analysis they found that depth of outreach has a positive relationship with financial self-sustainability. Woller and Schreiners' finding put evidence against a wide spread belief that small loans are highly risky and associated with lower financial sustainability. Moreover, Cull et al., (2007) indicates that institutions that make small loans are not less profitable compared to those making bigger loans, and the study by Paxton (2003) confirms that there is a negative correlation between depth of outreach and subsidy dependency index. This exhibits that there is a positive relationship between profitability and depth of outreach. Contrary to the above, Hulme and Musley (1996) state that delivering small loans to the poor and the relatively hard-to-reach clientele is inherently costly

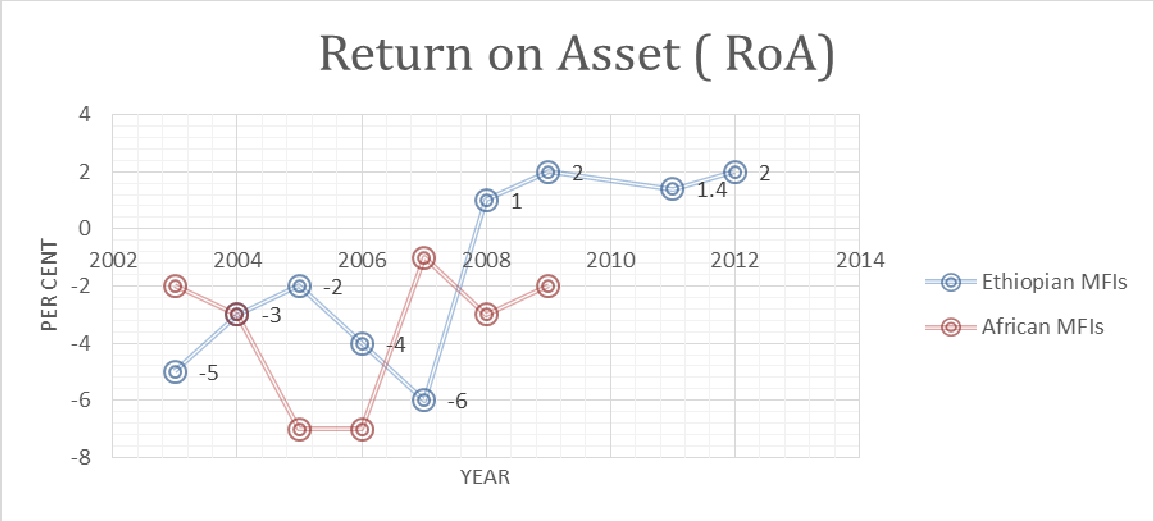
The extent of deposits among the different MFIs is calculated by using the organization's total deposits as a percentage of their outstanding loan balance. The analysis shows that the self- sustainable MFIs have a relatively

higher degree of savings in relation to loans. For example, in 2012 ACSI had 134% FSS and 60% deposit to loan ratio. There is a need to focus on saving mobilization in order to increase outreach and ensure sustainability. Self-sufficient MFIs utilize considerably more deposits than non- self-sufficient MFIs and as they have proven to have more clients and also larger loan amount, which implies that they also have a larger amount of total savings than non-self-sufficient MFIs.

Return on Assets (ROA)

"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" (Rosenborg,2009).

ROA1 measures how well the institution uses all its assets. It is also an overall measure of profitability, which reflects both the profit margin, and the efficiency of the institutions. ROA is a fairly straightforward measure. It encompasses net income, primarily portfolio yield, cost of funds and operational efficiency. RoA trend may help managers to fine tune their management approach to better deploy assets (Figure A).



Adjusted RoA of Ethiopian MFIs two per cent in 2012, which is above the RoA achieved by typical commercial banks. The MFIs, Shashemene and Harbu MFI achieved the highest ROA (18.9 per cent and 12 per cent respectively). This outstanding performance is apparently due to their high portfolio quality and yield.

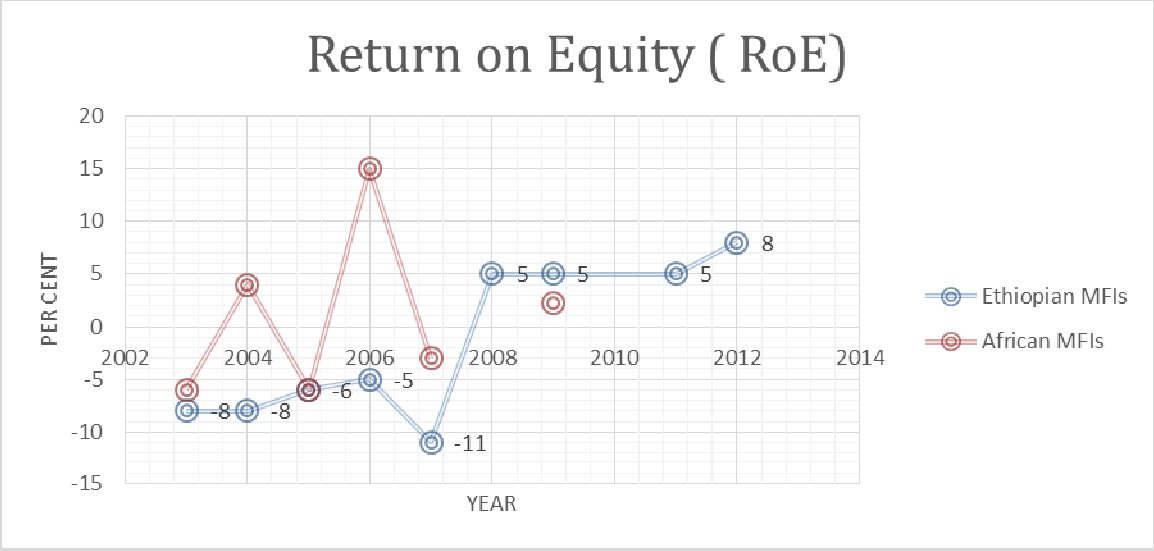
Return on Equity (RoE)

RoE indicates how much net income was earned on the equity invested by shareholders and donors of an MFI. RoE ratio is therefore of interest to present or prospective shareholders and donors. ROE indicates net profit earned on invested equity while RoA indicates profit earned on total asset (equity and all other liabilities). RoE has to be higher than the inflation rate of the country to avoid gradual erosion equity value over time.

This ratio will vary much depending on the capital structure of the MFI. MFIs that fund their assets primarily with equity will show a lower return than those that fund their assets primarily with other liabilities. In other words, debt-equity ratio has a significant impact on equity. The RoE ratio would be directly proportionate to profit of an MFI and its leverage level. Administrative cost of micro lender is always higher. Besides, cost of funds and higher portfolio risk cost on collateral free loans, etc necessitate higher interest rate on MFI loans to beat inflation and fund growth.

RoE trend over years (Figure B) would be more revealing on the true profitability of MFIs. Extraordinary income or losses, say in the form of asset sales, low loan loss provision in a year may distort and overstate the profit. Besides, tax liability of MFIs varies and determines profit. Incorporated and supervised MFIs generally pay taxes, while not-for-profit, non-supervised MFIs do not pay tax. In Ethiopia, MFIs which do not distribute dividend to shareholders are exempted from profit tax, while MFIs which distribute dividend are required by law to pay profit tax. Reporting and other requirements of bank regulators also add to the costs of the supervised institutions.

[1]Return on assets (RoA) is calculated by dividing net income (after taxes and excluding any grants or donations) by period average assets.



4.2.4 The Factors affecting Financing Structure of Ethiopian MFI (Interview Result)

As trend analysis of the dynamics of financing structure of Ethiopian MFI above indicates low level of debt financing are employed by the MFIs. There are a number of factors that are said to affect the industry in using the commercial debt and these are summarized thematically from the interview result conducted with the key informants. In this section the qualitative factors identified to affect the financing structure of the industry are presented as follows:

The first reason hindering the industry not to use the power leverage is regulatory constraint imposed by NBE. This implies that for MFI to be legible for commercial debt the institutions cannot borrow more than their equity. As per the interview result MFIs in Ethiopia cannot borrow more than 5% of their equity. It is possible to imagine how this regulation hinder the growth of MFIs in accessing commercial debt and the achievement of depth outreach objective of sector desires. Though MFI is a regulated business like banks the need to grow of the business with debt financing is limited by regulation coupled with the saving mobilization low performance of the industry.

The second factor that determines is the collateral provision required by the creditors. The providers of capital hesitate to lend to MFI who are need of commercial debt at concessional rate as most of them do not have sufficient collateral to back loans, despite their good performance. This finding has similar implication with quantitative finding that less tangibility (asset structure domination to the current portion) of MFI affects the leverage of the institutions negatively. Especially in this study the finding of most empirical studies with other firms is not consistent and recognized the importance of this variable to affect the leverage of MFI adversely. However, some MFI are using the opportunity of government guarantee for their soft loans that they have borrowed.

For commercial organizations, lack of collateral increases the risk of lending. These organizations rarely understand microfinance and have the impression that microfinance is a charitable activity. Even for those who don't have that perception, their understanding of microfinance as a business is limited, and so is their ability to assess risks and their willingness to lend (Sousa-Shields M. and Miamidian E 2004). The providers of capital also consider mostly if the MFI can provide collateral for the loan

MFI with less than 5% of non-performing loan (NPL) are considered as the candidate and those who perform more than 5% are not required by the providers of capital to borrow commercial debt. Though the business risk effect on the leverage of MFI is not statistically significant the interview result reveals that MFI who account 95% performing loan are guaranteed the minimum level of risk that determines the firm to borrow from commercial loans providers. This result has two important effects on the determinants of the capital structure which signifies the trade-off between risk and return of the MFI.

The other additional factors that affect the debt financing of Ethiopian MFI industry from the interview results are:

Governance and Ownership (the issue of organizational structure and to whom this MFI are backed matters most). The government backed institutions are guaranteed well enough than the others. Besides, with large number of sub branches the institutions opened more attention will be paid. From the regression we have concluded that the effect of size and / or ownership are both statistically significant and positively determine the capital structure of in the industry. This implies the larger the MFIS operating in the industry belongs to the government agencies which enables the firms to access the commercial debt.

Historical Records-refers the repayment history of the institution from past records also has been indicated

as one of the criteria by the providers. So the repayment history of the institution also matters in the accessing of commercial debt. This finding can be related to the age of MFI finding that reported positive and statistical significant impact it has on the leverage of Ethiopian MFI as the quantitative analysis.

Though, the industry saving mobilization is growing very rapidly in general terms saving mobilization is low in Ethiopian MFI due to lack of promotion on the part of MFIs about their products in general their business as a result low performance were recorded by the sector when compared with other sectors of regulated institutions.

5.1 Conclusions

This study has taken empirical step to examine factors driving the financial structure of Microfinance Institution in Ethiopia. The result shows an empirical link between the drivers of capital structure of MFI and the capital structure theory. The key informant's perspective from suggest that capital structure of Ethiopian MFIs industry are affected by collateral provision, capital adequacy (regulation), governance and ownership structure, business risk, historical records and outreach (women mix) in addition to the above standard determinants of capital structure.

It was noted that capital structure choice, as it was hypothesized, shows some consistency with a number of theoretical propositions. From this view the implication that the theories which explain the debt-equity choice in financial firms seem to be able to accommodate MFI capital structure decisions. However, ownership structure and governance consequences appear to be a material element for the understanding of unique behavior of MFI. Further studying of this fact had to be properly taken into consideration while drawing conclusions from the interview and empirical results.

The following conclusion have been drawn from the study:

The empirical results provide that there exist significant impacts of size, profitability, ownership, tangibility, age and growth on the capital structure of Ethiopian MFIs whereas risk has no significant impact on leverage of Ethiopian MFI industry.

Though debt financing has been accepted by the interviewees and empirical result to be beneficial for MFI industry to increase large scale of outreach and ensure the sustainability of the institutions in the long term. However, the practice of debt financing in the industry suffers from a number of factors in addition to the above empirically tested determinants. These includes:

The ownership and governance structure are also the most determining factors for Ethiopian MFI capital structure dynamics. As the interview result indicates institutions that are government backed are guaranteed well than the others which are not. Therefore, when we relate this finding with the empirical result of ownership and size, have positive impact on the leverage of MFI, significantly affected positively by being government backed in accessing the commercial loans provision from the providers of capital to serve as a guarantee.

The creditworthiness of the institutions is checked by the providers of their capital and usually perceived as charitable institutions not viable business. The providers of capital don't see MFI as viable business because the operating costs of the MFI are believed to be high. The lenders attitude towards the institutions severely constrained the debt financing need MFI. This factor is related to the quantitative findings of profitability of MFI. So the interview result also supports the profitability of MFI affecting their leverage.

For the institutions to be legible for the commercial debt at least nonperforming loan should be less than 5%. This implies the business risk although it isn't significant affects the MFIs capital structure negatively.

Currently, the industry practiced 15 % of saving mobilization (both voluntary and compulsory) over the period. This low performance of low saving in the industry is due to lack of promotion by the institutions for their business and products. Mainly, the roles of the institutional investors and such as small and medium financial institutions are not their focal point.

The institutions also can borrow only 5% of their equity capital (regulatory constraint). Above all this factors constraint the growth of MFIs industry in debt utilization unless the regulatory organ considers need to respond by relaxing the regulations.

5.2 Recommendations

On the basis of the above conclusions the following recommendations are forwarded by the researcher.

The majority of Ethiopian MFIs are lagging behind the industry average debt-equity ratio and other benchmarks reported and recommended by the sector analysts such as CGPA, MIXMKT industry report globally. Therefore, those MFIs which are highly profitable should use equity finance (less debt) as the finding indicates. Alternatively, as more profitable MFIs use retained earnings as a major means of financing they employ less debt. This implies that the industry is using more of donated equity, shareholder's capital and/ or retained earning rather than debt financing. This means those MFIs which have more preference towards equity should work aggressively to be profitable. To be profitable, the MFIs should manage their revenues and costs. Revenues should be pushed much whereas costs should be managed.

The most important factor that affects the debt equity (capital structure) of MFI is asset structure (tangibility). Tangibility has a negative and significant impact on the Ethiopian MFI leverage. This means those MFIs which have more collateral are accessing more debt as opposed to those MFIs with less collateral. This means collateral is highly required to access debt. As tangibility has a negative significant impact on leverage of MFI due to the fact the absence of the institutions investment in fixed asset can't go with the objective of the firm. However, MFI should at least increase the proportion of investment in fixed asset or else as it is practiced in other parts MFIs are using development funding and grants to guarantee commercial debt (AEMFI, 2009).

The other factor that affects leverage of Ethiopian MFI is size. The results show that MFI size has a positive and highly significant impact on leverage of the sampled MFI. This means those MFIs who have more preference for debt should increase their size significantly by raising more external finance that is debt.

The other factors that affect the capital structure of MFI are growth rate of MFI and business risk of MFI. Though both variables have similar signs with the empirical finding of other study they failed to show significant impact consistently in the models to affect MFI capital structure. This implies that either the appropriate measurement proxy is not employed for MFI unique nature for the first variables and there exists absence of significant difference in accessing debt financing that would affect the leverage of the institution. Therefore, studying the impact of these variables on capital structure of MFI should consider the industry peculiarity rather than standard determinants of capital structure proxy used for all other firms.

Saving mobilization is hampered by lack of promotion on the part of MFIs about their products and the MFI are not using the potential of saving to the maximum. Therefore, the institutions should aggressively mobilize saving from institutional investors and promote themselves to the general public to exercise their power by the NBE regulation 40/96 as a financial intermediary.

The Ethiopian MFI industry should aggressively use debt financing as they are far away from the industry average and other benchmarks recommended by the sector analysts.

The regulatory authorities of these sectors (NBE) should relax regulations for these sectors in order to achieve their major objectives of the institutions. At least the leverage of MFI should be relaxed to the Basel accord agreement allow for financial institutions to the maximum of 12x leverage rather than 5% of their equity capital as per NBE.

The major providers of capital in the industry RUFIP, CBE and IFAD should be empowered in borrowing from international finance organization which lend for MFIs at a very subsidized rate.

The government should consider the role of MFI industry playing in alleviating poverty and economic growth of the country by supporting and facilitating investment opportunities available for private investors in the sector. The participation of international NGOs as shareholders in the MFIs

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