

ASSESSMENT OF CREDIT RISK MANAGEMENT
THE CASE OF OROMIA CREDIT AND SAVING SHARE COMPANY (OCSSCo)
A Thesis Submitted To Department Of Accounting and Finance
In Partial Fulfillment Of the Requirements for the Degree Of
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DECLARATION

I, Hawi Beyene, hereby declare that this thesis entitled“ Assessment of Credit risk management, the case of Oromia Credit and Saving Share Company (OCSSCo)’’is my own work. It is submitted for the partial fulfillment of the degree of Master of Science in Accounting and Finance to the Department of Accounting at Adama Science and Technology University and that it had not been submitted before for any other degree or examination in any other university. All sources I have used or quoted have been indicated and acknowledged by complete references.

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Certification

This is to certify that the thesis prepared by Hawi Beyene, entitled “Assessment of Credit Risk Management: The case of Oromia Credit and Saving Share Company” and submitted in partial fulfillment of the requirement for the degree of masters in Accounting and Finance complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Advisor's Name

Signature

Date

DEDICATION

This research thesis is dedicated to my husband, Ato Eliyas Negera Jemama, and my mother, W/ro. Sinidu Jufar Dame, who have been with me diligently through all my efforts and aspirations to realize my dream of achieving this level of education in my life. You are the most prominent in my life.

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Abstract

This study focused on assessment of credit risk management in Oromia Credit and saving Share Company. The purpose of this study was to examine how far the MFI's under study has organized its operation and service provision to manage credit risk and assesses the status of the MFI's in terms of both quantitative and qualitative indicators of credit risk. Purposive sampling method is used to select respondents located in the headquarters of OCSSCo in order to gather qualitative data on credit risk factors. Primary data is collected through questionnaires administered to a purposively selected senior management staffs of OCSSCO. Quantitative data is collected from the financial statements of OCSSCO covering the period between 2010 up to 2014. The Morgan Stanley credit risk assessment methodology which uses descriptive statistics is used to analyze the data. The quantitative data analysis result showed that, OCSSCo has underscored in Loan Portfolio, Profitability, Sustainability and Operating efficiency, Assets and Liability Management credit risk factors. The result of the qualitative data collected through structured questionnaire when graded with Morgan Stanley's credit risk assessment scales also showed OCSSCo's underscoring in the qualitative credit risk factors. The study suggests that OCSSCO and other MFI's institutions in Ethiopia needs to reorganize and strengthen their operations and service delivery in order to minimize their level exposure to credit risks and better manage credit risk factors.

Key Words: Credit risk, Credit risk management, OCSSCO, Microfinance Institutions.

List of acronyms and abbreviations

BOD	Board of director
CEO	Chief executive officer
CRS	Catholic relief society
CV	Curriculum vitae
ETB	Ethiopian birr
HOD	Head of department
HOU	Head of unit
HQ	Head quarter
HR	Human resource
IT	Information technology
LAN	Local area network
MFIs	Microfinance Institutions
MIS	Management information system
MSE	Micro and small enterprise
NBE	National Bank of Ethiopia
NGO	Non-governmental organization
OCSSCo	Oromia Credit and Saving Share Company
PAR	Portfolio at risk
ROA	Return on assets
ROAA	Return on average assets
TMS	Technical Management Systems
WAN	Wide area network
WEDP	Woreda enterprise development program
VPN	virtual private network

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CHAPTER I

INTRODUCTION

1.1. Background of the study

Microfinance is provision of small amount of institutional credit and saving to jointly liable low-income people, who are unable to obtain loans from formal sector banks for lack of collateral (Rahman 1999, Morduch 2000).

Formal sector banks do not lend to the poor, as it is difficult for them to identify the truly reliable borrowers, monitor their behavior and to make them accountable when it needs (Morduch 2000). It is with the view to overcoming this phenomenon that the microfinance movement emerged by substituting material collateral with social collateral, organized social pressure from group members among the poor to make each member of the group responsible to and for the collective to enhance social solidarity (Rahman 1999, Morduch 2000). Credit risk is directly related to the portfolio of the organization and is one of the most significant risks from a MFI perspective. Whenever a MFI lends to a client there is an inherent risk of money not coming back, i.e. the client turning into a defaulter, this risk is called the Credit risk. Credit risk is simply the possibility of the adverse condition in which the clients does not pay back the loan amount (Rangan 2010). Credit risk is a popular type of risk that both non-financial and financial institutions must deal with. Credit risk occurs when debtor /borrower fails to fulfill his/her obligation to pay back the loans to the principal lender. More formally, credit risk arises whenever a lender is exposed to loss from a borrower, counterparty, or an obligor who fails to honor their debt obligation as they have agreed or contracted". This loss may derive from deterioration in the counterparty's credit quality, which consequently leads to a loss to the value of the debt. (Colquitt 2007) Or in the worst case, the borrower defaults when he/she is unwilling or unable to fulfill the obligations (Crouhy et al. 2006).

Credit risk management is simply the procedures implemented by organizations with the aim of diminishing or avoiding credit risk. Credit risk management has been a hot topic of debate as it is one of the fastest evolving practices thanks to institutional developments in the credit market, diversification of financial institutions participating in the lending business and modern technologies. Credit risk management lies in an expert analysis system, whose objective is to "look at both the borrower and the lending facility being proposed and to assign a risk rating"

(Caouette et al. 2008). Chua et al. (2000) also found that managing credit risk is one of the basic tasks to be done in micro financial institutions, once it has been identified and known. Schreiner (2005, p,207) said, ‘The central challenge of microcredit is to manage the risk that a client will behave ‘badly’, whether by defaulting, paying late, or not returning for repeat loans’. The purpose of this study was to examine how far the MFI’s under study has organized its operation and service provision to manage credit risk and assesses the performance of the MFI’s in terms of both quantitative and qualitative indicators of credit risk management. It also assessed the extent of exposure of OCSSCo to credit risk with regard to quantitative measures of credit risk using the Morgan Stanley methodology.

OCSSCo was first established as Oromia Credit and Saving Rural Schemes Development Project/OCSRSDP/ under Oromo Self-help Organization/OSHO/ on January 1, 1996G.C to provide microfinance service(credit and saving) to farmers in rural areas of Oromia. Later on, the project was shifted to a microfinance institution named Oromia Credit and Saving Share Company (OCSSCo) on August 4, 1997G.C following the issuance of proclamation number 40/96 that determines the licensing and supervision of microfinance business in Ethiopia. Currently OCSSCo is among one of the largest MFI’s in Ethiopia covering 98% of the Oromia regional state in addition to Dire Dawa city administration and Harari regional state. The company has a total number of 296 branches as of June 30, 2014. The Company’s amount of loan disbursement and saving mobilization has grown from 815,929 ETB and 1,150,856 ETB respectively in 1997 when it began its operation to more than 3.5 billion ETB and 2.2 billion ETB respectively in 2014. OCSSCo has a total number of 1,184,183 saving customers; Out of the total saving customers 992,327 are saving loan customers.

1.2. Statement of the problem

The major objective of MFIs is to provide banking and credit facilities to the poor and to micro entrepreneurs, who otherwise would lack access to financial services. However, lending to micro-entrepreneurs is based on a promise to pay without collateral. Such transactions entail risk to the financial institution: when borrowers fail to pay, the default constitutes loss to the institution concerned, which eventually impacts negatively on the capital of the institution.(Akintoye, 2007).

Credit risk in MFIs could arise from various sources, such as from a lack of adequate information about borrowers and their debt capacity, poor loan monitoring and recovery, loan

mismatch by the institutions, and natural occurrences. A high credit risk is likely to affect a MFI so negatively that it might eventually fail to remain a going concern. Chua et al. (2000) also found that managing credit risk is one of the basic tasks to be done in micro financial institutions, once it has been identified and known.

Viganò(1993) writes that, a suitable creditworthiness analysis has become crucial in MFI especially in developing countries. The research question, therefore, is how OCSSCo has fared in view of the foregoing enormous credit risk challenges. Most of the credit risk management practices are designed and being used in the banking sector widely and the application and use of credit risk management tools in the MFIs both as a practice and to assess their practice is not widely used. Like their banking counterparts, MFI's are also exposed to credit risks as a result of their operation. This study is motivated by the compelling factors that are prone to MFIs in particular.

Two major compelling factors that motivated this research undertaking are

- the fact that MFI's are exposed to a unique type of credit risk as a result of the type of clients they serve which is characterized by low income, lack of entrepreneurship skill and experience and lack of capital among others.
- The approach MFI's to lend money without collateral to their clients is the second factors which exposes them to a unique type of credit risks.

MFIs management needs to amplify the significance of risk identification and minimization in their organizations or they can suffer cataclysmic consequences if they are ill prepared for the result of a possible risk. By integrating risk management into MFIs operations, MFIs are better equipped to exploit their assets, thereby enabling MFIs to transform expense activities into undertakings that can produce a positive return (Steinwand, 2000).

According to NBE annual report (2011), OCSSCo is among the three largest MFIs including Amhara Credit and saving institution and Dede-bit Credit and Saving Institutions that account for 65% of the market share in terms of borrowing clients, and 74% in terms of loan provision. Due to this reason it is compelling to assess the credit risk management in OCSSCo and its status in terms of identified credit risk factors as it operating in the largest region of the country and serving the largest number of the population in the country. It is in the light of the foregoing that this research focuses on one such institution, OCSSCo, in this report in order to assess how it has performed in the face of the various aforementioned credit risks. By assessing credit risk status of OCSSCo by employing the Morgan Stanley methodology of credit risk assessment, this

research has tried to demonstrate quantitative and qualitative ways of assessing credit risks of MFI's.

1.3. Objectives of the study

The general objective of this study is the assessment of credit risk management in Oromia Credit and Saving Share Company. The specific objectives of the study are:

- To assess the credit risk position of OCSSCo
- To evaluate the status of OCSSCo in terms of identified Credit risks;
- To identify the main sources of credit risk in OCSSCo

1.4. Research Hypothesis

Based on theories of credit risk management, the researcher expected a negative relationship between an organization's credit risk management practice and the level of credit risk exposure of an organization.

H0: The range of the credit risk of OCSSCo depends on the extent of credit risk management of the company.

H1: The range of the credit risk of OCSSCo doesn't depend on the extent of credit risk management of the company.

1.5. Research Questions

This study has tried to answer the following research questions

- What are the main credit risk management tools adopted by OCSSCo to alleviate and reduce credit risk from their loan portfolios?
- What is the level of credit risk OCSSCo exposure with respect to their loan portfolio?
- What are the main sources of credit risk in OCSSCo?

1.6. Significance of the study

The researcher believes that the result of this research will have the following significances.

- ♦ The result and findings of the study can be used by the management of the MFI under study and other MFI's in Ethiopia for making decisions as the study has presented objective results on credit risk assessment by utilizing systematic and objective research tools.

- ◆ As this study is conducted on one of the largest MFI's in Ethiopia, the results and findings of this study can be used by policy makers to understand the credit risk management status of MFI's in Ethiopia and to identify the major credit risk factors in MFI's
- ◆ It will also serve as a reference for other studies on credit risk management.

1.7. Scope of the study

The Study has focused on the assessment of credit risk management of OCSSCo, using Morgan Stanley's methodology for analyzing MFIs credit risk. It emphasizes credit risk identification and assessment, focusing on such rating factors as loan portfolio, profitability, sustainability, operating efficiency, assets and liability management, management and strategy, internal and operational controls, and growth potentials. The study has particularly focused on the credit risk management of OCSSCo, from 2010 to 2014.

1.8. Limitation of the study

The limitation of this study is mostly related to lack of enough empirical data on credit risk management rating in Ethiopia using Morgan Stanley Methodology.

1.9. Organization of research report

There are five chapters in this specific study. Chapter 1 provides the background of the study, statement of the problem, objectives of the study, hypothesis, significance of the study, scope of the study, limitation of the study and organization of the paper. Chapter 2 reviews the theoretical review as well as empirical review. Chapter 3 presents research design & data type, data sources and data analysis techniques and procedure. Chapter 4 presents the analysis of the data. Chapter 5 presents the major conclusions and recommendations of this research.

CHAPTER II

LITERATURE REVIEW

2.1. Theoretical analysis

MFIs have become widely accepted globally as means of reaching businesses and persons that are either not served at all or that are inadequately served by the normal commercial banks (Oluyomno, 2007). Consequently, much interest has been generated in the institutions in order to obtain closer insight into their operations and performance, in terms of achieving the objectives of their existence. Microfinance, according to Karlan and Goldberg (2007), is “the provision of small-scale financial services to people who lack access to traditional banking services”. Other researchers, however, see the concept more narrowly as referring to “very small loans” to low-income customers for personal businesses, often with small savings. Park and Ren (2001) see micro financing programmers as providing “financial services to individuals traditionally excluded from the banking system, especially women”. Consequently, micro financing has been defined in broad terms as “the supply of loans, savings, money transfers, insurance, and other financial services to low-income people.

MFIs encompass “a wide range of providers that vary in legal structure, mission, and methodology to offer these financial services to clients who do not have access to mainstream banks or other formal financial service providers. Following from the above, MFIs can be seen as diverse institutions, societies or organizations that offer one or other form of financial services (credit, savings, etc.) to the different economically disadvantaged micro-enterprises in an economy. The institutions include friends, cooperative societies, NGOs, and MFIs, among others. The activities and contributions of the institutions have been well documented in literature (Gallardo, 2001; *et al.*, 2005).

2.2. Structure and Characteristics of the Microfinance Sector

Lafourcade *et al.* (2005) identified three categories of MFIs: regulated (banks, regulated non-bank financial intermediaries, and regulated NGOs); cooperatives (financial cooperatives and credit unions); and unregulated (NGOs, non-bank financial intermediaries, MFI projects, and others). In contrast, Udejaja and Ibe (2006) used the consideration of formality to classify MFIs. They identified the following three forms: (i) Formal MFIs, institutions such as development banks, savings and loans, and non-bank institutions that are governed by general company laws, regulations, and guidelines. (ii) Semi-formal MFIs are those MFIs that are subject to commercial and general company laws, but which are not subject to banking regulations, such as NGOs and cooperatives (thrift and credit societies). (iii) Informal MFIs are ‘non-registered groups’, such as traditional *esusu*, that organize thrift and credit services for members. Similarly, Ayayi (2008), in his study of MFIs in Vietnam, classified MFIs into three main categories: formal, semi-formal and informal, based on type of institution, and the regulations and core strategies involved.

2.3. Financial Products of MFIs

Oluyombo (2010) has identified the following four products or methods of financing by MFIs:

- **Deposits:** Deposits are inflow of resources into a bank through the deliberate sourcing of savings (i.e. savings mobilization) from grassroots level up. Deposits may be targeted daily, weekly or monthly savings. Most micro-enterprises, petty traders and market women make deposits on special market days when their sales are relatively high.
- **Credit:** Credit is a loan facility that is normally relatively small, and which is required to provide working capital to micro and small-scale businesses.
- **Collateral substitution:** While normal commercial banks require securities in the form of fixed/financial assets, MFIs normally do not require such collaterals, substituting such assets mostly with group guarantees, commodities and compulsory small savings.
- **Transfers and payment service:** Transfers and payment service involves transferring funds on behalf of customers, or making standing order and other regular payments, such as salaries and pensions, by crediting or debiting their accounts.

2.4. Microfinance Risk Management

According to Fernando (2008), risk management, in relation to a MFI, is “the process of controlling the likelihood and potential severity of an adverse event; it is about systematically identifying, measuring, limiting, and monitoring risks faced by an institution”. Services are

relatively small and simple when new MFIs commence operations. During the setting up of a new MFIS, it tends to be very aware of the financial risks that it faces, causing it to make a conscious effort to mitigate them. However, as MFIs grow in size and diversifies its loan portfolios, different types of risks, other than the obvious financial ones, tend to begin to manifest themselves. Generally, the following three categories of risks that might face microfinance business have been identified: financial, operational, and strategic (Ibid).

2.4.1. Financial risks

Lawrence J. Gitman (1988) defines financial risk as “risk to the firm of being not able to cover required obligations”. In the context of MFIs, such risks are associated with financial intermediation and are concerned with fund disbursement and repayment default. Usually, MFIs, being aware of the financial risks facing them, try to modify their lending approach in order to avoid or minimize the risks. Consequently, they focus more on reducing risks in the form of loans that they offer (transaction risk) and in the structure of the overall loan portfolio (portfolio risk).

2.4.2. Liquidity risks

Such risk arises when a MFIS is unable to meet its cash requirements or payment obligations timely and in a cost-efficient manner. MFIs have to plan the volume of loans to be approved and disbursed, the withdrawal pattern of their saving clients (where MFI is allowed to mobilize deposits), and other fund requirements for operational purposes, and should be able to match available funds against such requirements. In order to reduce liquidity risk, each MFIS branch needs to prepare a daily fund plan that guides the matching of cash inflows from loan repayment and saving deposits (that usually take place in the afternoon) with cash outflows (from draw-downs, customer withdrawals and operational expenses) for the branch on a daily basis. Any positive balance or surplus fund should be deposited with a correspondent bank daily, while any anticipated shortfall should be covered by withdrawing cash from the bank early in the day. No overnight cash should be held by the branch, in order to eliminate the risk of fraud or theft. Fernando (2008).

As in the case of the daily fund plan, each branch should also prepare a monthly fund plan that should outline the amount of loans to be granted, the volume of saving withdrawals from customers, and the anticipated operational expenses. The preparation of the plan assists the finance department to anticipate the funding requirements of the various branches, thereby

allowing the determination in advance of any potential cash shortfall or surplus facing the branches concerned. The funds should then be moved to a position where they can address the situation, while any arising idle funds are invested appropriately (Ibid).

2.4.3. Market risks

Market risks are, by nature, environmental and include risks from financial losses as a result of changes in interest rates, fluctuations in foreign exchange, or mismatch in the management of long-term assets and liabilities (investment risk). Generally, managing credit risk is an integral part of MFI's operating techniques, with reducing the risks requiring a major operational effort. As a provider of loan service, the MFI faces the hazard of imperfect selection of credit clients with little or no collateral security (Armendariz de Aghion & Morduch, 2005). Stiglitz and Weiss (1981) observe that wrong selection may occur when the bank has insufficient information to determine between good and bad customers. Therefore, Mersland and Strøm (2007) conclude that such knowledge is particularly important for MFIs, whose customers frequently lack a long, or any, credit history while a loan tends to be given without any collateral and the borrower is unlikely to make repayments without strenuous monitoring efforts.

Therefore, a pragmatic microfinance approach to dealing with such a serious challenge involves engaging in group lending, character referencing, and continuous building up of customers' credit history, in order to establish realistic and workable loan arrangements. In this regard, the following measures, among others, have been found to be most effective Oguntoyinbo (2011)

- ***Building relationships:*** A MFIS should emphasize the need to build and to maintain a strong and cordial relationship with its customers. Loan officers should visit their clients regularly, not only to collect installments, but also to relate closely to them in order to understand the challenges of their businesses and to assist them with their most pressing concerns. The experience of MFIs over the years has indicated that, in a lending situation without collateral, a critical success factor for timely loan repayment is to build strong ties with the clients involved.
- ***Engaging in group lending:*** While MFIs normally grant credit to individual businesses and persons, clients are frequently required to form themselves into groups of about 8 to 10 members (e.g. cooperatives) that nominate specific members for loan awards. Ultimately, the group members are expected to act as enforcers of the repayments of the loans by the individual members, by means of group sanction, if a member defaults in making repayments. In terms of such an arrangement, the failure of a single member is

likely to affect the credit rating of the whole group, so that social pressure forces the non-performing member to make amends in terms of timely repayment. Furthermore, the measure serves as a group reference, as only those members who are trusted to make timely repayment tend to be recommended by a group.

- **Total borrower verification:** The information provided by credit customers must be comprehensively verified. Loan officers are dispatched to verify each client's information, including business location, place of residence, the accuracy of information supplied, and the capacity of the prospective borrower to pay back the loan. Investigations include verifying the standing of the credit customer in the society with his or her neighbors and peers
- **Product standardization:** Loan products and services have to be standardized companywide in order to ensure that the company's loan portfolio consists of homogeneous products to facilitate easy appraisal, management and monitoring.
- **Regular reporting:** Portfolio performance has to be regularly monitored and appraised, and reports sent to the head office. Such reports are summaries that are intended for management as a means of providing overview information required to track vital progress indicators. From such reports, variations or exceptions can easily be identified, allowing for the institution of necessary corrective measures (Ibid).

2.4.4. Operational risks

Operational risks arise because of possible system or human errors in service or product delivery. Potentially, unexpected financial losses might occur as a result of a variety of issues, such as inadequate or deficient information systems, operational challenges, incompetent personnel, inadequate skill, deliberate breaches, or fraudulent tendencies. The management of such risks requires that the internal control framework is effective, the information technology (IT) used is adequate, the integrity of the employees is guaranteed, and the operating processes are streamlined. Mersland and Strøm (2007)

Given the various sources of operational risk, the most obvious is the interaction of loans and clients involving financial transactions. In the case of normal traditional banks, the staff undertaking credit assessment is usually well trained, with multiple levels of crosschecking put in place. Unfortunately, in the case of MFIs, there are usually numerous short-term loans of small amounts, making elaborate crosschecking not cost-effective. As a result, the possibility of

both error of assessment and deliberate fraud is relatively high. In order to reduce both such risks, MFIs tend to engage in some of the measures described below (Ibid).

Use of a 'daily collection board': The 'daily collection board' is a large board on which is written up the amount of money due for collection each day, including both loan installments and savings collection, with the names of the respective loan officers written against the collections to ensure transparency. The maintenance of such a board enables details regarding the daily collection targets for the various loan officers to be available at a glance and also helps to prevent the possibility of misappropriation of money by the officers concerned.

Collections in group meetings: The system requires that all savings and loan installments are collected during group meetings and in full view of the members concerned. In terms of such an arrangement, the clients are able to witness all financial transactions and, thereby, to increase their level of confidence in the organization. The possibility of fraud is also minimized.

Rotation of loan accounts: Rotating the clients' accounts within the same branch among loan officers every six months helps to ensure transparency, as no particular officer has a monopoly of knowledge of client accounts. In addition, such rotation helps to ensure accuracy in record-keeping, as well as compelling a six-monthly review of accounts, helping with the detection of error, and cutting down on the possibility of fraud.

Periodic review of passbooks: Such periodic review requires that each branch manager check all the clients' passbooks quarterly to ensure that the records of transaction in the passbooks agree with the records in the books that are held at the branch. The procedure is important for checking that no transactions are either erroneous or fraudulent.

Disbursements made from branch offices: The disbursement of loans to clients is made in the branch office concerned, in the presence of loan officers employed at the branch, as well as the branch manager. The client, the loan officer and the branch manager sign the loan application form, indicating that disbursement of the sum approved has been verified by all those who are immediately concerned with making the loan. The procedure helps to ensure that the whole loan amount is received by the client in question and that no portion of it is misappropriated by any officer.

Internal and external audits: An internal audit is carried out on a continuous basis, while external audits, which serve as counterchecks, are carried out periodically, on a biannual or annual basis (Ibid).

2.4.5. Strategic risks

Inadequate governance structure in a MFIS results in ‘strategic risks’, which might also arise if the MBF’s market reputation suffers due to the mismanagement of operations or client interactions, or other external market factors. Fernando (2008).

2.5. Assessing the Performance of MFIs

Several studies have been undertaken into the performance of MFIs world over. MFIs have been widely accepted as forming an important platform for poverty alleviation through facilitating accessibility to banking services by the poor and underprivileged, who normally cannot meet the collateral requirements of traditional banks, due to poverty, their low level of education and low financial status. Consequently, much interest has been generated in how the institutions successfully operate to meet their lofty societal objectives (Oluyombo, 2010). The question, therefore, has arisen as how best to appraise their performance.

According to Ferro Luzzi and Weber (2006), measuring the performance of MFIs is an onerous, multidimensional task. The two researchers, in common with Anyanwu (2004), argue that, since MFIs face the double challenge of not only providing financial services to the poor (the extent of their outreach) but of also having to cover their costs to avoid bankruptcy (financial sustainability), with both dimensions having to be taken into account in assessing their performance.

Outreach is defined as the ability of a MFI to provide high-quality financial services to a large number of clients (Youssoufou, 2002). The indicators of outreach performance include changes in the number of clients, the percentage of female clients, the total value of assets, the amount of savings on deposit, the value of outstanding loan portfolio, the average savings deposit size, the average credit size, and the number of branches, among other indicators. Sustainability, in contrast, requires MFIs to meet all transaction costs, including loan losses, financial and administrative costs, among others, with some return on equity, which helps to ensure the renewal and self-sustenance of the institutions concerned (Anyanwu, 2004).

In their study of MFIs in Africa, Lafourcade et al. (2005) considered outreach and financial performance (sustainability) as criteria in appraising MFI performance.

According to the researchers specified, efforts to extend microfinance services to those who, in the past, tended to be underserved by financial institutions, are classified as outreach. They considered measuring outreach in terms of breadth – the number of clients served and the

volume of services (i.e. total savings on deposits and total outstanding portfolio) – or depth (referring to the socioeconomic level of clients that MFIs reach). Thus, MFIs might achieve deeper outreach by targeting those client groups that are most vulnerable, such as women and/or those with a very low income. Financial performance: In appraising Africa MFIs, Lafourcade et al. (2005) identified variables that they considered crucial to their sustainability, including cost (which has to reduce), output (which has to increase), and profitability (which incentivizes the MFIs to operate). Consequently, the following variables will identify for measurement and appraisal:

- **Return on assets (ROA)** is a measure of profitability.
- **Efficiency and productivity:** The efficiency of a MFI is a measure of its ability to minimize its cost of service delivery, which can be calculated in terms of costs per borrower and costs per saver. Productivity is a combination of outreach and efficiency. Productive MFIs maximize the services that they can offer with their minimal resources, including staff and funds. In terms of such thinking, productivity is often measured in terms of borrowers per staff member.
- **Portfolio quality:** The loan portfolio is a MFI's most important asset. Portfolio quality reflects the risk of loan delinquency and helps to determine future revenues. Such quality also indicates a MFI's ability to increase its outreach and to serve its existing clients. MFIs therefore measure portfolio quality as portfolio at risk over 30 days (PAR >30 days).

Corporate governance is considered an important variable in achieving MFI corporate goals. For most MFIs, goals include extending service to more clients and to a wider range of lower income groups, with the latter being their main outreach target (Helms, 2006), and achieving financial sustainability and independence (i.e. financial performance).

Internal corporate governance concerns the supervision and control of management by a board (Becht, Bolton & Roell, 2003; Fama & Jensen, 1983; Hermalin & Weisbach, 2003). The soundness of the relationship between a board and the owners of a MFI depends on how well the board considers the interests of the owners, the broad knowledge and level of information possessed by the board, and whether or not the board can take far-reaching decisions (Bohren & Strøm, 2005). The better that a board performs on the above-mentioned dimensions, the more soundly the MFI concerned is able to perform financially. It is also argued that the board of a MFI tends to perform better if the chief executive officer (CEO) and the board chairperson are

not one and the same person, and if there are more external directors to make the board more independent. Such is the case due to independent boards being likely to monitor CEOs more effectively and to keep them on their toes on behalf of the shareholders concerned. Therefore, residing the positions of CEO and chairperson in one person (i.e. resulting in CEO-chairperson duality) might lead to the entrenchment of the CEO (Hermalin & Weisbach, 2003). Such entrenchment might lead the individual concerned to pursue policies that elevate his or her personal benefits over corporate interests. It must be kept in mind; however, that Brickley, Cole and Jarrell (1997) did not find that firms with a CEO-chairperson split outperformed those with a CEO-chairperson duality.

2.6. Causes of high credit risk and managing them

MFIs have to undertake the credit risk; the question is why different MFIs have different degrees of credit risk indicated by their different values of PAR. Even in the same geographic location with similar client profiles, different MFIs have different values of PAR, reflecting different degree of credit risk they are exposed to. This leads us to an important conclusion that the credit risk is a function of multiple variables of which client profile is only one. In fact risk emanates from reasons external to the organization such as client running away, any accident happening with the client migration, loss of business/crop etc and reasons internal to the organization such as MFIs policies, processes, systems and culture. Some of the major reasons for delinquencies observed in MFIs are discussed below. (Rangan, 2010)

Poor MIS – MIS on loan outstanding, collection etc plays a critical role in generating reports and making them available in minimum time to the right people. If a MFI does not have a good MIS, it may not know how much to collect, it may not know it's over dues or age-wise overdue. A with weak reporting system on overdue will result in delayed input on overdue to the top management and consequently result in delayed action by the top management. Sometimes weak MIS also results in generation of inaccurate report. If the correct and timely information is not generated and report the problem cannot be dealt with resulting in delinquencies getting aggravated

Poor screening of borrowers – Poor choice of clients results in delinquencies. If client with bad reputation or history of defaults are selected then it can result in delinquencies

Weak appraisal – Poor or weak appraisal of loans is one of the major reasons for delinquencies. Before giving any loan, client's repaying capacity, status of business and cash flows must be assessed. This helps in taking loan decision that whether a client should be given a loan and about appropriate volume of loan. Poor appraisal can lead to loans going to unworthy clients or disbursement of higher amount loans. Loans given beyond repaying capacity puts clients in stress situation as they do not have sufficient income to repay installments resulting in delinquencies.

Unclear communication about product and methodology- Clear communication of policies and procedures is very important. If the clients do not know the policies and procedures it can result in confusion and delinquencies even if clients are capable of paying (Ibid).

No immediate follow-up – MFI having strong overdue follow up system can control over dues to a large extent. It also gives clear message to the clients that the MFI is serious on repayments and thus prevents the future occurrences. MFIs which are weak in overdue follow up give a signal that it is not serious in overdue collection resulting in other clients to imitate. Also if the over dues are immediately followed up the chances of recovery are quite high but if the case becomes old then the chances of recovery also go down.

Mixing other social activities with micro-finance – Sometimes delinquencies may also result if MFIs carry out grant based activities along with micro-finance with the same set of clients and with same staff. Mixing activities of two different natures confuses the client wherein one activity is being provided free while repayment is asked on micro-finance. This confuses the clients who may think that loans to be given to them may also be grants for them and they need not return it. Also enforcing repayments and discipline through a staff who is involved with the community in other social activities also will be very difficult and hence results in delinquencies.

Poor product – Delinquencies occur if the product is not suitably designed. If the repayments do not match with the cash flow of the client then it may result in delinquencies. Client cash flow means that when do the clients receive income and when they need to spend. In agriculture economy, clients may need to spend during sowing season and hence need money. Other

important point is if the repayment period is too long or too short or frequency of payments and installments size are not well thought off, it can all lead to delinquencies.

Natural disasters – Delinquencies can also happen as an aftermath of a natural disaster such as flood, drought, earthquakes or epidemic.

Corruption – Corruption at field staff level such as taking bribe for loans or frauds can result in delinquencies. A staff taking favor from clients cannot enforce discipline or strict repayments. If the staff is committing fraud it will also show up as delinquency.

De-motivated employees – If the working conditions or incentive systems are not good, it will result in staff de-motivation and ultimately delinquencies. Motivated staff can make a lot of difference in enforcing policies in the field but if staff is de-motivated then they will not put sufficient efforts to enforce policies with the clients resulting in overdues.

Thus we see that delinquencies do not occur, exclusively on account of client related reasons. Much of it can be attributed to internal systems and policies of the MFIs. It also means that if internal reasons related to the organization are taken care of then delinquencies can be controlled to a large extent. It is also important to understand why MFIs, investors and assessment agencies give so much importance to delinquencies and portfolio quality. This is one of the most (if not 'the' most) critical parameter for investors and assessors to rate an MFI and taking lending decisions. This is because portfolio is the most important asset for the MFI and the only or the main source of its income. Any problem with the portfolio can adversely affect the MFI in a number of ways. In the next section we will see what different factors affecting delinquency can have on an MFI (Ibid).

2.7. Morgan Stanley's methodology for assessing MFI credit risks

The new comprehensively developed Morgan Stanley methodology for assessing MFI credit risks has been well documented in the Journal of Applied Corporate Finance (Arvelo et al., 2008). Morgan Stanley developed a credit analysis and rating methodology that assists organizations to assess the credit risk of MFIs. The approach considers certain challenges that are specific to MFIs, such as their "country risk, data availability and minimal default history". The approach, which is not currently prevalent in the microfinance industry, is informed by the work of major rating agencies, including Standard and Poor, Planet Finance, Micro Rate, Micro-

Credit Ratings International Limited (M-CRIL), and Credit Rating Information and Services Limited (CRISL), as well as by that of such major MFIs and Camel, among others. (Ibid)

Morgan Stanley identified the following rating factors that are considered critical during the assessment of the credit risks of microfinance organizations:

- loan portfolio;
- profitability, sustainability and operating efficiency;
- asset-liability management;
- management capability and strategy;
- internal systems and reports;
- operational procedures and controls; and
- Growth potential.

Of the seven factors, Morgan Stanley defined 23 indicators, with each indicator being a ratio calculated to measure certain characteristics. The first three of the factors (see above), which are largely ‘quantitative’, have 11 indicators well defined, while the last four factors, which are largely ‘qualitative’, have 12 indicators. Each indicator is rated on a scale of 1 to 6, with a grade of 6 indicating excellent performance and a grade of 1 indicating poor performance.

See Table 9.1 (below) for the details.

	Definition of indicators	Grades
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Table 2.1: Morgan Stanley’s methodology for analyzing MFI credit performance and rating factors

		6	5	4	3	2	1
Loan Portfolio	A1: PAR = (Outstanding loans with arrears over 30 days + restructured loans)/Gross loan portfolio	<3%	<6%	<9%	<12%	<15%	Above <15%
	A2: Write-offs = Total loan written off over the last twelve months/ Average loan portfolio	<2%	<3.5%	<5%	<7%	<10%	Above <10%
	A3: Size of portfolio = Gross loan portfolio	>300M	>250M	>100M	>50M	>10M	Less than 10M
	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 + Loan write-offs + operating expenses)	>120%	>115%	>110%	>100%	>90%	Below 90%
	B2: Return on average assets (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: Foreign currency exposure = (Foreign currency debt)/(Total financial debt)	<15%	<20%	<35%	<50%	<65%	Above 65%
	C3: Liquidity = (Cash + Short-term investment)/(Gross loan portfolio)	>15%	>12%	>9%	>6%	>3%	Below 3%
Management quality and strategy	D1: Quality of senior management and board						
	D2: Strategy and business plan (including competitive landscape)						
	D3: Quality and support from shareholders and network						
	D4: Human resource (HR) management						
Internal systems and reporting	E1: Quality of management information systems (MISs)						
	E2: Quality and speed of data feed						
	E3: Quality of reports and distribution/Analysis of 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-entrepreneurs towards micro loans						

Source: Ayayi, 2008.

Morgan Stanley not only computed the required ratios, but it also computed benchmark results for the seven factors with which local results can be related to obtain global comparisons. Any MFI that obtains scores that are below the benchmark results on any factor is regarded as having performed poorly. In other words, the benchmarks concerned represent the minimum requirement for a MFI to be regarded as having performed well on any of the respective indicators. Table 9.2 below contains Morgan Stanley's benchmark ratios.

Table 2.2: Rating factors and Morgan Stanley's benchmarks

Rating factors	Morgan Stanley's benchmark (%)
Loan portfolio Profitability, Sustainability, Operating efficiency	24
Asset/Liability management	23
Management and strategy	7
Systems and reporting	19
Internal/Operational controls	11
Growth potential	10
	6

Source: Ayayi, 2008

2.8. Empirical analysis on microfinance and credit risk management

In his study undertake Amhara saving and credit microfinance, Getaneh (2005) said that the fact that the Ethiopian government has established the regulatory framework early-on in the development of the microfinance industry has helped to lay out the roadmap for the development of the sector. In particular, the provision allowing MFIs to mobilize small savings from the public has enabled them to finance a substantial portion of their portfolio from internally generated sources. Subsequent improvements in the regulatory framework include the revision of the loan size ceiling for individual borrowers, the revision of repayment periods on loans from one year to two years, and removal of the interest rate ceiling on credit. This removes some of the key regulatory problems faced by the industry. But more needs to be done. The Ethiopia MFIs still have no way of learning new insights from foreign banks, yet indirect foreign ownership cannot be fully controlled, and not enough

Ethiopian-owned MFIs are forthcoming. The poor still do not have enough microfinance service providers from which to choose. While the interest rate ceiling on credit has been removed, a minimum on interest to be paid for savings persists, hampering savings mobilization in remote rural areas. Existing microfinance institutions, while targeting to reach the poor, are serving mainly men. Thus, the regulatory framework not only needs to find ways and means of helping the industry become more competitive and efficient in delivering flexible financial services to the majority poor, the regulatory mechanism also needs to be better equipped to supervise and monitor the industry.

As the risk management framework for microfinance institution in 2000 stated that ways to measure and monitor microfinance risks. By including regulators in discussion forums, inviting them to conferences and sending them the latest research findings, microfinance practitioners can work to improve regulators' knowledge and understanding of MFIs and will simultaneously gain an understanding of their perspectives and limitations. The importance of risk management is gaining recognition in the microfinance arena. Donors, regulators, technical assistance providers and practitioner networks can all promote the concepts of risk management, but it is up to board of directors and managers of microfinance institutions to take the necessary steps to implement effective risk management strategies. This publication offers the initial framework from which MFIs can begin to build a risk management foundation that is solid yet dynamic and responsive in an ever changing risk environment. By proactively taking on risks, MFIs can continue to advance the frontier and provide a wider range of services to a larger number of low-income clients around the world.

According to wolday (2009) stated that the challenges of microfinance in Ethiopia to address risk and the way forward to this problems. Lack of client awareness, limited knowledge and understanding of the MFIs on the magnitude of the risks, limited insurance products, limited capacity of the MFIs and insurers to develop insurance products, absence of a regulatory framework to provide micro-insurance and MFIs focusing on insuring credit not protecting the clients are the main challenges of MFI to address. The forward points to these challenges are conduct a study to identify and prioritize risks of MFIs, create awareness on the importance of micro-insurance, develop preventive tools to mitigate risks, develop insurance products for the insurable risks and Initiate the development of a clear regulatory framework to facilitate micro-insurance.

CHAPTER III

REASERCH METDOLOGY

3.1. Research Design

This research has used a case study approach of assessing credit risk management focusing on OCSSCO. The period of study covered by the study is five years, specifically from year 2010 to 2014 of operation of OCSSCO.

3.2. Data Sources and Method of Data Collection

When it comes to the data used in this study, both qualitative and quantitative data is used to gather the required data for the assessment of credit risk management in OCSSCO. To gather quantitative data secondary data source is used and for the qualitative data primary data is collected.

3.2.1. Data Source and type of data

Quantitative data is collected from the secondary data sources, primarily from published audited accounts of OCSSCo (Income Statement and Balance sheet). Quantitative data is collected in order to obtain adequate information with regard to OCSSCo's Loan Portfolio, Profitability, Sustainability and operating efficiency and asset-liability management. Qualitative data for the study is collected through self-structured questionnaire that is administered to OCSSCo's senior management level staff found at the head office. Qualitative data is gathered in order to obtain adequate information regarding OCSSCo's management and strategy, systems and reporting, Operating procedures and internal controls and finally on growth potential of the company.

3.2.2. Method of Data Collection

Secondary data

This research has used a case study approach, focusing on OCSSCO. In order to ensure the reliability and the quality of the data, the study has restricted the period of investigation as of the year 2010 to 2014 of operation of OCSSCO during five consecutive years. The study has extensively used data from *secondary sources*, consisting of financial statements and OCSSCO reports, due to Morgan Stanley's credit analysis and rating methodology using data in the form of financial and market information. Specifically, the following documents have been used:

- published audited accounts and reports from 2010 to 2014;

- OCSSCO quarterly reports;
- OCSSCO websites;
- The corporate profile of OCSSCO.

Primary data

This study has made use of primary data using questionnaires administered by selected key OCSSCO staff using purposive sampling based on their related responsibility to credit risk. The study has tried to include all targeted respondents in the head office as much as possible to gather required data. Accordingly the study questioner is administered to heads of departments, heads of units and responsible program officers. Different personnel of the company are interviewed, that included loan account officers, heads of department, branch managers and heads of unit. The primary data collection is geared towards obtaining information on the qualitative risk factors.

3.3. Sampling Method

In order to gather qualitative data for the study a sampling procedure is adopted in this research. The sampling method adopted by this research is a purposive sampling method. The target population from which the sample is drawn is found in the head office of OCSSCo. The sample is drawn from a total of thirteen senior management level staffs that are found in the head office of OCSSCo. Out of the thirteen senior management level staff, five staffs are purposively selected based on the degree of relation to the topic of the research study. Accordingly, Operations department head, Audit and Internal Control division head, Human resources department head, IT and MIS department head and planning and program development division head are selected in order to gather qualitative data regarding credit risk management.

3.4. Data Analysis Method

The study has adopted the Morgan Stanley methodology of credit risk rating in Microfinance Institutions. The Morgan Stanley method uses seven factors of credit risks they are inherent to Microfinance Institutions. Three of the factors are quantitative and seven of them are qualitative in nature. Under each quantitative and qualitative credit risk factor, there are indicators that measure each of the credit risk factors. A detail list of the Morgan Stanley credit risk rating factors and indicators is presented below.

Morgan Stanley's quantitative risk factors

Rating factors	Indicator definitions
Loan portfolio	A1: $\text{PAR} = (\text{Outstanding loans with arrears over 30 days} + \text{Restructured loans}) / \text{Gross loan portfolio}$ A2: $\text{Write-offs} = \text{Total loan write-off over the last twelve Months} / \text{Average gross loan portfolio}$ A3: $\text{Size of portfolio} = \text{Gross loan portfolio}$ A4: $\text{Loan loss reserves} = \text{Loss reserves} / \text{PAR30}$
Profitability, Sustainability, Operating efficiency	B1: $\text{Sustainability} = \text{Operating income} / (\text{Financial expenses} + \text{Loan Loss provisions} + \text{loan write-offs} + \text{operating expenses})$ B2: $\text{ROAA} = \text{Net income} / \text{Average assets}$ B3: $\text{Operating efficiency} = \text{Total operating expenses} / \text{Average Gross loan Portfolio}$ B4: $\text{Productivity} = \text{Numbers of borrowers} / \text{Total headcount of staff}$
Asset and liability Management	C1: $\text{Leverage} = \text{Total liabilities} / (\text{Net worth} + \text{Subordinated debt})$ C2: $\text{Foreign currency exposure} = (\text{Foreign currency debt}) / (\text{Total Financial debt})$ C3: $\text{Liquidity} = (\text{Cash} + \text{short-term investment}) / \text{Gross loan Portfolio}$

Morgan Stanley's qualitative risk factors and indicators

Management and strategy	D1: Quality of senior management and board D2: Strategy and business plan (including competitive Landscape) D3: Quality and support from shareholders and network D4: HR management
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Systems and reporting	E1: Quality of MISs E2: Quality and speed of data feed E3: Quality of reports and distribution/Analysis of reports
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Internal and operational Controls	F1: Operational procedures F2: Internal controls
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Growth potential	G1: Regulatory environment and government involvement G2: Number and density of micro-entrepreneurs G3: Behavior of micro-entrepreneurs towards micro loans
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Benchmarks and Rating Methodology

The Morgan Stanley methodology has set minimum standards for assessing the credit risk rating factors and the indicators used for measuring the credit risk factors. The Morgan Stanley methodology uses ratio, interval and nominal scales of measurement in measuring each indicator under each credit risk factor. Detail list of each of the 23 credit risk indicators and their respective grading is presented in the table below. As it is described in the table below, the Morgan Stanley methodology sets minimum benchmark scores of credit risk management in MFI's and assigns six grades, i.e. 6 being the highest grade and the grading descends to 1 as the poorest grade. Table 3.1 provides a detailed description of each credit risk indicator and its respective grade scale.

Table 3.1:Credit risk indicators grading scale of Morgan Stanley Methodology

SN	Indicators	Grades					
		6	5	4	3	2	1
1	PAR	<3%	<6%	<9%	<12%	<15%	Above <15%
2	Write-offs	<2%	<3.5%	<5%	<7%	<10%	Above <10%
3	Size of portfolio	>300M	>250M	>100M	>50M	>10M	Less than 10M
4	Loan loss reserves	>85%	>75%	>65%	>60%	>55%	Below 55%
5	Sustainability	>120%	>115%	>110%	>100%	>90%	Below 90%
6	Return on average assets (ROAA)	>3%	>2%	>1%	>0%	>-2%	Below -2%
7	Operating efficiency	<20%	<25%	<30%	<40%	<50%	Above 50%
8	Productivity	>200%	>190%	>170%	>145%	>130%	Below 130%
9	Leverage	<5x	<6x	<7x	<8x	<9x	Above 9x
10	Foreign currency exposure	<15%	<20%	<35%	<50%	<65%	Above 65%
11	Liquidity	>15%	>12%	>9%	>6%	>3%	Below 3%
12	Quality of senior management and board	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
13	Strategy and business plan (including competitive landscape)	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
14	Quality and support from shareholders and network	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
15	Human resource (HR) management	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
16	Quality of management information systems (MISs)	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
17	Quality and speed of data feed	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
18	Quality of reports and distribution/Analysis of reports	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
19	Operational procedures	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
20	Internal controls	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
21	Regulatory environment and government involvement	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
22	Number and density of micro-entrepreneurs	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking
23	Behavior of micro-entrepreneurs towards micro loans	Excellent	Very good	Good	Satisfactory	Lacking	Severely lacking

Source: Arvelo, 2000

CHAPTER IV

RESULT AND DISSCUTION

4.1 Research Design

This chapter presents the findings of the study and interprets the results of the analyses in respect to Morgan Stanley's credit indicators of OCSSCo over a period of five years, from 2010 to 2014. Before presenting and discussing the results, the profile of OCSSCo is briefly presented.

4.2 Analysis of quantitative risk factors

Morgan Stanely methodology uses three factors, i.e. loan portfolio, Profitability, sustainability, operational efficiency and productivity and asset & liability management which are largely 'quantitative', have 11 indicators well defined. Each indicator is rated on a scale of 1 to 6, with a grade of 6 indicating excellent performance and a grade of 1 indicating poor performance. Data and result on quantitative risk factors of OCSSCo is presented below.

4.2.1 Loan portfolio

The Morgan Stanley methodology focuses on loan portfolio rating because loan portfolios are the primary assets of MFIs and as such the loan portfolio factor rating can show the level of credit risk exposure of a MFI (Arveloet *al.*, 2008). In loan portfolio rating Morgan Stanley considers four major rating indicators, i.e. portfolio at risk, write offs, portfolio size and loan loss reserves. Data and result on loan portfolio is presented in the table 4.1 below.

Table 4.1: Loan portfolio of OCSSCo

Factor	Definition	Variables	Year					Average
			2010	2011	2012	2013	2014	
Loan portfolio	PAR>30days	Outstanding loan over 30 days (In Birr)	14,582,787	39,417,445	23,564,645	43,141,619	96,864,188	43,514,137
		Rescheduled/Restructured loan	0	0	0	0	0	0
		Total gross loan portfolio (In Birr)	1,019,348,445	1,258,340,415	1,595,734,363	2,420,905,071	3,545,909,695	1,968,047,598
	PAR >30 days (%) PAR = (Outstanding loans with arrears over 30 days +Restructured loans)/Gross loan portfolio		1.43	3.13	1.48	1.78	2.73	2.11
	Write-off	Total write-offs over last 12 months	0	0	0	0	0	0
		Average loan portfolio (In Birr)	1,019,348,445	1,138,844,430	1,427,037,389	2,008,319,717	2,983,407,383	
	Write-off (%) Write-offs = Total loan write-off over the last twelve Months/Average gross loan portfolio		0	0	0	0	0	0
	Size of portfolio	Gross loan portfolio	1,019,348,445	1,258,340,415	1,595,734,363	2,420,905,071	3,545,909,695	1,968,047,598
	Size of portfolio (number) Size of portfolio = Gross loan portfolio (In Birr)		1,019,348,445	1,258,340,415	1,595,734,363	2,420,905,071	3,545,909,695	1,968,047,598
	Loan loss reserves	Loan loss reserves (In Birr)	2,598,304	9,769,834	760,259	40,168,068	26,759,577	16,011,208
		PAR >30 days (In Birr)	14,582,787	39,417,445	23,564,645	43,141,619	96,864,188	43,514,137
	Loan loss (%) Loan loss reserves = Loss reserves/PAR30		17.82	24.79	3.23	93.11	27.63	33.31

Sources: 1. OCSSCo Financial statement and Operations reports
2. Morgan Stanley's benchmark obtained from Ayayi, 2008.

PAR: PAR over 30 days (PAR >30) measures the managerial recovery effort of loans more than 30 days past due. PAR >30 also measures the quality of loan portfolio. A low PAR >30 implies that the possibility of recovery is very high and that the tendency for the loan to go bad is very low. In other words, the quality of the portfolio concerned is very high. The reverse is the case when the PAR >30 days is high. Morgan Stanley methodology considers six grades of PAR>30 levels: <3%, <6%, <9%, <15% and above 15%, graded as best and worst in ascending order.(Arveloet *al.*, 2008)

OCSSCo's performance with regard to PAR indicator of the loan portfolio factor of credit risk rating is found to be excellent as the average PAR >30 over the five-years period was 2.11%. This has put OCSSCo above the Morgan Stanley's first grade of PAR scale. The result from each year and average PAR >30 of OCSSCo's loan portfolio shows that; the company has a better loan monitoring and managing practice. The PAR only rose above Morgan Stanley's benchmark of <3% in 2011 and for the rest of the years considered under this study the PAR remained below the <3% benchmark. The company's performance in terms of excellent loan portfolio management is graded in the highest grade of PAR>30 according to Morgan Stanley credit risk rating factor for MFIs.

Write-offs: The write-off ratio measures the amount of bad loans in arrears of more than 30 days written off. Morgan Stanley methodology considers six grades of write-off levels: <2.0%, <3.5 %, < 5.0%, <7.0%, <10.0%, above 10.0, graded as best and worst in ascending order.(Arveloet *al.*, 2008)

No write-off occurred during the study periods covered by this research in OCSSCo. The absence of write-offs during the study period shows that the company chooses to exert more effort on loan recovery options. By avoiding loan write-offs and by exerting more effort on loan recovery options the company retains its loan portfolio assets as much as possible.

Size of portfolio: The size of a MFI's loan portfolio can provide valuable insight into the institution's stability, experience, future growth potential and average loan balance. Morgan Stanley's credit analysis and rating methodology makes use of six grades of portfolio size in US\$:>300 million,>250 million, >100 million, >50 million, >10 million, less than 10 million, considered as best and least in descending order.(Arveloet *al.*, 2008)

It was found that during the five year study periods covered by this research, the portfolio size of OCSSCo has showed a significant increasing trend. The average OCSSCo's loan portfolio size

is Eth. Birr 1,968,047,598 which equal US\$98,402,380 this puts OCSSCo's at the fourth best grade of Morgan Stanley credit risk rating factor. The significant increase in OCSSCo's loan portfolio can be observed when comparing the growth of OCSSCo's loan portfolio from 2010 to 2014 which is Eth. Birr 1,019,348,445 to 3,545,909,695. This result shows that OCSSCo is utilizing its growth potential to a great extent in terms of increasing its loan portfolio to reach increased number of borrowers.

Loan loss reserve: The evaluation of a MFI's loan loss reserve levels and policies allows a credit analyst to determine how well a MFI can cope with estimated loan losses and, in a broader sense, understand a MFI's level of financial responsibility. A MFI's loan loss reserves should ideally cover any anticipated losses. Since PAR 30 serves as a conservative estimate of potential loan losses, when looking at loan loss reserves in the context of PAR 30. Morgan Stanley rating methodology contemplates six grades of the loan loss reserve ratio: >85.0%, >75.0%, >65.0%, >60.0%, >55.0%, below 55.0%, ranging from excellent to poor. (Arveloet *al.*, 2008)

In OCSSCO, provision for loan loss relative to PAR>30, has fallen short of the Morgan Stanley grading scale in this regard, except for only one year out of the total five year covered under this study. The average loan loss reserve ratio grade 33.31% for OCSSCo during the study period however remained significantly below the least poor grade scale of the Morgan Stanley Credit risk rating factor which puts the overall performance of the company in this regard at the least poor level. It is only in 2013 that OCSSCo achieved the highest ratio of loan loss reserve relative to PAR>30 which is >85%. The result shows that OCSSCo has not allocated adequate provision to cover for anticipated loan losses.

4.2.2. Profitability, sustainability, operational efficiency and productivity

This rating factor, which is almost as important as the Loan Portfolio rating factor, comprises a set of variables that are used to assess the financial viability of MFIs. The Morgan Stanley methodology has set minimum expected levels of profitability and cash flow sustainability, while also taking account of a MFI's ability to leverage its operational platform and flexibility in the event of deteriorating margins. Within this rating factor, it relies mainly on the following four indicators: sustainability; return on average assets; operating efficiency; and productivity (Arveloet *al.*, 2008). The data and result from the study is presented in detail in the table 4.2 below.

Table 4.2: Profitability, Sustainability, Operational efficiency and productivity data and results

Factor	Definition	Variables	Year					Average
			2010	2011	2012	2013	2014	
Profitability, Sustainability, Operating efficiency, Productivity	Sustainability	Operating income (In Birr)	95,025,040	158,146,161	195,937,761	258,419,243	413,217,024	224,149,046
		Financial expenses Loan loss provision Write-offs Total expenses Operating expenses Staff expenses(In Birr)	92,260,553	124,315,911	153,140,805	254,564,484	381,376,241	201,131,599
	Sustainability (%)		103	127.21	127.95	101.51	108.35	113.60
	ROAA	Net income (In Birr)	45,883,818	91,992,137	106,212,488	124,729,483	178,447,290	109,453,043
		Total assets (In Birr)	1,388,149,603	1,690,984,565	2,113,878,371	2,901,898,049	4,566,488,272	2,532,279,772
		Average assets (In Birr)	1,388,149,603	2,233,641,886	2,747,923,751	3,564,827,396	5,185,142,185	3,023,936,964
	ROAA (%)		3.31	4.12	3.87	3.50	3.44	3.65
	Operational efficiency	Total operating expenses(In Birr)	49,582,396	67,415,670	89,725,273	136,979,492	238,263,471	116,393,260
		Average gross loan portfolio (In Birr)	1,019,348,445	1,138,844,430	1,427,037,389	2,008,319,717	2,983,407,383	1,715,391,473
	Operational efficiency (%)		4.86	5.92	6.29	6.82	7.99	6.38
	Productivity	Number of borrowers (Units)	458,544	501,880	515,906	651,756	809,284	587,474
		Total headcount (No. of staff)	N/A	N/A	2798	3363	4125	2,057
	Productivity (number)		N/A	N/A	184	194	196	191

Sources: 1. OCSSCo Financial statement and Operations reports
2. Morgan Stanley's benchmark obtained from Ayayi, 2008.

Sustainability : Sustainability ratio, which is arguably the most important indicator within this rating factor, measures free cash flow, thereby reflecting the extent of a MFI's financial mitigation against margin or top-line shocks. Morgan Stanley rating methodology has six grades of the sustainability ratio: >120.0%, >115.0%, >110.0%, >100%, >90%, below 90%, ranging from best to worst.(Arveloet *al.*, 2008)

For the operation period covered by this study, the sustainability ration of OCSSCo has largely fallen in the third poorest grade scale of Morgan Stanley's credit risk rating when it comes to sustainability measure of a MFI's performance including the average grade of sustainability ratio. The average sustainability ratio for the study period is 113.6 % which puts OCSSCo between the second and the third best grade of Morgan Stanley credit rating factor. It is during 2011 and 2012 operating periods that OCSSCo has managed to score above the highest benchmark of sustainability ratio, i.e.127.21 % and 127.95%. The result of the sustainability ratio measure for OCSSCo implies a higher operating expense and the need to increase the company's operating income.

ROAA: ROAA is an important measure of a MFI's profitability. Morgan Stanley's standard establishes six grades of return on average assets: >3.0%, > 2.0%, > 1.0%, 0.0%, >-2.0%, below -2%, ranging from best to least(Arveloet *al.*, 2008).

The average ROAA score of OCSSCo during the specified study period is 3.65% showing a result above the highest ROAA ratio of Morgan Stanley credit risk rating measure in MFIs. OCSSCos' performance in relation to ROAA, fall above the highest benchmark for the study period.

Operating efficiency: This indicator measures the level of efficiency of management in the utilization of resources and controlling costs. Morgan Stanley use six grades of the operating cost ratio: <20.0 %, < 25.0%, <30.0%, <40.0%, <50.0%, above 50.0%, graded from excellent to worst(Arveloet *al.*, 2008).

The average operating efficiency of OCSSCO is 6.38% which implies OCSSCos' performance in relation to operating efficiency is excellent. OCSSCos' score during the specified study periods fall below the highest benchmark score for operating efficiency of Morgan Stanley rating measure. This shows the decline in the company's operating expenses as the company expands its operation this implies that the company is achieving economies of scale in its operations.

Productivity: Productivity indicator measures the number of borrowers per staff member. Morgan Stanley rating methodology has six grades of the productivity ratio: >200, >190, >170, >145, >130, below 130, the rating is put from best to worst (Arveloet *al.*, 2008).

OCSSCo's average productivity ratio for the specified study period is 191, which put OCSSCo on Morgan Stanley's the second best scale. The productivity ratio of OCSSCo is increasing from 184 borrowers per staff member to 196 borrowers per staff in the study period. Though the company's score against the standard Morgan Stanley benchmark is relatively good, the company doesn't have staff data for the years 2010 and 2011.

4.2.3 Asset and liability management

Asset and liability management credit risk rating factor provides important clues about potential financial risks of MFIs. The specific indicators include leverage, exposure to foreign currency, and liquidity, each of which is mostly discretionary strategic or financial decisions made by management (Arveloet *al.*, 2008). Table 4.3 present the asset and liability management data and result for the last five years.

Table 4.3: Assets and liability management data and results

Factor	Definition	Variables	Year					Average
			2010	2011	2012	2013	2014	
Assets and liability management	Leverage	Total liabilities (In Birr)	1,052,544,793	1,245,582,894	1,540,615,820	2,174,227,753	3,673,271,758	1,937,248,604
		Net worth(In Birr)	335,604,810	445,401,671	573,262,551	727,670,296	893,216,514	595,031,168
		Subordinated debt	0	0	0	0	0	0
	Leverage(times)		3.14x	2.80x	2.69x	2.99x	4.11x	3.14x
	Exposure to foreign exchange	Financial debt in non-hedged forex	N/A	N/A	N/A	N/A	N/A	N/A
		Total financial debts	N/A	N/A	N/A	N/A	N/A	N/A
	Exposure to foreign exchange (%)		N/A	N/A	N/A	N/A	N/A	N/A
	Liquidity	Cash (In Birr)	296,458,829	241,222,396	287,363,382	293,436,438	786,939,018	381,084,013
		Short-term investment(In Birr)	4,965,000	5,525,250	5,726,922	9,332,630	115,535,400	28,217,040
		Gross loan portfolio (In Birr)	1,019,348,445	1,258,340,415	1,595,734,363	2,420,905,071	3,545,909,695	1,968,047,598
	Liquidity (%)		29.57	19.61	18.37	12.51	25.45	21.10

Sources: 1. OCSSCo Financial statements and operation report
2. Morgan Stanley's benchmark obtained from Ayayi, 2008.

Leverage: The leverage ratio refers to the level of gearing, or the debt-equity ratio, that pertains at a MFI. A MFI's leverage ratio is a reflection of the conservatism or aggressiveness of the capital structure, largely indicating the equity cushion available in the event of write-offs and the ability to weather liquidity short falls. Morgan Stanley's rating methodology makes use of six grades of leverage ratios: <5.0x, <6.0x, <7.0x, <8.0x, <9.0x, above 9.0x, this is from the best to least (Arveloet *al.*, 2008).

The average leverage score of OCSSCO is 3.14x which is below the first best grade of Morgan Stanley (<5.0x). The leverage ratio in OCSSCo for all the study specified periods, fall below the minimum benchmark of Morgan Stanely's credit risk rating. The result of OCSSCo leverage score shows that the company has managed to have a good debt-equity ratio during the specified study periods.

Exposure to foreign exchange: While particularly important in cases involving volatile currencies, foreign currency exposure can be difficult to quantify. Morgan Stanley's rating methodology contemplates 6 grades of exposure to foreign currency: <15%, <20%, <35%, <50%, <65%, above 65%(Arveloet *al.*, 2008).

The exposure to foreign exchange ratio is not applicable to OCSSCo, as it has no financial debts in non-hedged foreign currencies. All its transactions are in local currency, namely Ethiopian Birr (ETB).

Liquidity: The liquidity ratio is a measure of the extent to which a company has the capacity to meet its payment obligations. While a low liquidity ratio might signal a liquidity problem in the system, indicating serious challenges in meeting current payment obligations, ineffective cash management might be implied. The higher the liquidity ratio is the better. Morgan Stanley's rating methodology assigns six grades of liquidity: >15%, >12%, >9%, >6%, >3%, below 3%, considered as best and least in descending order(Arveloet *al.*, 2008).

OCSSCo's average score in relation to liquidity ratio is 21.10 % which means above the first highest benchmark of Morgan Stanely's credit risk rating. The company's liquidity ratio performance is above the first best grade of Morgan Stanley's credit risk rating for the four years of the specified study period except in one of the study year where the liquidity score fall on the second best score. In general this shows that OCSSCo has managed to have the best

liquidity score which implies better cash management, as the liquid assets were put into profitable.

4.3. Analysis of qualitative risk factors

Morgan Stanley methodology uses four qualitative risk factors to analyze credit risk of MFIs, i.e. Management and strategy, Systems and reporting, Internal and operational Controls and Growth potential (Arveloet *al.*, 2008). The result of qualitative risk factors of OCSSCo's presented below.

4.3.1. Management and strategy

As in any organization, management and its strategy are critical to performance. In the case of MFIs, this role can be especially important since decisions made by the board and management are instrumental in determining whether a MFI becomes a thriving institution or experiences a turn for the worse, particularly in its early growth stages. Within this rating factor, there are four indicators: quality of senior management and the board; strategy and business plan; quality of and support from shareholders and networks; and HR management (Ibid).

Quality of senior management and board

Typically, the strongest MFIs boast board members and management teams with extensive experience in the financial and development sector while having a deep cultural understanding of their operating regions. Board or management experience as well as relationships with financial or government authorities can further improve a MFI's operating environment. Finally, management ideally demonstrates an ability to set balanced goals and achieve them in a timely and cost-efficient fashion without compromising portfolio quality or community reputation (Ibid).

OCSSCo's board members composition is made up of three city mayors from Bishoftu, Sabeta and Burayu. The other two members of the board are the president of Oromia regional state and the head of Oromia Forest enterprises. None of the board members are from or have experience in the financial sector and this makes the top leadership of the company and the company itself disadvantaged when it comes to making informed decision and strategic investment. The composition of the senior management is from heads of departments, heads of unit and the CEO. The total number of the senior management of OCSSCo is 13; all with more than ten years' experience. The worst part when it comes to the experience and qualification of the senior management of OCSSCo is that, the CEO comes from a law background. A decisive position like this should be handled by an experienced professional with considerable leadership skills and experience in the financial sector. According to his CV, the CEO of the company has LLB

degree and has served in OCSSCo at different capacities ranging from loan officer through loan coordinator to area office manager before taking his position as the company's CEO. Based on the data collected on the senior management experience and qualification it is found out that the company is being led by individuals with no related experience and qualification in the financial sector which puts the company at poor standard when it comes to quality of the senior management team.

Strategy and business plan

When assessing the strategy and business plan of a MFI, the credit analyst must look for a clear and achievable strategy that is accompanied by carefully thought-out financial projections. A strong business plan makes reference to marketing, attraction and retention of customers, product, branch and geographic expansion, human resource needs, and technology enhancements. Naturally, the MFI's strategy needs to take into account the MFI's size, maturity, and legal status/structure (Arveloet *al.*, 2008).

OCSSCo has a clear vision, mission and objectives statement. From these objective statement of the company, OCSSCo' prior targets are serving the poor and the disadvantaged group of the society by providing microcredit service and to achieve self-sufficiency in its operation. During the period specified for this study, OCSSCo is implementing a five year strategic business plan that covers the period between 2010 and 2015. The company has an annual budget in place and all operational spending of the company is made as per the annual budget. Both budget spending and variance is regularly monitored by the senior management and the finance team.

However the company has failed to engage in strategic operation in the MFI industry as whole and in its geographic operational areas. For instance the company's stand regarding its competitors, the company doesn't have any document to operate strategically and based on competitive advantage in the competitive landscape of the MFI industry in Ethiopia. The data from the planning and program development division states that the company hasn't what so ever perceived competitor in its operational areas. The only thing the company perceived as a potential competitor to its operation is the expansion of Ethiopian commercial banks in the operational areas of OCSSCo which is threatening the saving mobilization opportunities of the company. Aside from this OCSSCo perceives as operating in an area where the demand for its micro credit products is considerably higher than what the company can supply and as such the company didn't have any reason to engage in competitor identification and designing of strategy to deal with the market completion in its operational areas. The company's market expansion

plan is limited to reaching all districts of the Oromia regional state and so far OCSSCo has achieved a 98% percent geographical coverage in the state.

Quality and support from shareholders and network

Due to the young nature of the microfinance industry, many MFI's rely on shareholders and networks for financial, strategic, and technical support. Shareholders may range from individuals with limited means, to international financial institutions. Strategically, shareholders and networks provide valuable guidance, for instance in determining an optimal capital structure, the roll-out strategy for a new product, technical assistance or best practices. Networks are frequently non-profit organizations and foundations that provide grants and technical support. Together, shareholders and networks can provide financial support in the form of grants, equity, or loans (Arveloet *al.*, 2008).

The support from shareholders in OCSSCo is found to be good as the shareholders have provided most of the financial capital the company wanted to start its operation. The shareholders were able to mobilize more than the required amount of take of capital. The amount of takeoff capital required was Eth. Birr 20,000,000 and the amount of take-off mobilized by the shareholders was more than threefold higher than the amount required ETB 65,050,000. The current total paid up capital of OCSSCo has reached ETB 124,499,000 as of 2014. When it comes to networking, OCSSCo has a strong networking level dominantly with humanitarian non-governmental organization such as Glimmer of Hope foundation, whole planet foundation, Care, CRS, World Bank and many others. This shows that the company has engaged itself to network with various stakeholders to support its operation through diverse financial and technical support.

HR management

Recruitment, training, and retention are pillars of a robust HR policy. The recruitment plan should tie into the business plan of the MFI, and address needs for credit officers as well as middle and upper management. Attracting experienced senior management is very important but can be difficult due to competing employers and compensation levels, or the unattractiveness of remote location.

Credit officers may be difficult to recruit because of lack of qualifications, compensation, or the nature of the job, which requires considerable time "in the field." AMFI's recruitment plan needs to anticipate these challenges (Arveloet *al.*, 2008).

OCSSCo has an organized HR department at the head office and 18 Zonal office levels and a written HR policy manual is in place to guide the whole human resource management policy and practice of the company. When it comes to the quality of personnel working in OCSSCo, it can't be said that the company has a qualified and experienced staff compared to the vibrant and wealthy financial institutions such as the banks. However the overall qualification and experience of the personnel in OCSSCo is at an acceptable level when it comes to the requirement of the company's operation given the relatively smaller remuneration and salary paid to staff in the company. Continues investment in staff training and capacity building is not also common in the company as the staff are trained mostly at the beginning of their hiring in order to familiarize them with the company's culture and their position responsibilities.

Incredibly, staff turnover for the three years, is below 10%, with an average value of 5.4%. Data regarding total number of employees and staff turnover is only compiled for the past three years and the study has to only utilize a three year data in this regard as opposed to the five year coverage of the study. The absence of employee data for the years before the past three years shows the company's poor status in the organization and leadership of its human resource management.

4.3.2. Systems and reporting

The ability of a MFI to maintain robust systems and provide accurate reports affects not only the quality of the information that it provides, but also its ability to understand and monitor its own operations. MFI systems usually revolve around three business functions: (1) portfolio tracking; (2) accounting; and (3) human resources functions. An ideal system would accurately record and analyze information from each of these functions, seamlessly integrate the information, and speedily transmit this data from branch offices to the head office to ensure that the MFI has a real-time handle on its business.

Hence, we analyze the following indicators: (1) quality of management information and accounting systems; (2) quality and speed of data feed; and (3) quality of reports and distribution/ analysis of reports (Arveloet *al.*, 2008).

Quality of MIS

In analyzing the quality of management information systems of a MFI, we look at the level of automation, integration, adaptability to a changing business environment and ease of use. Automation should be analyzed on two levels: "vertical" and "horizontal." The former refers to the automation at the branch, regional and head office level, while the latter focuses on portfolio

monitoring, accounting and human resources functions. Integration, and the associated security, of these systems are also important since the tracking of one function acts as a check on the tracking of another function. The third key factor we examine is an information system's ability to adapt to changing business environments (Arveloet *al.*, 2008).

OCSSCo has a strong IT department at its head office that is supporting the current reasonable level of IT infrastructure. The system effectively supports the organization's MIS, loan tracking and accounting system. The company adopted an up to date technology of IT solutions such as VPN broad band connection, Application and report servers such as Oracle, SQL 2008, Java, C sharp and Dot Net. The company utilizes Omni Enterprise core banking software for its financial recording and report and TMS is the accounting software the company use to prepare its financial statements. Daily and monthly balances were available promptly and operations were automated. However, the company's is only automated in twenty branches of the company out of the total 304 which shows a very insignificant achievement in this regard.

Quality and speed of data feed

Typically, information is transmitted at three levels: first, credit officers or branch data entry staff record information daily based on the transactions of the field staff with borrowers. This information is then passed to branch or regional offices, which consolidate information and review the accuracy of information. Finally, this information is relayed to the head office, which consolidates and analyzes information received from all regions or branches. This transfer of information may occur manually for example, via post or courier or electronically by email. This chain of command can also be bypassed with a fully automated online system; however, the importance of review at each level cannot be overstated (Arveloet *al.*, 2008).

The data system at head office was efficient and IT-driven, with an effective LAN, which facilitated the automatic processing of financial data (as opposed to slow manual processing), while all appropriate officers could simultaneously log on to accounts, as required. Similarly, the Head Office and the branches were effectively linked with the appropriate IT/network system, consisting of a WAN, such that data transfer between the head office and the branches was instantaneous(online, real time). However although the company has an automated and up to date IT solutions in place, only twenty of its branches enjoy the benefits of this technological arrangement. So far the company has managed to connect only its 20 branches out of the total 304 branches.

Quality of report and distribution/analysis of report

High quality reports provide a credit analyst with some comfort that management understands the fundamental reasons for its successes and failures and is able to improve upon the status quo. When talking about quality of reports and distribution, we look for reports that provide both consolidated and single branch-level information (to ensure that specific problems may be tracked) and analyze the components of PAR 30, performance of credit officers, lending by sector, borrower characteristics and credit history, as well as financial ratios.(Arveloet *al.*, 2008)

OCSSCo generated and circulated appropriate reports, including monthly reports, quarterly performance reports, and annual reports and financial accounts. Such reports were circulated among all HODs, heads of units (HOU) and board members. The quality of reports of the company can be said reasonably well. Monthly reports are prepared for the consumption of internal purpose primarily and also external stakeholders, i.e. regional MSE development agency (in relation to MSE performance) and Development Bank of Ethiopia (Loan report). Formal operational reports are produced on quarterly and annual basis for the consumption of Development bank of Ethiopia, National bank of Ethiopia, Company's higher leadership bodies (BOD) and regional MSE development agency. The account of the company is currently being audited by, Degefa Lamessa Authorized Auditors Limited Partnership Certified Chartered Accountants, a reputable audit firm.

4.3.3. Internal and operational control

Well-established operational procedures and internal controls allow MFIs to achieve operational efficiency, avoid fraudulent activity, promote work-flow continuity, and create a track record of transparency with clients and investors. While we consider two separate indicators operational procedures and internal controls these factors should be evaluated together because stronger operational procedures can have a positive effect on the level of internal controls, and vice versa(Arveloet *al.*, 2008).

Operational procedures

Operational procedures set the tone and consistency for various intra- and inter- departmental interactions and processes of MFIs. Ideally, MFIs should maintain a detailed document of procedures clearly stating the functions of all departments while setting policies to monitor risk areas of the business. Experience suggests, however, that even if such operating procedures are in place, their effectiveness cannot simply be assumed (Ibid).

OCSSCo has a comprehensive and well-documented operational procedure guiding all aspects of its operations. The operational procedures were reviewed periodically. Operation manual of OCSSCo is last updated in 2012 in relation to BPR. Five operation manuals available, i.e. Self-organized group based loan manual, MSE manual, Housing and general purpose loan manual, saving manual and WEDP loan manual. Branch managers, Zonal managers, senior staff and HQ operation staff are among the authorized to possess and execute operational procedures and manuals. Staff compliance to operation manuals is strictly ensured at all levels by Branch managers and Zonal managers. Complementing the operational procedures were the various manuals (e.g. credit manual) that helped the credit officers to handle all company credit activities effectively. All operational procedures and manuals were circulated to all the appropriate officers for guidance. Consequently, OCSSCo is strictly able to enforce compliance with the procedures and manuals, as no officer could claim ignorance of the procedures concerned.

Internal controls

Given the volume and number of transactions managed by a MFI on a daily basis, as well as the reality that cash travels or is wired constantly from the hands of borrowers to loan officers/branches and ultimately to the head office, MFIs require constant monitoring of cash management and procedures for the detection of fraud(Arveloet *al.*, 2008).

OCSSCo's structure, when it comes to audit and internal controlling system is very strong. The company has a credit risk management and internal control manual in place that leads and directs the credit risk management and internal controlling system. The company has a total of 130 staff under its internal control unit, assigned at most of OCSSCo's branches. For a company to have such a large amount of auditors is a huge advantage in providing proactive risk mitigation mechanism. The head of the unit is an experienced auditor with over 15 years' experience in the financial industry and reports directly to the CEO. The unit enforced control of processes, ensuring strict compliance with procedures and the implementation of all control measures.

4.3.4. Growth potential

Given the nascent nature of the microfinance industry, the growth potential of a MFI has a noteworthy impact on the creditworthiness of a MFI. In many countries, regulatory restrictions and political climate can have a significant effect on a MFI's business. The sustainability and future growth of a MFI also depend on the demand potential (i.e. how many potential borrowers exist) as well as potential borrowers' awareness and receptiveness to microfinance and related products. While examining the growth potential of a MFI, we examine the following indicators:

regulatory environment and government involvement; number and density of micro entrepreneurs; and behavior of micro entrepreneurs toward micro loans (Arveloet *al.*, 2008).

Regulatory environment and government involvement

Governments have the potential to contribute favorably to the development of MFIs. The ideal regulatory environment is one where a MFI faces little or no government interference, or competing programs, coupled with support for the sector from important country/regional leaders (Arveloet *al.*, 2008).

OCSSCo is a licensed MFI, whose activities are regulated by the National Bank of Ethiopia. OCSSCo was registered on August 04, 1997 G.C by proclamation No 40/96 that licenses and supervises microfinance business in Ethiopia. Consequently, the company implemented and adopted all the necessary procedures and activities in its operations to comply with procedures in pursuit of its corporate goals, both as a matter of social responsibility and in terms of the regulatory requirements. The Company rendered its periodic reports to both shareholders (through the board) as well as to the regulatory institution (the NBE).

Number and density of micro-entrepreneurs

Two important drivers of a MFI's growth are the demand potential for their services and the density of the individuals demanding these services, each in the context of local competition. The demand for microfinance services comes from the sheer number of potential borrowers that are un-banked by the traditional financial institutions, generally in developing countries (Ibid).

OCSSCo operates in Oromia regional state including Diredawa and Addis Ababa city administration and Harari regional state. This makes the company the largest MFI in terms of geographical coverage, number of clients, size of loan portfolio and saving mobilization. There is a huge demand for the company's micro credit products which constantly deriving the company's growth and expansion. OCSSCo has a total number of 1,184,183 saving customers; Out of the total saving customers 992,327 are saving loan customers. This shows that the company has a strong demand for its services and loan products.

Behavior of micro-entrepreneurs

This indicator assesses the general attitude toward microloans in a given region (Ibid).

OCSSCo customers happy with OCSSCo services and there is high rate of loan repayment among customers. Repeated request for another loan and high rate of loan repayment show customers satisfaction with OCSSCo services. In general there is a positive attitude towards loan

repayment among clients. High percentage of clients pays there loan voluntarily. Thus, the loans schemes of OCSSCo are tied to salaries (housing loans) and group activities (group loans), and they, among other techniques, were closely monitored. Overall, loan repayments had been reasonable and portfolios at risk over 30 days (PAR >30) had been relatively low.

4.4. Overall performance compared with Morgan Stanley

Morgan Stanley not only computed the required ratios, but it also computed benchmark results for the seven factors with which local results can be related to obtain global comparisons. Any MFI that obtains scores that are below the benchmark results on any factor is regarded as having performed poorly. In other words, the benchmarks concerned represent the minimum requirement for a MFI to be regarded as having performed well on any of the respective indicators. The overall performance of the quantitative and qualitative risk factors of OCSSCO's are graded& compared with Morgan Stanley benchmark results of each factors.

4.4.1. Quantitative risk factors

OCSSCo has achieved underperformance in terms of its ratings on the quantitative factors. It achieved a total rating of 49, as against Morgan Stanley's benchmark score of 54. The quantitative factor's indicators are analyzed and graded on a scale from 1 to 6, indicating poor, weak, fair, good, very good, and excellent, respectively. The factor-by factor analysis is presented below.

Table 4.4:Comparative analysis of Loan portfolio of OCSSCo and Morgan Stanley

Factor	Indicators	Performance		
		OCSSCo		Morgan Sanely
		Average2010–14	Scale	
Loan portfolio	PAR (PAR >30)	2.11	6	6
	Write-off	0	6	6
	Size of portfolio (N)	1,968,047,598	3	6
	Loan loss reserve	33.31	1	6
Total			16	24

Sources: 1. OCSSCo financial statement and operation reports

2. Morgan Stanley's benchmark obtained from Ayayi, 2008.

Loan portfolio: OCSSCo performed below Morgan Stanley's benchmark on this factor, scoring 16 as against 24.when we see the scores of OCSSCo on the different indicators of loan portfolio factor, OCSSCo scores the first best grade in PAR>30, Write-off and Portfolio size when

compare to the Morgan Stanley credit risk rating . However, the company scores the first poorest grade in loan loss reserve in relation to Morgan Stanley’s standards which significantly contributed to the short fall of the company’s grade under this particular factor from the benchmark Morgan Stanley’s credit risk rating.

Table 4.5:Comparative analysis of Profitability, Sustainability, Operating efficiency& productivity of OCSSCo and Morgan Stanley

Factor	Indicators	Performance		
		OCSSCo		Morgan Sanely
		Average 2010–14	Scale	
Profitability, Sustainability, Operating efficiency& productivity	Sustainability	113.60	4	6
	Profitability (ROAA)	3.65	6	6
	Operating efficiency	6.38	6	6
	Productivity (Number)	191	5	5
Total			21	23

Sources: 1. OCSSCo financial statement and operation reports
2. Morgan Stanley’s benchmark obtained from Ayayi, 2008

Profitability, sustainability and operating efficiency: Using the average indicators, OCSSCo underperformed, going by Morgan Stanley’s benchmark scoring 21, as against Morgan Stanley’s 23. From the indicators under this factor, OCSSCo’s achieved excellent result in ROAA, Operational efficiency and productivity as compared to Morgan Stanley’s credit rating. In the sustainability indicator, OCSSCo scores 4 against 6 comparing to Morgan Stanley’s credit rating.

Table 4.6:Comparative analysis of Assets & liability management of OCSSCo and Morgan Stanley

Factor	Indicators	Performance		
		OCSSCo		Morgan Sanely
		Average 2010–14	Scale	
Asset and liability management	Leverage	3.14x	6	7
	Exposure to foreign exchange	N/A	N/A	
	Liquidity	21.10	6	
Total			12	7

Sources: 1. OCSSCo financial statement and operation reports

2. Morgan Stanley's benchmark obtained from Ayayi, 2008

Assets and liability management: OCSSCo clearly exceeded Morgan Stanley's standard in terms of this factor, achieving a performance score of 12, as against the benchmark of 7. The performance score showed that OCSSCo did well on leverage, which is a measure of liabilities to net worth (or how much funding is provided with debt). The company also performed excellently in terms of liquidity, indicating high ability to meet current obligations.

4.4.2. Qualitative risk factors

OCSSCo has achieved a good performance in terms of its ratings on the qualitative factors. It achieved a total rating of 50, as against Morgan Stanley's benchmark score of 46. The qualitative factor's indicators are analyzed and graded on a scale from 1 to 6, indicating poor, weak, fair, good, very good, and excellent, respectively. The factor-by factor analysis is presented below.

Table 4.7: Comparative analysis of Management and strategy of OCSSCo and Morgan Stanley

		Performance
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Factor	Indicators	OCSSCo Scale	Morgan Stanley
Management and strategy	Quality of senior mgt	3	19
	Strategy and business plan	4	
	Quality & support from Shareholders & network	4	
	HR management	5	
Total		16	19

Sources: 1. OCSSCo financial statement and operation reports

2. Morgan Stanley's benchmark obtained from Ayayi, 2008

Management and strategy: OCSSCo's rating of 16 score in Management and Strategy factor is below Morgan Stanley's standard. The company needs to improve and strengthen its performance, particularly in the areas of Quality of senior management, Strategy and business plan and Quality & support from shareholders.

Table 4.8: Comparative analysis of System and reporting of OCSSCo and Morgan Stanley

Factor	Indicators	Performance	
		OCSSCo Scale	Morgan Stanley
Systems and reporting	Quality of MIS	2	11
	Quality & speed of data feed	3	
	Quality/Distribution of reports	3	
Total		8	11

Sources: 1. OCSSCo financial statement and operation reports

2. Morgan Stanley's benchmark obtained from Ayayi, 2008

Systems and reporting: OCSSCo also under performed as compared to Morgan Stanley's benchmark on this factor. This is primarily due to the low coverage of its IT infrastructure that affects the MIS, the data feed and the reporting system of the company.

Table 4.9:Comparative analysis of Internal & operational control of OCSSCo and Morgan Stanley

Factor	Indicators	Performance	
		OCSSCo Scale	Morgan Sanely
Internal & operational controls	Operational procedures	6	10
	Internal controls	5	
Total		11	10

Sources: 1. OCSSCo financial statement and operation reports

2. Morgan Stanley's benchmark obtained from Ayayi, 2008

Internal and operational controls: OCSSCo's performance on this factor is very good, significantly outscoring Morgan Stanley's benchmark (OCSSCo = 11; Morgan Stanley = 10).The Company has a formal manual that directs operational procedures and guides the staff in their duties in governing the company's credit activities. The internal control system of the company is also found to be very strong and organized both in terms of its operation system and size of personnel in the division.

Table 4.10:Comparative analysis of Growth potential of OCSSCo and Morgan Stanley

Factor	Indicators	Performance	
		OCSSCo Scale	Morgan Sanely
Growth potentials	Regulatory environ. & govt.	6	6
	Number & density of micro entrepreneurs	5	
	Behaviors of micro entrepreneurs to loaner payment	4	
Total		15	6

Sources: 1. OCSSCo figures computed from own data.

2. Morgan Stanley's benchmark obtained from Ayayi, 2008

Growth potential: As a licensed and regulated MFI, OCSSCo is under the supervision of NBE, which has considerably influenced its level of performance, as it constantly has kept OCSSCo to operate within the set guidelines. The geographical operational area which is the Oromia Regional State is the largest state in the country which provides the opportunity to the company to the highest density of population and with the highest concentration of potential for businesses

and entrepreneurship. This provides a concrete position to take advantage of outstanding opportunities for growth and development. Overall, OCSSCo scored 15, against Morgan Stanley's benchmark score of 6, indicating that the company has performed significantly higher than the standard global benchmark.

CHAPTER V

Conclusion &Recommendation

In this chapter a brief summary of recommendation and conclusion is provided based on the research findings.

Conclusion

The overall performance of OCCSCo in terms of credit risk management when rated against Morgan Stanley methodology of credit risk rating happened to be discouraging as the company fall short of in four of the factor rating out of the total seven factor ratings. As a financial institution and a MFI particularly operating in developing country like Ethiopia, the company has performed well in some of the credit risk rating benchmarks adopted for a global industry wide rating.

In summary, observation of the company's performance of credit risk management in terms of Morgan Stanley's credit risk rating, the below stated areas are emphasized.

The company has performed poor in terms of its management and strategy factor rating due to its poor quality of senior management and board composition and in its HR management. As this is a very decisive area of operation in a MFI's overall operational metrics, the company has a considerable drawback that contributes to its level of credit risk exposure.

The company's loan portfolio has also showed a poor performance against the Morgan Stanley's credit risk rating due to its low loan portfolio size and loan loss provision. OCSSCo has fallen short of not only the minimum loan portfolio size but also in terms of allocation of loan loss reserve for its anticipated bad loans. This shows that the company has a work to do to increase its loan portfolio size and ensuring a significant guarantee for its anticipated loans that could turn bad.

The other area the company showed a poor performance when rated against Morgan Stanley is in the profitability, sustainability and operating efficiency factor rating. The poor performance of the company on this factor is due to the low grade it scored on the sustainability indicator which measures the ratio of operating income to operating expenses. This shows that the company's operating income is mostly proportional to total expenses which put the company at risk of operational sustainability failure.

The company has performed well in the areas of internal/operational control, asset/liability and growth potential factor rating. All of the factor ratings the company performed well on are quantitative credit risk factor ratings.

Finally the overall performance of the company on credit risk factor rating has showed a poor performance as rated against the Morgan Stanley's credit risk factor rating methodology, as OCSSCo scored 99 against the minimum 100 score of Morgan Stanley's benchmark.

Recommendations

Based on the findings of the current research report, the following recommendations are made for policy adoption:

- I. The research finding has showed that OCSSCo's Boards of directors are not composed from a diversified qualification and experience. The presence of qualified and professional individuals in the Board will greatly help in making informed decision and strategic planning. The researcher suggests that OCSSCO needs to diversify it Board of directors in order to enable the presence of qualified and experienced professional in the field of financial sector strategic and technical leadership. In general it is advisable if the

company focuses on improving the composition of its senior management in order to have a vibrant and qualified leadership that enables the company to perform well in the competitive environment and foster organizational growth and profitability.

- II. The current level of IT infrastructure utilization in the company is very insignificant when seen in terms of the large percentage of the company's branches, around 94% are not automated with the head office MIS. The researcher suggests that OCSSCo needs to make sure that all of its branches are connected with IT infrastructure as it ensures the ability of the company to maintain robust systems and provide accurate reports that affects not only the quality of the information that it provides, but also its ability to understand and monitor its own operations.
- III. People make up organizations, and as such investing in acquiring and retaining qualified and experienced staff is very decisive to an MFI that operates in a competent environment. The research finding showed that OCSSCo has problems in its HR system in terms of management of employee information, staff training and remuneration. The company needs to work on providing staff training and capacity building, improving staff remuneration and benefits and reducing staff turnover.
- IV. OCSSCO should focus on increasing its loan portfolio size which is relatively smaller when compared to the minimum loan portfolio size suggested by Morgan Stanley credit risk rating factor. To meet the growing needs of micro credit and other loan products in its operational areas, the company needs to increase its loan portfolio size through support from shareholders, stakeholders such as DBE, NBE and networking with various foundations, private firms and NGOs.
- V. OCSSCos performance in relation to sustainability, profitability, operational efficiency and productivity is another area that needs improvement as this is a very important factor that shows the financial viability of the company. Particularly OCSSCo needs to improve its operation expense to income ratio which shows how far the company is efficient and effective in providing for its operation expenses. The researcher suggests that OCSSCO needs to identify cost minimization options in order to reduce its operational cost and diligently work on loan recovery efforts to increase its net income.

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APPENDIX

QUESTIONNAIRE

Assessment of Credit Risk Management in Oromia Credit and Saving Share Company (OCSSCo)

I'M conducting a study on credit risk assessment in OCSSCo, in respect to various credit risk factors. This questionnaire is specifically required to elicit information on the qualitative risk factors of OCSSCo. Kindly answer the questions in the sections relevant to you clearly and faithfully, as the reports will be useful in advising the company on ensuring successful performance in the future. Thank you.

SECTION I (*personal information*):

1. Name (optional): -----
2. Department: -----
3. Position: -----
4. Summary of duties: -----

5. No. of personnel in dept.: -----
6. Do you enjoy your job at OCSSCo? (1) Yes (2) No
7. If the answer to question 6 above is 'No', why not?
(a) Poor remuneration (b) Difficult office environment (c) Inadequate working tools (d) Uncooperative customers
8. What is your advice for improving the situation in the company? -----

SECTION II (OCSSCo information):

Please answer the questions below. Answer only the sections that are relevant to your department. Use separate sheets attached with this questionnaire to answer the questions.

OCSSCo: Qualitative risk factors *Section Questions*

Quality of Management and strategy

1: Quality of senior management and board

- a. What is the composition of the board? Give a brief profile of board members.
- b. State the interval between, and frequency of, board meetings.

- c. Please provide a brief summary of senior management staff, focusing on their designations, qualifications and experience. Please focus on the CEO, the HODs and the HOU's only.

2: Strategy and business plan (including competitive landscape)

- a. In terms of the vision, mission and business objectives of OCSSCo:
 - Do you have a formal business plan?
 - Do you prepare budgets annually?
 - What is your current growth/financial projection?
 - How many competitors do you have?
 - What is your share of the market?
 - What is your market strategy?
 - How many branches do you have?
 - What is your expansion plan?

3: Quality and support from shareholders

- a. Who are the shareholders?
- b. What is the current proportion of shareholding?
- c. What is the take-off authorized and paid-up capital?
- d. What is the current paid-up capital?
- e. Who are the other donors to the investment fund?
- f. Generally, what is the shareholders and board relationship?

4: HR management

- a. Do you have an HR policy?
- b. What is the objective of the HR policy?
- c. What is the total number of personnel?
- d. What is your training policy?
- e. How do the salaries of those working for OCSSCo and other financial institutions compared?
- f. What is the percentage staff turnover: on annual basis?

System and reporting

1: Quality of MIS

- a. What IT infrastructure is available?

- b. What core banking software is available?
- c. What is the IT link between HQ and branches?
- d. Are all branches linked? If not, how many branches have yet to be linked?
- e. What accounting software do you use?
- f. Would you say the accounting system is adequate?

2: Quality and speed of data feed

- a. Is the data processing system automated?
- b. Is the head office networked?
- c. Is the data transfer between branches and HQ online in real time?

3: Quality of report and distribution/ analysis or reports

- a. What is the interval of reports (monthly, quarterly or annual)?
- b. Which reports are monthly?
- c. Which reports are quarterly?
- d. Which reports are annual?
- e. What is the distribution list of reports?
- f. What is the quality of your financial statements?
- g. Who are the external auditors?

Internal and operational control

1: Operational procedures

- a. Do you have formal operational procedures?
- b. How often do you review it?
- c. When last was it updated?
- d. Which operational manuals do you have?
- e. Who is authorized to possess operational procedures and manuals?
- f. To what extent do the staffs comply with procedures?
- g. Do you have difficulty in getting senior managers to comply?

2: Internal controls

- a. How many staff do you have in internal audit?
- b. How do you control the processes involved?
- c. What is the relationship between internal audit and the external auditors?

Growth potential

1: Regulatory environment and government involvement

- a. When was OCSSCo incorporated?

- b. When did the MFI actually commence business?
- c. Has OCSSCo been licensed by the NBE? If yes, when?
- d. What is the regulatory control of NBE?
- e. Did the NBE issue prudential guidelines for MFI's in Ethiopia?
- f. What is the frequency of NBE inspection?

2: Number and density of micro entrepreneurs

- a. What is the number of saving customers?
- b. What is the number of saving loan customers?
- c. What is the area of coverage of the MFI's operations?
- d. What is the size of potential customers?
- e. How would you assess your potential for growth: low, medium, or high?

3: Behavior of micro entrepreneurs

- a. Are your loan customers happy with your services?
- b. What is your method of assessing their happiness?
- c. What is their attitude towards loan repayment?
- d. What is the percentage of those who pay voluntarily without pressure from you?