CREDIT RISK MANAGEMENT OF MFIS FOUND IN ETHIOPIA

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Abstract

This study is conducted to assess the credit risk management of MFIs found in Ethiopia and to rate these institutions according to their rank. In conducting this study secondary data from audited annual reports of the MFIs, performance analysis report bulletins, the web sites of the MFIs and from the Mix Market (MIX) was collected. The Morgan Stanley approach was employed to assess the credit risk management of the MFIs rated in accordance to their grade. Accordingly the overall credit risk management of these MFIs is ranked as follows ACSI (1^{st}), DECSI (2^{nd}), Wasasa (3^{rd}), PEACE, OCSSCO,and BUSSA (4^{th}), ADCSI (5^{th}), SFPI(6^{th}),OMO(7^{th}),and Wisdom (8^{th}). Based on their result these institutions are recommended to re-assess their credit risk management process and procedures in each rating factors in which they fail to achieve the best grade in the Morgan Stanley grading approach.

Keywords: Credit risk management, MFIs in Ethiopia, rank of MFIs, performance of Ethiopian MFIs

Introduction

The fight against poverty has taken many expressions. The combination of many elements is what helps countries to develop. Microcredit is just one of these elements, which together with other components can create the environment for people to get out from the poverty traps **(**Ferriet.al 2013).

It is widely recognized that the exclusion of the poorest borrowers, particularly in the rural areas, from the financial banking system is one of the main obstacles for sustainable development and poverty reduction. Indeed, it is almost impossible for rural poor people who live in riskier environments and who lack assets collateral, formal wage job and limited credit history

loans to obtain credit from formal banking system because lending to them became very risky and very costly. The failures of formal banks in rural sector especially the bad repayment rates of agricultural state banks that had provided subsidized loans to rural farmers have given rise to the innovative lending institutions that are Microfinance institutions. This type of organization has become an increasingly popular means that can alleviate poverty by making small, uncollateralized loans to poor customers (Ibtissem and Bouri, 2013).

Microfinance institutions (MFIs) have the function of providing financial services to the low-income households who have long been deemed 'unbankable", including the self-employed and customers without collateral assets. Dedicated to improving the life of the poor in developing countries, MFIs provide to the poor much needed credit loans of small amount to finance their entrepreneurship projects, to finance their consumption, to cope to illness or for the education of their children without any collateral requirement. (Ibtissem and Bouri, 2013)

The microfinance industry has grown rapidly during the last decade in breadth, depth, and scope of outreach. The rapid growth seems to continue; given the massive unserved and underserved market. The growth of the industry has changed the risk profile of MFIs. Yet many MFIs seem to continue to seek growth without much attention to attendant risks. Surprisingly, many MFIs appear to neglect even the basic credit risk management which helped MFIs achieve high growth rates historically (Fernando, 2008).

On the one hand around 85% of the Ethiopia economy is dependent on agriculture and these citizens should be financed by these microfinance institutions. On the other hand, Agriculture is widely considered to be inherently riskier than industry or trade because it is more typically affected by different factors. The poorer farmers suffer disproportionately from these than the non-poor. Returns in agriculture are not only more volatile but also generally much lower than those in most commercial and non-farm microenterprises. Hence, agricultural microfinance is riskier than agricultural finance in general and non-agricultural microfinance in particular (Fernando, 2008). Additionally, About 80% of Ethiopians live below the poverty line with less than 2 dollars a day (WHO report 2013). To compromise these two contradicting issues i.e. financing the agrarian as well as the poor and the risk involved there, microfinance institutions should apply different mechanisms of controlling and managing the risk in the field as well as on other services provided by these MFI. The main questions that arises is, how they can manage to maintain their non-performing loans rates so low, if microfinance is about providing financial services to poor households with

no collateral, most of them working in the informal sector, were the risk of just taking the money and running is very high.

As Nancy et al. (2001) noted an effective credit risk management process is required to help institution's top leadership establishes rules to prevent operating losses due to human error, employee carelessness, technological malfunction or fraud. Unfortunately, most MFIs do not yet have comprehensive risk management systems. The norm in the industry appears to consist largely of efforts to manage certain types of risk but not the overall risk of the institution in a systematic manner. Surprisingly, many MFIs seem not to have made a systematic effort to manage even credit risk (Fernando, 2008).

Even though, Proactive risk management is essential to the long-term sustainability of microfinance institutions (MFIs), but many microfinance stakeholders are unaware of the various components of a comprehensive risk management procedure. The objective of this study is to assess the credit risk management system of MFIs found in Ethiopia. It is because of that, like all financial institutions, microfinance institutions (MFIs) face risks that they must manage efficiently and effectively to be successful. If the MFIs do not manage its risks well, it will likely fail to meet its social and financial objectives. In addition to this, when poorly managed risks begin to result in financial losses, donors, investors, lenders, borrowers and savers tend to lose confidence in the organization and funds begin to dry up. When funds dry out, MFI is not able to meet its social objective of providing services to the poor and quickly goes out of business. The finding of the study will help MFI management teams evaluate their institutions' performance with regard to their credit risk management in order to identify and correct their weaknesses.

Most of the researches done in Ethiopian MFIs are concerning the overall performance of MFIs, others are with regard to the uses of these MFIs as a weapon for the reduction of poverty, and most of them are with regard to the services which are provided by these institutions and the challenges and prospects of these institutions. There are, as to the researchers knowledge, few studies conducted in the area of MFIs found in Ethiopia, for instance the study conducted by Goshim, 2011, on "performance of micro finance institutions in credit risk management: the case of five micro finance institutions in Addis Ababa". By using mixed approach he found that the failure to effectively manage credit risk contributed to a greater extent to the micro finance institutions crisis. The other study is done by Abafita, 2003 regarding microfinance and loan repayment performance by taking the Oromia Credit and Savings Share Company (OCSSCO) in Kuyu as case study. He found that the overall repayment performance of the borrowers and the screening technique is sound and the credit scheme has contributed

positively in terms of improving the incomes, access to education, access to health facilities and nutritional status of the borrowers. G/egziabher, 2013, conducts a study entitled "Small Loans-Big Gains: Benefits and Repayment Performance of Microfinance Programs in Tigray, Mekelle" by applying Propensity Score Matching (PSM), she found that microfinance loans of DECSI have improved the clients` wellbeing in their living standard. A current study is conducted by Pasha and Negese, 2014 on Performance of Loan Repayment Determinants in Ethiopian Micro Finance –by taking Sidama Micro Finance Institution as a case study. By using Binary logistic model and descriptive statistics, they found that age of respondents, education level, time lag between loan application and disbursement, complicated loan processing procedures, Repayment period, and Loan diversion was found as essential and significant determinant of loan repayment rate.

The credit risk management of MFIs is expected to be analyzed deeply by different scholars. Unfortunately, credit risk which is the major risk that is faced by most MFIs is not studied as expected. So the current study fills the gap as well as assesses the credit risk management of MFIs which are found in Ethiopia so that a complete understanding of the current status of these institutions as well as making different conclusions can be possible.

The main objective of the study is to assess the credit risk management of MFIs in Ethiopia. Specifically the study is aimed to

- To assess the credit risk management of MFIs found in Ethiopia.
- To compare the level of the credit risk management of the MFIs found in Ethiopia.
- To rate these MFIs in accordance with their credit risk management process.

The objective of the study is to assess the credit risk management of MFIs in Ethiopia. The study is limited only to the credit risk management of these institutions' which is the one and basic risk management system of MFIs. Other components were not assessed because they are vast in nature. In addition to this, to avoid the researcher's personal judgmental grading the qualitative aspect of the Morgan Staley approach were not used to assess the credit risk management of the MFIs. So the results of the study will entail only the credit risk management of these institutions rather than the overall risk management.

Definition and origin of microfinance institutions

As cited in Yirsaw (2008), MFIs are defined in terms of the following characteristics: targeting the poor (especially the poor women); promoting small businesses; building capacity of the poor; extending small loans

without collaterals; combining credit with savings; and charging commercial interest rates. MFIs are often innovative and flexible in their design and implementation (Dejene, 1998)

The origins of microfinance can be track down to the Grameen Bank of Bangladesh. They were the first to face the information problem by building a lending institution using the information base of a community. The bank started in the mid-1980s by Prof. Mohammed Yunus, lends to very poor household, and lends to groups of borrowers rather than individual within the group. Microfinance institutions often represent a first opportunity for the local population to participate in financial systems and to benefit from access to business and capital (Brune, 2009).

MFIs can perform better than standard bankers in some social contexts for two different reasons. First, members of a community may know more about one another. Second, a major source of market failure in credit markets is that a bank cannot apply financial sanctions against poor people who default on a loan, since by definition they are poor. People within the group may be in a position to enact powerful non-financial sanctions at low cost. With this mechanism micro finance institutions have high repayment rates (Ghatak, 1999).

Overview of microfinance institutions in Ethiopia

Since the mid- 1980s, many non-governmental organizations (NGO) in Ethiopia have started providing micro- credit to poor households for income generating activities (Michael 2006). Moreover, as cited inGoshim (2011), the development bank of Ethiopia, in collaboration with the ministry of trade, has launched a micro enterprise lending program (Kereta 2007).

According to the Proclamation No. 40/1996 of the Business of Micro Financing Institutions, micro financing institution should be owned fully by Ethiopian nationals and/or organizations wholly owned by Ethiopian Nationals and registered under the laws of Ethiopia and having its head office in Ethiopia. This legislation excluded international NGOs and other overseas agencies not to own and run microfinance institutions in Ethiopia

As cited in Ebisa et.al, (2013), the development of microfinance institutions in Ethiopia is a recent phenomenon. 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). In particular, the Licensing and Supervision of Microfinance Institution Proclamation of the government encouraged the spread of Microfinance Institutions (MFIs) in both rural and urban areas as it authorized them among other things, to legally accept deposits from the general public (hence

diversify sources of funds), to draw and accept drafts, and to manage funds for the micro financing business (Getaneh, 2005).

Purpose and Activity of Micro-Financing Institutions in Ethiopia

The purpose and activities that are allowed to MFIs are explicitly discussed in Proclamation No. 626 /2009Federal Negarit Gazetaof the Federal Democratic Republic of Ethiopia as follows: The main purpose of MFIs is to collect deposits and extend credit to rural and urban farmers and people engaged in other similar activities as well as micro and small scale rural and urban entrepreneurs.

Risks in microfinance institutions

Risk is at the heart of any finance institution. It is part of the financial intermediations. This makes that Risk Management to be at the center in any financial institution. Since the MFIs had been growing in the last decade, the importance of risk management has been gaining more and more importance for a good management. It is important to mention that a great portion of the borrowers from MFIs are involved in agricultural activities. Financing this type of activities is risker than financing trade or industry, because of the inherent risk in agriculture. Risk is defined broadly as the potential for events or ongoing trends to cause future losses or declines in future income of an MFI or deviate from the original social mission of an MFI (Ferri et.al 2013).

Categories of Risks in Microfinance

There had been many efforts to make a categorization of the different risk that a MFI must deal with in a publication from Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), they considered three major risk categories: financial, operational, and strategic. Inside each of these categories, they also mention some subcategories. Other authors such as Churchill and Frankiewicz divide risks into four categories: institutional, operational, financial, and external. They also list a number of subcategories inside each one of them. In addition, risks are either internal or external to the institution. Internal risks are largely within the MFI's control— related to operational systems and management decisions. External risks are largely outside of the control of the MFI.

Research design and methodology

Research Design

To obtain the advantage of both the qualitative and quantitative research approach and at the same time to overcome their limitation, the mixed approach is used. The target population of the study is all MFIs found in Ethiopia which are mature and large. There are 32 MFIs in

Ethiopia (Source: National Bank of Ethiopia). Out of the MFIs those institutions which are mature (who serve for 8 years and above) and large (MFIs with gross loan portfolio greater than 50 million birr) at the same time those institutions who report to MIX and have full data have been taken as a sample for this study. Institutions which fulfill these criteria include ACSI, ADCSI, BUSSA, DECSI, OCSSCO, OMO, PEACE, SFPI, WASSASA, and WISDOM. (Source: performance analysis report, 2013).

Method of Data Collection and data analysis

To achieve the objective of the study mainly secondary data has been used. Secondary data is collected from four reliable sources: the audited annual reports of the MFIs, performance analysis report bulletins, the web sites of the MFIs and from the Mix Market (MIX). The MIX (http://www.mixmarket.org) is a database that compiles information on MFIs. Different annual reports submitted to the MIX were taken from this website. In addition to this, different manuals and directives of these institutions have been analyzed.

To analyze the data from different reliable sources, the Morgan Stanley approach has been adopted from Ayayi, (2012) with some modification. There are seven rating factors which are used to rate the microfinance institutions in accordance to their credit risk management level. They are:

1. Loan portfolio
2. Profitability, sustainability, operating efficiency
3. Asset and liability management
4. Management and strategy
5. Systems and reporting
6. Internal and operational controls
7. Growth potential

The first three rating factors i.e. Loan portfolio ; Profitability, sustainability, operating efficiency and Asset and liability management which are assessed by using the following ratios: portfolio at risk, write-offs, size of portfolio, loan loss reserve, sustainability, return on average asset, operating efficiency, productivity, leverage and liquidity. These rating factors are analyzed based on the data available on the website of the microfinance institutions, performance analysis report bulletins, and audited financial statements as well as from MIX. To avoid the researcher's judgmental grading of the qualitative aspect of the Morgan Staley approach, these rating factors are not used to assess the credit risk management of the MFIs. It is due to the fact that there is no specific grade apportioned to

analyze these factors the quantitative rating factors are used to assess the credit risk management of the MFIs.

The Morgan Stanley approach used because it is specifically tailored to institutions: As cited in Ayayi, (2012)

(i) that are strictly dedicated to providing microfinance products, and

(ii) Whose business model mainly revolves around providing micro-loans as financing for micro-entrepreneurs' businesses (Arvelo et al., 2008).

(iii) It addresses the specific challenges inherent in the microfinance industry such as country risk, data availability and minimal default history among MFIs (Arvelo et al., 2008).

(iv) Allows assessing the risk of MFIs relative to any other issuers via a global scaling rating: an approach that is not currently prevalent in the microfinance industry.

The Morgan Stanley approach, which is the methodology to assess the credit risk management, is discussed in Ayayi, (2012) as follows.

Table 2, Morgan Stanley's credit analysis and rating methodology of microfinance institutions

Rating factors	Indicator definitions	Grades
Loan portfolio	A1: Portfolio at risk = (outstanding loans with arrears over 30 days + rescheduled or restructured loans)/total gross loan portfolio	<3 < 6 < 9 < 12 < 15 above 15
	A2: Write-offs = total write-offs over the last 12 months/average gross loan portfolio	<2 < 3.5 < 5 < 7 < 10 above 10
	A3: Size of portfolio = gross loan Portfolio	>300 M, >250 M, >100 M, >50 M,>10, <10 M
	A4: Loan loss reserves = loss reserves/PAR30	>85 > 75 > 65 > 60 > 55 below 55
Profitability, sustainability, operating efficiency	B1: Sustainability = operating income/(financial expenses + loan loss provisions + write-offs + operating expenses)	>120 > 115 > 110 > 100 > 90 below 90
	B2: ROAA = net income/average Assets	>3 > 2>1 > 0 > –2 below –2
	B3: Operating efficiency = total operating expenses/average gross loan portfolio	<20 < 25 < 30 < 40 < 50 above 50
	B4: Productivity = numbers of borrowers/total headcount	>200, >190, >170, >145, >130, below 130
Asset and liability Management	C1: Leverage = total liabilities/ (net worth + subordinated debt)	<5x, <6x, <7x, <8x, <9x, above 9x
	C2: Exposure to foreign currency = (financial debt in non-hedged foreign currency)/(total financial debt)	<15 < 20 < 35 < 50 < 65, above 65
	C3: Liquidity = (cash + short-term	>15 > 12 > 9>6 > 3, below 3

	investment)/gross loan portfolio)	
Management and Strategy	D1: Quality of senior management and board	
	D2: Strategy and business plan (including competitive landscape) Credit	
	D3: Quality and support from shareholders and network	
	D4: HR management	
Systems and reporting	E1: Quality of management Information system	
	E2: Quality and speed of data feed	
	E3: Quality of reports and distribution/analysis reports	
Internal and operational controls	F1: Operational procedures	
	F2: Internal controls	
Growth potential	G1: Regulatory environment and government involvement	
	G2: Number and density of micro-entrepreneurs	
	G3: Behavior of micro-entrepreneur towards micro-loans	

Source: adopted from Ayi Gavriel Ayayi, 2012, Credit risk assessment in the microfinance industry.

Data analysis and presentation

Profile of sample MFIs

Amhara Credit and Saving Institution (ACSI)

ACSI emerged from another local NGO in 1995. The institution makes predominantly agricultural loans using the group lending methodology. ACSI converted into a limited liability company in 1997 and is directly and indirectly owned by the Amhara National Regional State ("ANRS"). ACSI's primary mission is to improve the economic situation of low-income, productive poor people in the Amhara region through increased access to lending and saving services. It the Largest microfinance outreach in Ethiopia with many years of experience in the Amhara region.

Dedebit Credit and Savings Institution (DECSI)

The Relief Society of Tigray (REST) has been involved in development programs mainly in environmental rehabilitation and agricultural development, relief and social development, rural water supply and credit and saving services.
In 1994, REST implemented Rural Credit Scheme in Tigray, accessible and affordable micro financing services in the poor areas. When the Scheme's operational coverage and client outreach was increasingly widened, institutional restructuring became indispensable. The Rural Credit Scheme

was thus required to be registered under the National Bank of Ethiopia and was allowed by law to form a micro financing institution. Accordingly the Rural Credit Scheme was changed into a new institutional form under the name "Dedebit Credit and Savings Institution S. C" since March 1997.

Wasasa Microfinance S.C

Wasasa Microfinance S.C. was established in Sep 20, 2000 under the legal ground set by the National Bank of Ethiopia. Recognizing that economic growth and development of peasant farmers and other engaged in small scale production and services is dependent on easy access to and the availability of finance.

The mission of Wasasa MFI is to provide sustainable financial services to the active poor in order to employ capital for poverty alleviation.

Poverty Eradication & Community Empowerment (PEACE) MFI S.c

Poverty Eradication and Community Empowerment Micro-finance Institution S. Co. (PEACE MFI) was founded in November 1999 to take over the micro-credit activities previously run by its mother organization, Agri-Service Ethiopia (ASE), a local NGO that has been undertaking integrated rural development activities for more than 40 years in Ethiopia. PEACE MFI is formed as a Share Company under the Ethiopian law. It is licensed by the National Bank of Ethiopia (NBE) to provide micro-finance services.

PEACE MFI S.CO is the Micro Financing Institution which plays an 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. The main purpose of PEACE is to collect deposits and extend credit to rural and urban farmers and people engaged in other similar activities as well as micro and small scale rural and urban entrepreneurs.

Oromia Credit and Saving Share Company (OCSSCO)

OCSSCO is a transformation of Oromia Rural Credit Scheme Development Project. It assumed company status in August 1997. The basis for this transformation was the issuance of proclamation no 40/96 that provides for licensing and supervision of the business of microfinance in Ethiopia. OCSSCO has a mission of poverty alleviation in Oromia through availing financial services to the poor and assist them to make the best use of indigenous resources and knowledge

Buusaa Gonofaa Microfinance institution (BG MFI)

BG MFI was initiated through its mother NGO -HUNDEE - in 1999. HUNDEE as institution and 15 staff of HUNDEE together organized and formed BG MFI. The mission of BG MFI is providing efficient and sustainable microfinance services to improve and enhance the self-reliance of economically active but resource-poor segment of community in oromia region

Addis Credit and Savings Institution (ADCSI)

ADCSI is established in Jan 1 2000 to promote micro and small enterprises to alleviate poverty and unemployment prevailing in Addis Ababa city administration territory through provision of sustainable financial and other related service with particular attention to women.

Specialized Financial and Promotional Institution (SFPI) share company

Specialized Financial and Promotional Institution is a share company established in accordance with the provisions proclamation no40/96, a proclamation to provide for the licensing and supervision of the business of microfinance institutions, and duly registered with the National Bank of Ethiopia in Nov 1 1997. SFPI is initially established with the support of Radda Barna. Commercial bank of Ethiopia and Dashen bank are shareholders of this institution.

The main objective of this institution is Facilitating socio-economic empowerment of under-privileged people both in rural and urban Ethiopia

OMO Microfinance institution

OMO Microfinance Institution S.C (or OMO) is a micro finance institution operating in SNNPR. OMO was legally registered by the National Bank of Ethiopia, according to Proclamation No.40/1996 in 1997. This microfinance institution is established with the aim of Provision of financial services to active poor in southern regional states both in urban and rural areas.

WISDOM Microfinance Institution

WISDOM MFI is located in Addis Ababa. Company is working in Banks, credit unions business activities. Wisdom MFI has changed its name to Vision Fund Ethiopia effective December,2013. Wisdom's evolution is linked with the development of World Vision Ethiopia (WVE). Its Microcredit operations began following the relief operations and rehabilitation efforts in the 1980s. WVE stopped its microcredit schemes in keeping with the Government of Ethiopia (GOE) Proclamation no. 40/1996

on the registration and supervision of microfinance institutions. WVE facilitated the establishment of Wisdom in 1998 adapting to the law. Wisdom is primarily funded and promoted by WVE and focused on providing financial service to WVE's Area Development Programs (ADPs).

Credit risk analysis

In this section the data collected from different reliable sources are analyzed and presented.

The following table presents the average result of different rating factors of the Morgan Stanley approach which includes portfolio at risk >30 days, write-off ratio, gross loan portfolio ratio, loan loss reserve ratio, operating self-sufficiency ratio, return on asset, operating efficiency, productivity ratio, leverage and liquidity ratio of large and mature MFIs found in Ethiopia starting from 2007 to 2011.

Table 1: analysis of different rating factors of sample MFIs from 2007-2011

MFI name	Fiscal Yr.	PAR >30 in %	Write-off ratio in %	Gross Loan Portfolio In Birr	loan loss reserve in %	Oss in %	Retu rn on asset In %	Operati ng efficien cy in %	Produ ctivity in %	Levera ge In %	Liqu idity in %
Wasasa	2007	1.70	0.24	28,112,850	98.5	147.9	5.95	11.35	242	1.20	22.2
Wasasa	2008	0.88	0.26	43,842,897	40	162	7.28	9.89	238	1.97	12
Wasasa	2009	1.41	0.24	64,066,939	97	184	9.51	9.68	244	2.20	19
Wasasa	2010	4.00	0	83,427,324	78	145	3.00	4	510	2.19	9
Wasasa	2011	2.25	0	83,427,324	92.01	163	7.11	9.21	245	1.88	5.21
averag		2.05	0.15	60,575,467	81.1	160.38	6.57	8.83	295.8	1.89	13.4
SFPI	2007	1.80	0	26,338,262	70.5	111	1.36	12.02	434	1.80	9.1
SFPI	2008	3.77	3.11	32,183,443	72	119	2.96	13	453	1.17	10
SFPI	2009	3	5	33,984,970	68	120	1	0	468	1.3	16
SFPI	2010	3	0	43,061,855	53	161	15	7.00	439	1.23	11
SFPI	2011	3.33	0	50,000,000	36.16	143	6.18	12.7	189	1.16	7.17
averag		**2.98**	**1.62**	37,113,706	**59.93**	**131**	**5.3**	**8.94%**	**396.6**	**1.33**	**10.65**
PEACE	2007	0.50	0.16	19,471	90	187	9.03	7.51	885	2.20	9
PEACE	2008	0.48	0.21	38,883,067	69	165	7.4	9.11	226	1.92	7
PEACE	2009	5.52	0	42,511,836	71	123	2	5	250	2.10	10
PEACE	2010	0.00	0	42,440,247	937	107	7	11	337	1.67	18
PEACE	2011	0.10	0.13	50,930,631	81.75	143	4.61	14.89	115	1.25	9.76
averag		**1.32**	**0.10**	34,957,050	**250**	**145**	**6.01**	**9.50**	**362.6**	**1.83**	**11**
ACSI	2007	1.27	0.10	1,008,800,901	59	226	8.12	4.59	253	2.70	9.2
ACSI	2008	1.35	0	1,548,902,150	42	240	9.08	5.55	274	2.20	7
ACSI	2009	3.80	0	1,656,863,562	53	210	6.70	3.78	249	2.80	18
ACSI	2010	3.00	0	1,765,373,544	60	223	4	2.00	351	2.60	21
ACSI	2011	1.75	0	1, 169,650,670	123.35	214	8.28	5.44	253	2.59	27.9
averag		**2.23**	**0.02**	1,494,985,039	**67**	**222.6**	**7.24**	**4.27**	**276**	**2.58**	**16.6**
OCSSCO	2007	NA	1.80	396,423,389	NA	166	0.70	6	442	2.50	16.50
OCSSCO	2008	3	1.00	703,366,490	86	153	4	4	593	3.48	8
OCSSCO	2009	7	0	734,540,219	33	195	3	5.00	536	3.10	15
OCSSCO	2010	5	0	1,046,979,300	40	145	3	5.00	672	3.14	21
OCSSCO	2011	3.52	0	1,078,886,665	52.9	160	5.4	5.02	631	2.80	14.27
averag		**5**	**0.56**	792,039,213	**52.98**	**164**	**3.22**	**5**	**574.8**	**3.00**	**14.95**
DECSI	2007	0.50	1.80	1,078,612,652	53.5	173	1.11	2.9	711	3.90	21.4
DECSI	2008	2.00	1.00	1,450,973,195	244	130	1.43	3	1012	4.01	11
DECSI	2009	5	0	1,359,117,217	70	202	3	3	836	1.60	18
DECSI	2010	7	0	1,511,845,613	66	102	0	2	765	3.13	12
DECSI	2011	2.16	0	1,849,942,011	99.72	172	1.9	1.88	653	3.16	21.14

average		**3.33**	**0.56**	1,450,098,138	**106.64**	**156**	**1.49**	**2.56**	**795.4**	**3.16**	**16.71**
Buusaa	2007	1.67	0.00	19,830,265	54	130	-0.80	25.2	502	1.30	24.70
Buusaa	2008	2.38	0.03	31,368,645	70	145	7	18	463	1.25	22
Buusaa	2009	2	1	48,928,779	86	145	7	15	427	1.31	11
Buusaa	2010	2	0	48,928,779	82	147	7	16	376	1.02	10
Buusaa	2011	0.67	0	50,526,483	87.59	159	14.1	12.59	516	0.90	1.9
averag		**1.74**	**0.21**	39,916,590	**76**	**145**	**6.86**	**17.36**	**456.8**	**1.16**	**13.9**
ADCSI	2007	0	1.30	140,991,535	0.00	150	-8.1	4.7	206	0.50	25
ADCSI	2008	3.00	1	243,929,992	23	129	4	4	248	0.40	14
ADCSI	2009	4	0	321,197,819	53	177	3	3	418	0.43	18
ADCSI	2010	5	0	422,981,000	35	195	4	3	297	0.54	15
ADCSI	2011	3.78	0	566,826,000	53.81	166	3.1	3.38	269	1.03	19.7
averag		**3.16**	**0**	339,185,269	**33**	**163**	**1**	**4**	**287.6**	**0.58**	**18**
omo	2007	2	5.70	179,654,227	64.10	122	-1.3	8.6	443	7.10	20.7
omo	2008	5	3	418,684,029	58	129	2	4	374	11.15	6
omo	2009	7	0	462,403,284	33	102	2	2	488	9.40	15
omo	2010	7	0	537,342,406	63	103	0	5	397	2.66	10
omo	2011	15.16	0	675,495,737	81.04	116	1.4	5.12	138	3.09	9.76
averag		**7**	**1.74**	454,715,937	**59.83**	**114**	**0.82**	**4.94**	**368**	**6.68**	**12.3**
Wisdom	2007	2.70	3.30	60,175,252	51.30	99	-7.8	19.9	256	1.70	9.7
Wisdom	2008	3	0	82,307,145	60	96	0	17	263	1.25	8
Wisdom	2009	5	1	95,822,168	61	107	-2	20	261	1.30	8
Wisdom	2010	9	1	89,768,393	58	71	-1	19	221	0.77	21
Wisdom	2011	2.11	1.52	181,075,805	41	86	-2.60	16.75	249	1.08	13.8
averag		**4.36**	**1.36**	101,829,753	**54.27**	**92**	**-2.68**	**18.53**	**250**	**1.22**	**12.1**

Source: researcher's computation, 2015, based on data from Microfinance Information Exchange, Inc. and AEMFI bulletins.

Analysis of the quantitative credit risk factors

Loan portfolio

To assess the Loan portfolio of the sample MFIs the portfolio at risk, write-off ratio, size of portfolio, and loan loss reserve ratios are calculated and rated in accordance with the Morgan Stanley approach.

A1. Portfolio at risk

Portfolio at risk is calculated by dividing the outstanding balance of all loans with arrears over 30 days, plus all refinanced (restructured) loans by the outstanding gross loan portfolio as of specific date. The PAR30 for, Wasasa, SFPI, PEACE, ACSI, and Buusaa are below a threshold of 3 percent which is the best grade ranked by Morgan Stanley. Out of these institutions BUSSA and PEACE have the least average PAR 30 which are 1.74% and 1.32% .Over the entire period of 2007-2011 the PAR 30 for Buusaa was below 3% which can be taken as a signal of good managerial recovery policy, loan process and procedures because the PAR 30 shows the true risk of delinquency problems. The low PAR30 value is a good sign of their portfolio quality because the portion of their portfolios that is contaminated by arrears and, therefore, at risk of not being paid, is very small. On the other hand the PaR 30 of OCSSCO, DECSI, ADCSI, OMO, and Wisdom have an average PAR 30 of greater than 3 which are 5%, 3.33%, 3.16%, 7 and 4.36% respectively. Out of these the severe case is PAR 30 of OMO which is 7% followed by OCSSCO (5%). This can be taken as an indicator of poor

quality of their portfolio. In the year 2009 the PAR30 of DECSI, ACSI, ADCSI,OMO, Wisdom, Peace and OCSSCO was drastically increase to 5%,4%,3.8%,4%,7%,5%,5.5% and 7% respectively which extremely above the threshold of the Morgan Stanley.

Since low PAR30 value may indicate that the MFIs have simply decided that they do not want bad loans sitting on their books; any loans that are delinquent for 30 days or more are written off. To control this potential adverse effect on the portfolio quality, the write-off indicator should be analyzed.

A2. Write- offs

Write- off ratio is calculated by dividing total write-offs for the period by the period's average gross portfolio in a specific period. It represents the loans that the institution has removed from its books because of substantial doubt that they will be recovered. It is an accounting transaction that helps prevent assets from being unrealistically inflated by loans that may not be recovered. Write off policy serves as a control to better understand portfolio at risk. Regarding the write-off ratio of the sample all the MFIs have scored the best grade in the Morgan Stanley approach (which is 6) because they have write off ratio of less than 2. Out of the sample the best write-off ratio is scored by ACSI, PEACE, and Wasasa who scored, 0.02%, 0.1%, and 0.15% respectively. On the other hand OMO has scored 1.74% which is the largest as compared to the result of the sample. The result of the write –off ratio of OMO in combination with the highest PAR 30 of the same can be taken as indicator of poor credit screening, processing and related activity of the institution. While analyzing the reason for result of SFPI (which is the second highest average write off ratio) is the high amount of write-off in the year 2008 and 2009.

A3. Size of portfolio

To analyze the size of portfolio of the sample MFIs the gross loan portfolio of these institutions is taken in to consideration. Out of the sample MFIs which are large and mature DECSI score the best grade by havingBirr1,450,098,138 gross loan portfolios followed by ACSI gross loan portfolio of Birr 1, 169,650,670and OCSSCO gross loan portfolio of Birr 792,039,213. These three MFIs hold a gross loan portfolio extremely above the threshold of the Morgan Stanley approach which is Birr 300 million. In general the gross loan portfolio of the sample is increasing from time to time. The overall growth of the loan portfolios of the sample MFIs is mostly due to the increasing rate of expansion of their respective number of active borrowers from 2007 to 2011 and to the enlargement of the individual loans. On the other hand the least grade is achieved by SFPI (37,113,706), PEACE (34,957,050) and BUSSA (39,916,590) which is even below the 50 million which the criteria of being large MFIs. This is due to the fact that these three

MFIs were under the classification of medium MFIs until the year 2010. It is starting from the year 2011 they became under the category of large MFIs.

A4. Loan loss reserve ratio

Is calculated by dividing loan loss reserve by the outstanding balance in arrears over 30 days plus refinanced loans. This ratio shows what percent of the portfolio at risk is covered by actual loan loss reserves. It gives an indication of how prepared a MFIs for a worst- case scenario. The higher the ratio, is the better the protection of the loan portfolio and voluntary deposits. While analyzing the average loan loss reserve ratio of the sample MFIs under study: the highest ratio is achieved by PEACE (250%) followed by DESCI (106.6%) These ratios are above the threshold of 85% in the Morgan Stanley approach. ADCSI, OCSSCO, and Wisdom have the least loan loss reserve ratio33%, 52% and 54% respectively which is below 55% in the Morgan Stanley approach. This needs an emphasis by these MFIs because this ratio determines the level of the loan portfolio and voluntary deposit of the interested parties who need to deposit.

To assess the second rating factor which is sustainability, operational sustainability, return on average asset, operating efficiency, and productivity ratios are analyzed and rated in the following section.

B1. Sustainability

Operational sustainability measures operating revenue as a percentage of operating and financial expenses including loan loss reserve provision expenses, write off expenses and the like. This ratio shows the ability of MFIs to cover its operating and other costs from generated revenue and profits. It indicates how an institution can run its activities through own operations and free of any subsidies. All most all of the sample MFIs achieved operational self-sufficiency by having greater than 120% which is the best result in the Morgan Stanley approach. ACSI has got the best operational self-sufficiency ratio 222% which is extremely above the threshold. OCSSCO and ADCSI constitute the next best grade by having 164% and 163% respectively. This shows their increasing ability to cover their financial expenses, loan loss provisions, write-offs and operating expenses of these MFIs. Out of the sample Wisdom has got 2 out of 6 in the Morgan Stanley grading system which is lower. This result gives a clue to the MFIs does not have free cash flow to guard against margin or top-line shocks. To improve its long-term viability, Wisdom should reduce its operating expenses and increase its interest income

B2. Return on asset

This ratio shows the institution's ability to use its assets profitably at the same time it reflects the profit margin and efficiency of an organization. Return on asset is calculated by dividing net income by period average asset. The best result is achieved by ACSI, BUSSA, Wasasa, and PEACE by

having 7.24%, 6.86%, 6.57% and 6% respectively which extremely above the threshold of 3% in the Morgan Stanley approach. On the other hand Wisdom has achieved the least return on asset ratio of -2.68%. This result in combination with the low sustainability ratio (92%), high PAR30 (4.36%), high write off ratio (1.36%), less loan loss reserve (54%) may led the institution to fail to achieve its objectives.

B3. Operating efficiency

Operating efficiency is calculated by dividing all expenses related to the operation of the MFIs by gross loan portfolio. This ratio provides the best indicator of the overall efficiency of a lending institution. It measures the cost of delivering loan services. The lower the operating expense ratio is the higher the efficiency. The entire sample MFIs got the grade 6 which the best result in the Morgan Stanley approach because all of them have operating efficiency ratio below 20%. While comparing the operating expenses incurred by these institutions, DECSI, ADCSI, ACSI, OMO and OCSSCO have incurred the least expense which is 2.56%, 4%, 4.27, 4.94% and 5% respectively. On the other hand Wisdom and Bussa have the large operating expense by having 18.53% and 17.36% respectively as compared to the other sample MFIs.

B4. Productivity

The loan officer productivity ratio is calculated by dividing the number of active borrowers by the total number of loan officers. This ratio shows the productivity of an institution's loan officers- the higher the ratio the more productive the institution is. On the other hand a high ratio may indicate high client loads. While analyzing the productivity level of the sample MFIs all of the institutions reach the maximum threshold of the Morgan Stanley approach which is greater than 200 active borrowers per loan officer. As a result all of the institutions got the grade 6 in this rating factor. While comparing this result among the MFIs DECSI scored the highest productivity ratio by having, on average, 795 active borrowers per loan officer this is followed by OCSSCO and BUSSA by having 574 and 456 borrowers per loan officers respectively. Even though these institutions score the higher ratio in this rating factor, this high productivity has its own downside. If one employee has to work with many borrowers, this will presumably lower his effectiveness. This in turn may have a negative impact on the long-term viability of the institution. As compared to the sample under consideration, MFIs which are mature and large, Wisdom scored the lowest productivity ratio 250 active borrowers per loan officer followed by ACSI and ADCSI by having 276 and 287 active borrowers per loan officers. Low staff productivity does not usually mean that the staff works less, but may hint that they are tied up in excessive paperwork and procedures.

To assess the third quantitative rating factor which is asset and liability management leverage and liquidity of the sample MFIs was analyzed and rated accordingly.

C1. Leverage

It is calculated by dividing total liabilities by total equity. It is the simplest and best known measure of capital adequacy because it measures the overall leverage of the institution. This ratio reflects how successful a MFI has been in accessing debt as compared to its equity. MFIs with higher leverage ratio position tend to have a capital structure that translates into better capital performance. Among the sample the highest leverage ratio is scored by OMO, DECSI, OCSSCO, and ACSI by having 6.68%, 3.16%, 3% and 2.58% respectively. This result is an indication of the ability of these MFIs in generating additional income in the form of debt which can help the institutions to generate more revenue. On the contrary the least debt to equity ratio (leverage ratio) is scored by ADCSI, BUSSA, Wisdom, and SFPI having 0.58%, 1.16%, 1.22% and 1.33%. This result implies that the institutions are weak in generating additional funds. This probably limits the income-generating potential of the institutions by not making use of external sources of debt. It may be better for these institutions to increase their liabilities in order to increase its income-generating asset.

C3. Liquidity

This ratio shows the productive employment of liquid assets in order to ensure whether those assets for which costs have been incurred are kept idle. This ratio also indicates whether an institution is on the way to meet its payment obligation on time. Taking these issues into consideration the highest liquidity ratio is scored by ADCSI which has 18% liquid asset. This is followed by DECSI (16.71%), ACSI (16.62%) and OCSSCO (15%). By having above 15% liquid assets these institutions got the best grade (6) in the Morgan Stanley approach. BUSSA (13.92%), Wasasa (13.48%), OMO (12.29%) and Wisdom (12.11%) scored the next best grade (5) in the Morgan Stanley approach by having above 12% liquid asset. SFPI (10.65%) and PEACE (11%) scored the least grade as compare to the grade of the sample. This gives a clue to the institutions to check their liquidity ratio because they have to be competitive enough in the market and meet their payment of their obligations on time.

Conclusion and recommendation

Conclusion

This study was conducted to assess the credit risk management of large and mature MFIs found in Ethiopia and rates these MFIs in accordance to their result. Accordingly Wasasa, SFPI, PEACE, ACSI, OCSSCO,

DECSI, BUSSA, ADCSI, OMO and Wisdom was taken as a sample of the study.

To achieve the objectives of the study, which is to assess the credit risk management of MFIs in Ethiopia, Morgan Stanley approach was employed. To avoid personal judgment in rating the MFIs only the quantitative aspect of the approach is applied so that acceptable comparison among mature and large MFIs and rating of these institutions can be possible.

In this section, an integrated analysis of the credit risk analysis of the sample MFIs is provided. To do this, I adopt an ordinary grading system to put the quantitative indicators of the rating factors into the same schedule. The grading system ranges from six (excellent) to one (poor). For the purpose of the comparison, the mean of each quantitative indicator over the sample period is computed and converted to its corresponding numerical value on the grading system. Following the in-depth analysis of each quantitative indicator over the 5-year span of the sample MFIs in the preceding chapter, each quantitative indicator (see Table 1) is graded to capture the particular nature of each MFI. With the numerical values of the quantitative rating factors' indicators on hand, the proprietary weighting (see Table 2) is then computed to approximate the ten credit rating factors of the sample MFIs. Each weight reflects the relative importance of each of the ten rating factors for each of the sample MFIs in the credit analysis and rating methodology.

As the result depicted in table 2, the highest overall grade is achieved by ACSI scoring 52 out of 54. ACSI score the best grade in the Morgan Stanley approach which is 6 in all the rating factors except in loan loss reserve ratio which is grade 4. The second best overall grade is scored by DECSI by having 51 out of 54. This MFI scored the best grade (6) in all the rating factors except PAR 30 and ROA having 3.33% and 1.49%. Wasasa scored the third overall best grade which is 49. The problem with this MFI is the less amount of the gross loan portfolio as compared to the sample in consideration, less loan loss reserve ratio and to some extent liquidity ratio. The overall grade of 48 is scored by PEACE, OCSSCO, and BUSSA which is the fourth grade. The problem with BUSSA and PEACE is an extremely less gross loan portfolio and in somehow less liquidity ratio. On the other hand, the problem of OCSSCO is the less amount of loan loss reserve ratio provided for the worst scenario happened and in some how the issue of PAR 30. The fifth grade is achieved by ADCSI by scoring 46 out of 54. ADCSI has the least loan loss reserve ratio, above 3% of PAR 30 and have less return on asset. SFPI stood sixth by scoring 45. The reason for this grade is the institution has small size of gross loan portfolio, less loan loss reserve ratio and less liquidity ratio. OMO stood the seventh overall grade in the

Morgan Stanley approach. OMO has the greatest average PAR 30, low loan loss reserve ratio, low return on asset and somehow on liquidity ratio and productivity of loan officers. The last grade (8^{th})is gotten by Wisdom by having 36 out of 54. Wisdom has high PAR30, little gross loan portfolio, extremely less loan loss reserve ratio and return on asset ratio, excessively less productive loan officer, and somehow less liquidity ratio.

Table 2: overall result and rank of sample MFIs

rating factor	Indicators	Average										grades									
		Wasasa	**SFPI**	**PEACE**	**ACSI**	**OCSSCO**	**DECSI**	**Buusaa**	**ADCSI**	**Omo**	**Wisdom**	**Wasasa**	**SFPI**	**PEACE**	**ACSI**	**OCSSCO**	**DECSI**	**Buusaa**	**ADCSI**	**Omo**	**Wisdom**
PAR> 30	A 1	**2.05%**	**2.98%**	**1.32%**	**2.23%**	**5%**	**3.33%**	**1.74%**	**3.16%**	**7%**	**4.36%**	6	6	6	6	5	5	6	5	4	5
Write-off	A 2	**0.15%**	**1.62%**	**0.10%**	**0.02%**	**0.56%**	**0.56%**	**0.21%**	**0.46%**	**1.74%**	**1.36%**	6	6	6	6	6	6	6	6	6	6
GLP	A 3	60,575,467	37,113,706	34,957,050	1, 169,650,670	792,039,213	1,450,098,138	39,916,590	339,185,269	454,715,937	101,829,753	3	2	2	6	6	6	2	6	6	4
LLR	A 4	**81.10%**	**60%**	**250%**	**67%**	**52.98%**	**106.64**	**76%**	**33%**	**60%**	**54.27%**	5	3	6	4	1	6	5	1	3	1
OSS	B 1	**160.38%**	**131%**	**145%**	**222.60%**	**164%**	**156%**	**145%**	**163%**	**114%**	**92%**	6	6	6	6	6	6	6	6	5	2
ROA	B 2	**6.57%**	**5.30%**	**6.01%**	**7.24%**	**3.22%**	**1.49%**	**6.86%**	**1%**	**0.82%**	**-**	6	6	6	6	6	4	6	4	3	1
Oper.efficiency	B 3	**8.83%**	**8.94%**	**9.50%**	**4.27%**	**5%**	**2.56%**	**17.36**	**4%**	**4.94%**	**18.53**	6	6	6	6	6	6	6	6	6	6

productivit	B4	**295.8**	**396.6**	**362.6**	**276**	**574.8**	**795.4**	**456.8**	**287.6**	**368**	**250**	6	6	6	6	6	6	6	6	6	6
Leverage	C1	**1.89**	**1.33**	**1.83**	**2.58**	**3.00**	**3.16**	**1.16**	**0.58**	**6.68**	**1.22**	-	-	-	-	-	-	-	-	-	-
Liquidity	C3	**13.48.%**	**10.65%**	**11%**	**16.62%**	**14.95%**	**16.71%**	**13.92%**	**18%**	**12.29%**	**12.11%**	5	4	4	6	6	6	5	6	5	5
Total (out of 54)												49	45	48	52	48	51	48	46	44	36
Rank of the MFI												3rd	6th	4th	1st	4th	2nd	4th	5th	7th	8th

Source: researcher computation 2015

Recommendation

By using the Morgan Stanley approach the credit risk management of sample MFIs was assessed and based on the results the MFIs was ranked. While doing so the strength and weakness of each MFI were identified. In this section each MFI is forwarded the existing weakness and possible solution. To start from ACSI is recommended to increase its loan loss reserve ratio because this ratio is low as compared to the result of the sample and may harm the continuity of the institution in the market. DECSI is recommended to assess its credit risk management especially its PAR 30 and raise the level of ROA ratio. BUSSA and PEACE should try to increase their gross loan portfolio by diversifying their channel of borrowing and try to increase their liquidity ratio so that they can continue in the business activity and cover their current obligations. OCSSCO is recommended to increase the loan loss reserve ratio and minimize the amount of the PAR 30 because these rating factors highly determines the quality of the loan portfolio of an institution as well the continuity of an institution in the market competitively. ADCSI is also recommended to revise it credit risk management process and try to reduce the level of PAR 30 and increase the loan loss reserve ratio and return on asset ratio. SFPI is recommended to increase its size gross loan portfolio, loan loss reserve ratio and liquidity ratio. Based on the finding OMO MFI is commented to extremely decrease its PAR 30, to increase its loan loss reserve ratio, to check whether the institution is using its employees efficiently and effectively and try to increase the liquidity level. Lastly, the researcher recommends Wisdom MFI to decrease the level of PAR 30, increase loan loss reserve ratio, gross loan portfolio, productivity ratio and liquidity ratio.

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