

CAPITAL STRUCTURE AND SOCIO-FINANCIAL PERFORMANCE: A STUDY OF SELECT INDIAN MICROFINANCE INSTITUTIONS

Thesis

SUBMITTED TO
DEPARTMENT OF RURAL MANAGEMENT
SCHOOL FOR MANAGEMENT STUDIES
BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY, LUCKNOW

BABASAHEB
BHIMRAO
AMBEDKAR
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प्रज्ञा शीलं करुणा
ESTABLISHED 1996

FOR THE AWARD OF THE DEGREE OF
Doctor of Philosophy
in
MANAGEMENT

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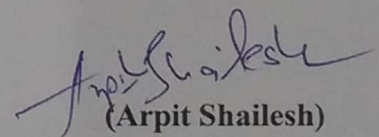
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DECLARATION

I, **Arpit Shailesh**, student of Ph.D. hereby declare that the thesis titled "**CAPITAL STRUCTURE AND SOCIO-FINANCIAL PERFORMANCE: A STUDY OF SELECT INDIAN MICROFINANCE INSTITUTIONS**", has been prepared by me under the supervision of **Dr. Taruna**, Assistant Professor, Department of Rural Management, School for Management Studies, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow. No part of this thesis has formed the basis for the award of any degree, diploma or fellowship previously. Further, I declare that the material embodied in the present work is based on original research work and the indebtedness to others has been duly acknowledged at relevant places. I also declare that the thesis is essentially free from all kind of plagiarism.



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CERTIFICATE

This is to certify that the thesis titled “**CAPITAL STRUCTURE AND SOCIO-FINANCIAL PERFORMANCE: A STUDY OF SELECT INDIAN MICROFINANCE INSTITUTIONS**” submitted by Mr. Arpit Shailesh is an original research work and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other university.

The thesis submitted to Babasaheb Bhimrao Ambedkar University Lucknow satisfies all the requirements as stipulated in the *Doctor of Philosophy (Ph.D.) regulations -1999 as amended in 2008/2010/2013* and it is fit for submission and evaluation for the award of the degree of Doctor of Philosophy of the University.

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ACKNOWLEDGEMENT

Research is a piece of work that involves the unfolding of the phenomenon which is yet to be ventured. This work too is an outcome of the various influences and motivations, giving shape to the research done. I feel privileged to express my deep regards to the few ones whose eternal guidance and support has helped me in achieving this mammoth task. First of all, I thank **God**, for his compassionate blessing and being ever-merciful, for imbuing in me the stimulated potential and the perseverance to sum up this voluminous work.

I would like to take this opportunity to extend my heartiest gratitude to the person whom I have known for his great work at this institution, his guidance to the research scholars have not only helped them to perform best in their career but also personally motivated them to show case their talent in field of research. Therefore, I am indebted to **Prof. M. S. Khan**, Head, Department of Rural Management and Dean, School for Management Studies, Babasaheb Bhimrao Ambedkar University, Lucknow for his constant support and skillful help to design my research work and achieving great success in completion of the venture.

All the more, I am grateful and thankful to the woman of her words who choose to be my esteemed supervisor and mentor, **Dr. Taruna**, Assistant Professor, Department of Rural Management, Babasaheb Bhimrao Ambedkar University, Lucknow for her sincere guidance, support and motivation throughout my research work. She has enlightened the urge for knowledge within me. It's my good fortune to have her as my supervisor. During the research on the topic her potential inputs and criticisms have raised the bar, along with her constant multifarious accountabilities; she facilitated the accomplishment of this study successfully.

I thank and appreciate the immense support of **Prof. K. Mishra**, Department of Rural Management, Babasaheb Bhimrao Ambedkar University, Lucknow. The power of One exceptional person with exceptional results. I would like to acknowledge him for his exclusive approach and unique ideas which have helped me to get better outlook on the subject. I extend my sincere regards for his motivation, encouragement and endeavors towards the completion of this research.

I also extend warm thanks towards **Dr. R. K. Chaturvedi**, Assistant Professor, Department of Rural Management, Babasaheb Bhimrao Ambedkar University, Lucknow for providing his continuous appraisal and shaping of my research.

I would also thanks **Dr. Abhilash Babu** and **Dr. Lata Bajpai Singh**, designated faculties of the department for their valuable feedback and constant support during my research program.

I am also indebted to the supporting resources, infrastructure facilities and the library for the uninterrupted information supply to meet the dynamic demands of this challenging research. Completing this research would have been all the more difficult without the sincere efforts and unending support of my senior colleagues spread inside and outside the university who have willingly helped me out in providing me with necessary documentation for referring throughout the research work.

Finally, my last but not the least piece of thanks goes to my father, **Mr. S. K. Gupta**, for his unconditional support and everlasting encouragement at every phase of my life. He has always been a source of inspiration to me and has always encouraged me not to give up even when the odds were against me. I feel honored to express my deep sense of humble gratitude to my extended family for always being the source of encouragement, guidance and support. I am big at heart to my mother, **Mrs. Shalini Gupta**, for her constant support and motivation throughout the journey.

Lastly, I am gracious to every positive vibe and every little effort by myself and all in successful completion of my research work.

Arpit Shailesh

PREFACE

India, stepping towards to become a developed nation, always tries to put in their best efforts in order to alleviate poverty and upgrade the living standards of the society at large. The lack of credit and the non-access to the financial services are the major factors contributing towards poverty. The issue of lack of credit arises out of transaction cost being high, thereby complicating the credit lending procedure and also the prerequisite of collateral security for the credit facility provided by the financial institutions adds to the complication. In the past two decades, Microfinance attained the levels of success with the objectives of upgrading the standards of living of the poor affected with poverty by facilitating them with credits of small amounts and various financial services such as, insurance, credits, savings, etc.

With the passage of time, Microfinance has shaped up to be the most significant tool in order to alleviate poverty. In this model, groups were formed consisting of joint members and that the collection of savings was utilized as the source of fund for other members to commence their work. The underdeveloped and the developing countries have also initiated this model actively in order to eradicate poverty. Microfinance, along with offering financial services to the much needed people constituting the lower income group, also focuses on such activities facilitating the development process including leadership training, societal development, financial management, entrepreneurship management, skill management, etc.

With 3.5 billion people still being a part of the deprived society, do not have appropriate access to the financial services, thereby targeting the gap between the supply and demand prevailing in the microfinance market. Although, the chief focus of the Microfinance tool is on the poverty-stuck population and the women as well, this practice has been also evolved itself in the industrial world too, wherein they are serving the Small-Scale Enterprises as well. The stimulation of this methodology was promoted by The Reserve Bank of India (RBI), wherein they framed specific guidelines for the banks in the year 1996, in order to provide financing to the Self-Help Groups (SHGs). It has the maximum outreach accompanied with their best performance outcomes across the world, thereby being the fastest and largest emerging Microfinance Programs. Numerous issues pertaining to the sustainability of the Microfinance Institutions across the globe are also required to be dealt with.

Keeping all the aspects into consideration, the financial performance and sustainability of the Microfinance Institutions occupies to be the most significant of all.

A Microfinance Institution's financial performance reflects that the institution is capable enough to cover all the operating costs as well as costs during their growth. This in the long run, will place a positive and significant impact on the sustainability factor of the Microfinance Institution, with special emphasis on the financial sustainability.

Although, in this research study two significant issues will be discussed in detail, viz. social performance and financial performance and the sustainability of the Microfinance Institutions. Consequently, the Microfinance Institutions have to deal with three main issues, including the financial sustainability of the institution, its outreach – concerning the facilitation of services to the maximum number of poor population and the depth of outreach – concerning the attempts made to reach to the poorest person of the population.

The Microfinance Institutions needs to satisfy the imperative financial requirements in order to be sustainable in the long run. The Microfinance Institution's performance, in the past, was always evaluated with its impacts on the social performance, rather taking financial sustainability as the chief indicator. The Capital Structure of the Microfinance Institutions comprising of equity, debt, retained earnings, etc. must also be taken into consideration along with the socio-financial performance while evaluating the effectiveness of the MFIs. However, the practitioners and the academicians suggest that after the initial establishment days of the MFIs are over, they should be capable enough to sustain financially and operationally without being dependent on the subsidies, grants and donation of the Government or the donors. Therefore, it becomes all the more interesting in figuring out the mechanism implemented by the Indian MFIs in order to achieve financial sustainability.

The current research focuses on contributing the best of studies with respect to the Microfinance industry in India wherein no contributions have been instigated as of now in order to assess the socio-financial performance of the Microfinance Institutions. The review of literature proposes that with an ideal and effective capital structure, the socio-financial sustainability of the Microfinance Institutions can be

achieved. In the study, a conceptual framework of the relationship between the social and financial performance of the Microfinance Institutions is highlighted, along with the capital structure of the Microfinance Institutions registered on the Microfinance Information Exchange Market, USA.

This research study is significant to the strategic decisions taken by the policy makers and the government for the Microfinance Institutions and for resolving the issues of poverty in the Macro Environment. This research study, thus, will benefit the forthcoming students and researchers who intend to work in the field of Microfinance along with its socio-financial sustainability, with the linear study of the review of literature, the models for research, the data analysis thereby facilitating the summed up conclusions, the limitations of the research, the future benefits of the study and also the list of bibliography.

EXECUTIVE SUMMARY

This research work comprises of eight chapters considering broadly two heads. The first section outlines the research introducing the basics of the research topic, the review of the literature on capital structure, social performance and financial performance and the conceptual framework of indicators of Socio-Financial performance taken into study. The second section covers an exhaustive and comprehensive analysis of the data collected identifying the necessary association between the capital structure and Socio-Financial performance of Microfinance Institutions.

Chapter 1 is a prolog the need of the research study highlighting the relevance of the topic. Further, the section intends to give an introduction of the crux of the research. The chapter explains the significance behind selection of such a topic. The indispensable need of Microfinance is to eradicate poverty and supply financial services to the poor excluded from the financial system is explained. Further, the scope of the construct is also defined delineating what is meant and what it did not mean clearing any room for enigma. People often get confused in terms Microfinance and Microcredit. Although the concept of Microfinance has its roots in Microcredit, but the former is a broader term. It justified the rising significance of Microfinance and the issues related to microfinance. It also explained the reasons as to why there is an imminent need for the government and policy makers to focus on social and financial performance of microfinance institutions.

Chapter 2 comprises of two sections: first section deals with the microfinance and second one deals with capital structure. This provides a theoretical grounding of the research and the review of literature is exhaustively detailed providing the base on which the research process is designed. The definitions of the constructs given over a period of time by various researchers and policy makers associated with development agencies across the globe are enumerated. It also gives an overview to the work done on the relevant area in several countries providing an academic base for the continued research in an appropriate direction. It gives emphasis to various approaches and delivery models of microfinance. It also includes other relevant studies which display the results of past researchers attempting to associate the self-sufficiency and sustainability of microfinance institutions. It indicates the prominence of other works

done in this area where determinants of social-financial performance such as portfolio at risk, productivity, age of MFIs, number of clients, earning on the loan portfolio, level of liquidity, return on assets etc. are found as a source of information for financial decision making and are equally important in measuring the levels of social performance and financial performance of MFIs. The second section also made an attempt to enlist major work in the research area related to capital structure and included an extensive analysis of the findings from those studies. The section intended to create a level or a framework proposing apparent relationship between capital structure and socio-financial performance of microfinance institution.

Chapter 3 details the conceptual framework of socio-financial performance of microfinance institutions. This chapter is bifurcated in two sets and outlines the variables taken in to study the social and financial performance of MFIs. The first set thoroughly discusses the variables measuring financial performance of microfinance institutions such as Return on Assets, Return on Equity, D/E Ratio, Portfolio at risk etc. whereas second discusses the variables measuring social performance of microfinance institutions such as Breadth of outreach, Depth of outreach, Length of Outreach etc. These variables help us to fulfill the objectives of the research i.e. to measure the levels of social and financial performance of MFIs and to analyze the association between social and financial performance of MFIs.

Chapter 4 chapter gives an overview of the research methodology applied in this research by the researcher. The chapter delineates the research problem, research objectives, scope of the research, the research methodology, the design of the research, the necessary hypothesis and data sources used in the study.

The research design is a combination of conclusive and exploratory research design and the methodology is a mixture of qualitative and qualitative research techniques. It further gives a description of the population under study to which the results of research can be effectively applied and the sampling technique which could give a sample that can be the best representative of the sample. Further, a snapshot of the possibility of the data analysis technique is also given which can be applied for testing the given research hypotheses which is derived from the research objectives from the crux of overall research.

Chapter 5 analyses the data exhaustively and present the results for all the research objectives. The relationship between various components is analyzed in detail. Univariate and Multivariate data analytical techniques such as Mean and Standard Deviation, Correlation, Regression and Factor Analysis has been employed for data analysis to come up with appropriate answers to the set out questions. The data analysis begins with descriptive statistics followed by correlation between the variables of capital structure and indicators of financial and social performance related to performance of MFIs. The nature of correlation is found and simple regression technique was applied to find out the extent of relationship.

The factor analysis comes up with a set of variables which underline the construct and it is only these variables which can be cumulated to form an index or to measure the performance of MFIs in future studies. The construct of performance can be broken down into two aspects i.e. social performance and financial performance. The research hypotheses have also been tested and accepted or rejected based on the results. Based on all these tests and analysis, the researcher has drawn his inferences and conclusions. The same are listed in the last chapter i.e. chapter 6.

The research concludes with Chapter 6 giving the snapshot of the entire research work initiated by the researcher. It summarizes the results and present an in depth discussion of major findings. In a systematic way an outline of the findings associated with each research objective is specified. It also lists the suggestions specific for the MFIs and the policy makers as well.

Chapter 7 comes up with narrating directions for the future research that can be undertaken and underlines the general limitations of the research with some contributions of the study.

Chapter 8 is the outcome of the whole research work taken in the form of conclusions. Describing the main outcomes linked with the objectives of the study.

A comprehensive bibliography at the end lists all the references used in the research work. The appendix contains Questionnaire and Data Sheet whereas annexures contain list of Microfinance Institutions extracted from Microfinance Information Exchange Market for this study and CV of the researcher.

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LIST OF EQUATIONS

Equation 1:

$$ROA_i = \alpha_0 + \alpha_1 Debt\ Equity_i + \alpha_2 Debt\ Asset_i + \alpha_3 Firm\ Size_i + e_i(1) \quad \alpha_1, \alpha_2, \alpha_3 > 0$$

Equation 2:

$$ROE_i = \beta_0 + \beta_1 Debt\ Equity_i + \beta_2 Debt\ Asset_i + \beta_3 Firm\ Size_i + e_i(1) \quad \beta_1, \beta_2, \beta_3 > 0$$

Equation 3:

$$Tobin\ Q_i = Y_0 + Y_1 Debt\ Equity_i + Y_2 Debt\ Asset_i + Y_3 Firm\ Size_i + e_i(1) \quad Y_1, Y_2, Y_3 > 0$$

Equation 4:

$$Breadth_i = \delta_0 + \delta_1 Debt\ Equity_i + \delta_2 Debt\ Asset_i + \delta_3 Firm\ Size_i + e_i(1) \quad \delta_1, \delta_2, \delta_3 > 0$$

Equation 5:

$$Depth_i = \theta_0 + \theta_1 Debt\ Equity_i + \theta_2 Debt\ Asset_i + \theta_3 Firm\ Size_i + e_i(1) \quad \theta_1, \theta_2, \theta_3 > 0$$

Equation 6:

$$Length_i = \iota_0 + \iota_1 Debt\ Equity_i + \iota_2 Debt\ Asset_i + \iota_3 Firm\ Size_i + e_i(1) \quad \iota_1, \iota_2, \iota_3 > 0$$

Equation 7:

$$Scope_i = \kappa_0 + \kappa_1 Debt\ Equity_i + \kappa_2 Debt\ Asset_i + \kappa_3 Firm\ Size_i + e_i(1) \quad \kappa_1, \kappa_2, \kappa_3 > 0$$

Equation 8:

$$Cost_i = \lambda_0 + \lambda_1 Debt\ Equity_i + \lambda_2 Debt\ Asset_i + \lambda_3 Firm\ Size_i + e_i(1) \quad \lambda_1, \lambda_2, \lambda_3 > 0$$

Equation 9:

$$Worth_i = \mu_0 + \mu_1 Debt\ Equity_i + \mu_2 Debt\ Asset_i + \mu_3 Firm\ Size_i + e_i(1) \quad \mu_1, \mu_2, \mu_3 > 0$$

LIST OF ABBREVIATIONS

AAGR	Average Annual Growth Rate
ACCION	Americans for Community Cooperation in Other Nations
ADEMI	Association for the Development of Micro Enterprises
AIMS	Assessing the Impact of Microenterprise Services
ALS	Average loan size
ANOVA	Analysis of Variance
APR	Annual Percentage Rate
AROA	Adjusted Return on Asset
BRI	Bank Rakyat Indonesia
BSE	Bombay Stock Exchange
BOB	Bank of Baroda
CAR	Capital Asset Ratio
CEO	Chief Executive Officer
CERISE	Comité d'Echange, de Réflexion et d'Information sur les Systèmes d'Epargne
CGAP	Consultative Group to Assist the Poorest
CIDA	Canadian International Development Agency
CRISIL	Credit Rating Information Services of India Limited
CSR	Corporate Social Responsibility
CSP	Corporate Social Performance
D/A	Debt to Asset
D/E	Debt to Equity
EBIT	Earnings Before Interest and Tax
EPS	Earnings Per Share
ESRA	Environmental and Social Risk Audit
FACT	FINCA's Client Assessment Tool
FEM	Fixed Effect Model
FIs	Financial Institutions
FINCA	Foundation for International Community Assistance
FS	Firm Size
FSS	Financial Self-Sufficiency
GR	Growth Rate

GDP	Gross Domestic Product
GNI	Gross National Income
GLP	Gross Loan Portfolio
GRA	Growth Rate Assets
GSE	Ghana Stock Exchange
HDFC	Housing Development Finance Corporation Limited
ICICI	Industrial Credit and Investment Corporation of India
IDBI	Industrial Development Bank of India
IOB	Indian Overseas Bank
JLG	Joint Liability Group
KMO	Kaiser-Meyer-Olkin
LTD/E	Long Term Debt to Equity
MACS	Mutually Aided Cooperative Societies
MDG	Millennium Development Goals
MFIs	Microfinance Institutions
MIS	Management Information System
MIX	Microfinance Information Exchange
NABARD	National Bank for Agriculture and Rural Development
NBFCs	Non-Banking Financial Institutions
NPA	Non-Performing Assets
NPL	Non-Performing Loan
NPV	Net Present Value
NGO	Non-Government Organization
OLS	Ordinary Least Square
OSS	Operational Self-Sufficiency
PAR	Portfolio At Risk
PAT	Profit After Tax
PAT	Poverty Assessment Tools
PDCs	Post Dated Cheques
PPP	Public Private Partnership
PPI	Progress out of Poverty Index
PSBs	Public Sector Banks
PLS	Pooled Least Squared

QR	Quick Ratio
RBI	Reserve Bank of India
REM	Random Effect Model
ROSCAs	Rotating Savings and Credit Association
ROA	Return on Asset
ROE	Return on Equity
ROI	Return on Investment
SDI	Subsidy Dependency Indicator
SDR	Subsidy Dependence Ratio
SHGs	Self Help Groups
SEWA	Self Employed Women's Association
SIDBI	Small Industries Development Bank of India
SPA	Social Performance Assessment
SPM	Social Performance Measurement
SPI	Social Performance Indicators Initiative
SPSS	Statistical Package for Social Science
SMEs	Small and Medium Enterprises
STD/E	Short Term Debt to Equity
TQ	Tobin's Q
USAID	United States Agency for International Development
USD	United States Dollar
UN	United Nation
UNDP	United Nation Development Programme Administrator
UT	Union Territory
VIF	Variance Inflation Factor
WACC	Weighted Average Cost of Capital
YGLP	Yield on Gross Portfolio

Chapter 1

Introduction to Microfinance

INTRODUCTION TO MICROFINANCE

1.1 Introduction

Poverty, across all the developing and under-developed nations, has been the most contemporary issue for discussion. Since Independence of India, various initiatives like insurance, subsidies, health benefits, security, etc. were introduced in order to eradicate poverty and help the needy ones but irrespective of the measures taken the facts reveals an astonishing report. According to the survey report of the Suresh Tendulkar Committee report, the below poverty line or BPL population in India in the years 2009-2010 was of 354 million (being 29.6% of the total population) and 269 million in the years 2011-2012 (being 21.9% of the total population). According to the methodology of the Rangarajan Committee report, it confirmed that in the years 2009-2010 the below poverty line population was 454 million (being 38.2% of the total population) and 363 million in the years 2011-2012 (being 29.5% of the total population). The estimates of the Deutsche Bank Research states that there are approximately 300 million people of the population are middle class. With the approaching of 2020, the world GDP share of India will considerably grow to 8.5% if the previous trends are carried on.

India is one of the fastest-growing economies in the world; poverty has been on a decline with close to 44 Indians escaping extreme poverty every minute, as per the World Poverty Clock. India has been able to lift significant percentage of its population out of poverty but many still live below it. It had 73 million people living in extreme poverty which makes up 10% of its total population according to Brookings report. It was a minimal 3.6% in terms of percentage. As of 2016, the incidence of multidimensional poverty has almost halved between 2005-06 and 2015-16, climbing down to 33.8 percent from 54.7 percent.

As per UNDP, India has lifted 271 million people out of poverty in 10 year i.e. 2005-06 to 2015-16 time periods.

World Bank has been reviewing its definition and standards to measure up poverty since 1990s, with a \$2 per day income on PPP basis as the definition in use from 2005 to 2013.

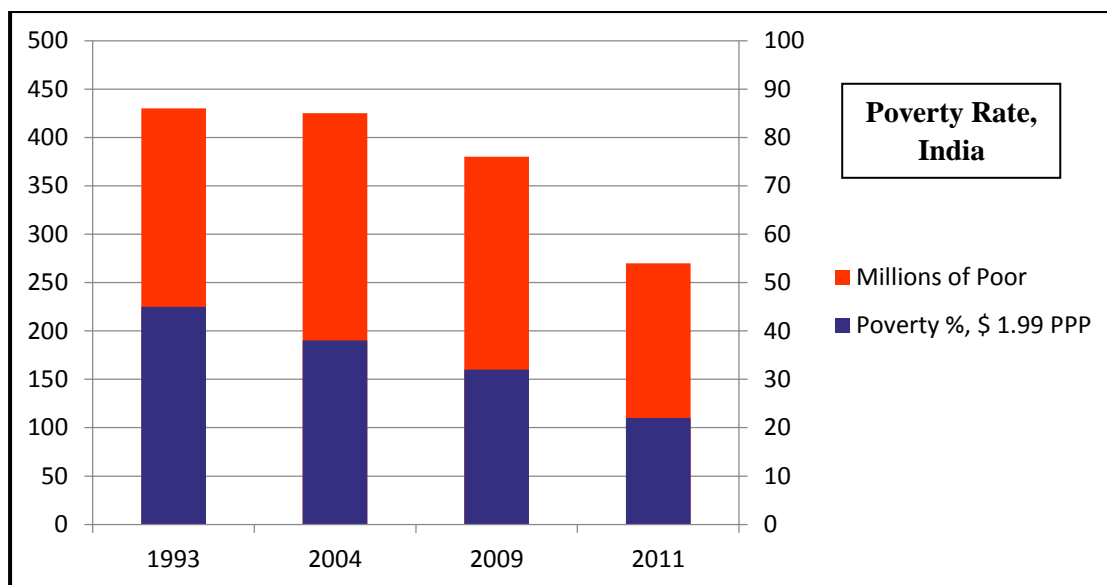


Figure 1.1: India Poverty Chart since 90s based on World Bank \$1.99 PPP poverty line

Source: <http://povertydata.worldbank.org/poverty/country/IND> (December 2017)

India has resulted in extensively broad estimates of poverty from 1950s to 2010s. In 2012, the Government of India stated 22% of India’s population is below official poverty line. World Bank, in 2011 based on 2005's Purchasing Power Parity International Comparison Program, assessed 23.6% of Indian population, lived below \$1.25 per day on PPP. According to United Nation's Millennium Development Goals programme 270 million or 21.9% people out of 1.2 billion of Indians lived below poverty line of \$1.25 in 2011-2012. It depicts that the poor require credit facilities in order to ensure and live up their basic needs rather than the grants and subsidies from the government.

Microfinance, being one of the most prominent instruments for providing credit facilities to the poor, has attained its importance in the past times. It so happened after the successful establishment of the model of Grameen Bank in Bangladesh, wherein, the United Nations as well declared the year 2005 as the Microfinance year. The poor’s are provided with credit assistance in the form of savings or short term credit facilities by the MFIs. Henceforth, Microfinance is regarded to be one of those chief methodologies wherein the growing level of poverty across the globe is rapidly alleviated.

1.2 Microfinance

“Microfinance is one of the terms of monetary services to low-earning clients or shared aims lending groups as well as consumers and the self-employed, who conventionally require admittance to banking and such other financial services.”

Microfinance, along with being an openhanded micro credit to the deprived ones, also is a financial growth instrument whose aim is to help out people to function and get rid of poverty. It includes an extensive array of services like savings, credit, insurance, transfer of funds as well as non-monetary services like counseling, training etc.

RBI (2011) defined microfinance to be a company, not registered and obtained licensed in the Companies Act, 1956 under the Section 25, which offers monetary services mainly to the borrowers having low income and come under that section with small credits, for a shorter-duration of time, being non-secured, predominantly for activities relating to income generation, with schedules for repayment that are more recurrent than the ones ordinarily specified by commercial banks and that imitates furthermore to the guidelines quantified in that accordance.

Significant characteristics of Microfinance:

- The credits are of smaller amounts, such as micro-credits
- Credits for short span of time
- A consistent reimbursement
- The borrowers are associated with low income group
- Credits are borrowed even without collaterals
- The credits are typically taken for income generation and improve standard of living

Microfinance came back in the early on 1990's to give credit and investments services to the poor as a promising substitute to conservative bank lending. Most of the developing economies have developed with time and have been providing the credit assistance to the poor with their avenues of Microfinance. The practice of several Latin America, Asian and also African countries possibly will be a distinctive example concerning this (Meyer, 2002). It established more and enhanced participation of quite a few NGOs and microfinance corporations. This hard work led

to the shaping of Self Help Groups or commonly known as SHGs, wherever poor from standardized backgrounds created groups of like 20 each and the collective funds were lent out to the deprived ones in the group of members. With massive potentiality and short NPAs, various foreign as well as private banks revealed their strategies to penetrate into the Indian microfinance industry. The Reserve Bank of India along with the entire governmental force has proclaimed various mechanisms to enhance and improve the activities of microfinance in the country. Some of the detailed growth worth citing here are as under:

- Increased development, recently observed in the Microfinance sector, with additional and more agencies getting introduced like every day. Certainly there is nothing much to worry or panic about, but somewhere it is necessary to have a control on the activities as well in this industry.
- With substitute portfolios, being anticipated for additional Financial Inclusion, as well as Mobile based banking and Agent based banking, the subsequent major issue of discussion will be the transaction cost or simply the business deal cost, wherein there is selection of the substitute models having the transaction cost to be minimum.
- With excessive funds needed for the recognized MFIs to expand; and for the reason that of the maximizing the deposits, the cost-effective Microfinance Institutions are contributing their equity share to the banks and financial Institutions, that are way more eager to invest their funds in such emerging and profitable Microfinance Institutions to earn a handsome returns from such equity shares.

1.3 Gaps in Financial System and Need for Microfinance

As per the recent research study conducted by the World Bank, it was interpreted that India is a home to roughly one third of the total population of poor (surviving currently on a corresponding amount of one dollar per day). Although various programs concerning the issue of poverty eradication are taken up by the state government or central government in India, still Microfinance describes a major provider to financial inclusion. In the previous years, Microfinance has helped outstandingly to alleviate poverty. The reports demonstrate that the people who use

Microfinance are capable to amplify their income and also enhance their living standards.

Almost half of the total Indian residents still are unaware of the banking services and hence, do not have a proper bank account. The poor also require some financial services in order to satisfy their wants and needs such as, consumption cost, formation of assets and the security counter to risk. The Microfinance Institution aids to provide additional benefits to the banks. These Microfinance Institutions not only tender micro credit but they also offer various other monetary services like insurance, savings, allowances and many more non-monetary services like personality counselling, training and assist in order to start up a new business is the most expedient way significantly. The borrowers are served with such financial services at the earliest and sometimes with a schedule of refund for the convenience of the borrowers. Nevertheless, such services are delivered at a rate of interest and cost much higher than that of the commercial banks which differ from approximately 30% to 60%. Some of the borrowers feel that such high rates of interest are just and acceptable whereas some are in contradiction to this.

1.4 Timeline of Microfinance

- 1462 - Barnabé de Terni, an Italian preacher established an institution with offering charity as the prime objective, Monte di Pietà, to get rid of money lending issues.
- 1653 - An Italian investor, Lorenzo Tonti, established a savings agency in France. His system of savings was termed as the tontine, signified after the name of the founder.
- 1720 - Jonathan Swift, was the first individual to lend credits of small amounts to the poor craftsmen in Dublin.
- 1864 - The first ever cooperative credit offering institution was set up by Friedrich-Wilhelm Raiffeisen in Rhineland, situated in Germany. It intends to offer mutual monetary promise to banks so that poor farmers can have admittance to credit.
- 1880 - Father Ludovic de Besse established a Crédit Mutuel et Populaire, in France where Banque Populaire was a derivative. In the subsequent years, an

attempt to restructure and assist the agricultural sector, the French State established Crédit Agricole, grounded on the Raiffeisen model.

- 1970s - Subsequently the stoppage of rural growth funds sponsored by worldwide support and a range of states in the 1950s, accommodating funds and credit unions start up-and-coming in mounting countries. Incorporation of investigational microcredit programs to the groups of poor individual women: in Brazil (ACCION International), in India (SEWA), and in Bangladesh (Grameen Bank, established by Muhammad Yunus where he granted USD 27 out of his own possession of money to a collection of 42 women in Jobra, Bangladesh).
- 1989 - Maria Nowak, in France, established an agency concerning the right to financial proposal (Adie).
- 2005 - This year was acknowledged by the United Nations as the International Year for Microcredit, where their basic objective was to build a wide-range of financial industries to attain the Millennium Growth Goals.
- 2006 - Professor Muhammad Yunus and the Grameen Bank both received the Nobel Peace Prize together which Prof. Yunus established in 1976.
- 2009-2012 - Subsequently with several crises, a variety of initiatives started to come up to support the performance of Microfinance Institutions.
- 2013 - First Smart Campaign certifications (Bosnia and India).
- 2014 - The Reserve Bank of India formally recognized Microfinance Institutions Network (MFIN).
- 2015 - Micro Units Development & Refinance Agency (MUDRA) established in order to help small businesses financially.
- 2017 - E-Shakti pilot project covering 100 districts. The project has a dedicated website <https://eshakti.nabard.org> in which all the information of all SHGs is uploaded through apps on the Android mobile tablet.

1.5 Birth of Microfinance

Credit associations and credit lending cooperatives have approximately been functioning for over hundreds of years. On the other hand, the ground-breaking move

of modern Microfinance is often given to Dr. Mohammad Yunus, who initially gave evolution to an experiment by assisting the poor women with services in the village of Jobra, situated in Bangladesh throughout his occupancy as a lecturer of economics at Chittagong University in the 1970s. He went on to establish the Grameen Bank in 1983 and thereafter was succeeded with the Nobel Peace Prize in 2006. The UN Year of Micro-credit in 2005 indicated a revolving summit for Microfinance as the hush-hush subdivision began to take a more somber curiosity in what has been well thought-out sphere of government. On the other hand, with the progressive responses over the views related to the poverty alleviation and the involvement of the poor residing across the globe into the rapidly emerging worldwide market system, the Consultative Group to Assist the Poorest predicts that Microfinance in all probability reaches to smaller amount than 5% of its probable clients. Even though this is a very certain estimation of those not attained by the formal financial institutions, it may effectively serve and provide a wide-ranging idea of what portion of the probable clients of Microfinance are still left to be attained. India, as a country is sheltering the growing and creative industry of Microfinance. Though, India has a great share of the poor residing all across the world, thus it requires the functioning of Microfinance to be significantly important.

In any specific country, the empathetic understanding of the emergence and the key characteristics of the nation's financial system, its incorporation through regulation and the attitude of the government towards the Microfinance sector is very essential. Such familiarity allows one to recognize what services shape its expansion and what factors hold it back. An empathetic comprehending of the nature of Microfinance guideline is imperatively essential to assess the costs and reimbursement of change from a Non-Governmental Organization - Microfinance Institution to Non-Banking - Microfinance Institution. South Asia has been termed as the "cradle of microfinance" by The World Bank. The statistical information indicates that approximately half of all the people in the world who use Microfinance services are residing in South Asia. The World Bank predicts that the poor people residing in India of approximately more than 87% of the total cannot have access to the credit from any of the trusted sources and thus they never borrow any amount of money or are dependent on the credit-borrowers who ultimately levy high rates of interests from 48 percent to 120 percent or at times even much higher. This exhibits that there is an existence of capable

clients for micro-credit financing in India, depending on the stage of demand for financial services, from persons poor with no right of entry to it.

1.6 Issues with Microfinance

It is evident from the preceding discussion that although some important stride has been made in the enhancement and improvement of the Microfinance Sector, but at present a number of areas of apprehension too exist. Some of the issue, which needs the concentration of the strategies maker, directly are:-

1.6.1 Structure and Sustainability Issues

At this time, the arrangement of the MFI's in India is moreover the SHG Model or the JLG Model and at present there are various Microfinance Institutions who put into practice atleast one of these model. The alternative of the model taken up may not be a methodical developmental process of accuracy, and might be more determined by expediency with the transaction costs which the relative MFI is ready to bear. The alternative of the model has a gigantic collision on the long term sustainability of the MFI and is for the most part an irreparable decision.

1.6.2 Funding Issues

Stable usage of Capital is a subject joined with serious dependency on Financial Institutions and Banks which make the industry all the more susceptible. An even usage to capital will stay put a key confront for India's Microfinance Institutions industry over the standard term. Internal accumulations of funds and the capital mixtures have assisted most of the Microfinance Institutions augment their net income for over the former two years. Currently round of capital mixture have helped Non-Banking Financial Corporations- Microfinance Institutions diminish accelerating in spite of high enlargement in their asset bottom. Whereas, the cooperatives and the non-profit Microfinance Institutions abridged on the reverse of enhanced internal accrual, exchange of deposits to capital and decrease in the sum of borrowings due to short of ease of use of funds. As the MFIs are needy on borrowings from banks and FIs, and do not move up debt from the capital market, the great NBFC-MFIs face higher cost of borrow. The large and mid-sized MFIs and NBFC-MFIs first and leading have a loan of from private and foreign banks, as the lesser MFIs have a loan of mostly from private banks and apex lenders. Lend model plays an important role in determining a MFIs borrowing profile. PSBs prefer lend in a straight line from side to

side the SHG-bank connection path, secretarial for 36% of the total borrowings alongside only 10% of the MFIs succeeding the JLG model.

1.6.3 Dropouts and Relocation of group members Issues

A majority of the Microfinance credits are given out on the concept of group credit lending where all the members are held responsible if the loan is taken up by any one of the total members. With an objective to achieve credits, the historical records of data of the groups exhibit a significant part for both, including the Microfinance Institutions and the SHG Bank linkages. The two most important tribulations connected to groups are either the members leaving the group or the ones immigrating the group. A dropout concerns the situation when a member decides to exit the group, whereas, a migration concerns the shifting of member from one group to another group. This impacts the permanence of the group and decreases its record in the presence of the receiver which can hold back their loan.

1.6.4 High NPAs Issues

The overall NPAs under the SHG-Bank linkage programme for the year 2017-18 is 6.18% with the maximum NPAs in rural areas. A very small minority of people undertake any new economic activity after taking a loan. Majority of such loans are utilized by the people for consumption purposes. Political, social and economic factors also affect the repayment rates for these loans.

1.6.5 Weak Governance Architecture Issues

MFI have a strong bearing on governance practices because they influence management practices and levels of transparency. Legal structures suffer from want of adequate regulations and disclosure standards. This creates a vicious circle phenomenon. NGO - MFIs continue to face challenges in striking a balance between their social and business goals. This results in poor internal control systems, lack of accountability, and sub-optimal performance. This will ultimately hinder the sustainability of their operations.

1.6.6 Capacity Building Issues

Ever-increasing heaviness on process and pedals due to destructive growth strategy and it remnants to be seen as to how the MFIs live up to this only one of its kind confront. Also, MFIs risk management practice have destabilized in excess of the past

duo of years, on description of a shift in focal point towards business growth and set of connections expansion. Some credit approves and monitor put into practice have been watered down. Rapid development to new geography also put heaviness on the inside is in charge of mechanism and inspection functions. MFIs are required to reorganize their internal audit and calculating process to diminish prepared risk for the duration of the growth phase

1.6.7 Controller Issues

Absence of control is a sort of a mixed blessing. On one hand, this has helped in mushrooming of huge number of MFI's but at the same time, this has led to some malpractices and reporting practices, whose ethical standards are questionable. Microfinance activities are undertaken by the organizations that are registered under the several legal forms. The absence of prudential norms and accounting guideline for non-NBFC-MFIs leads to lack of uniformity and highly leveraged balance sheets among MFIs. Savings is an important component, but currently savings and deposit services can be offered only by banks and cooperatives. The regulatory risk involved in allowing NGO-MFIs to collect savings/deposits has resulted in MFIs ceasing to mobilize savings and deposits.

1.6.8 Inability to generate sufficient funds Issue

Inability of MFIs to raise sufficient fund remains one of the important concern in the Microfinance industry. Though NBFCs are able to raise funds through private equity investments because of the for-profit motive, such MFIs are restricted from taking public deposits. Not-for-profit companies which constitute a major chunk of the MFI industry have to primarily rely on donations and grants from Government and apex agencies like NABARD and SIDBI. In absence of adequate funding from the equity market, the major source of funds for MFIs are the bank loans, which is the reason for high Debt to Equity ratio of most MFIs.

MFIs receive debt from banks against their equity and in order to increase their portfolio size they need to increase their debts for which they further need to increase their equity. After the Andhra crisis, it is reported that banks have stopped issuing fresh loans and even though currently few banks have resumed, they want MFIs to increase their equity to get fresh loans. So the only mode for the MFIs to increase their portfolio size is to increase their equity. The problem of inadequate funds is even

bigger for small and nascent MFIs as they find it very difficult to get bank loans because of their small portfolio size and so they have to look for other costlier sources of fund.

1.7 Benefits of Microfinance

Microfinance is the mechanism of offering a small amount of loan or any other form of credit, reserves, insurance products or checking to those people who don't have the right to use this type of capital. This permits the individuals, residing in poverty, to focus and work for transforming themselves to be economically independent with accordance to enhance their standards of living.

In the developing countries the benefits of Microfinance and the reason as to why everyone should be empathetic to this kind of credit lending are as under:

1.7.1 Provides access of credit to people

Microfinance makes the access of credit easy for the poor people. The father of Microfinance, Prof. Muhammad Yunus, out of his own money lent \$27 to women as it was having an adverse effect on their bamboo chairs crafting. Many banks do not provide credits due to absence of collaterals with the poor, as they are not ready to take up the risks involved. With the maximization of Microfinance opportunities, the poor groups can now have an access to small credits at their time of need, thereby eradicating poverty rapidly.

Many financial institutions never followed the belief of Yunus as he stated that credit is an essential right of every human. Therefore, with an objective of eradicating poverty and upgrading the living standards of the poor, credit is a must and thus the poor should be allowed to have complete access to it.

1.7.2 It allows the individuals to enhance their living standards

Microfinance is an addition for improvement in the living standards in the world. The families themselves are working hard in order to get rid of poverty but with their one adverse incident they fall back to square one of poverty. This retrieval of poverty may be due to a health issue. The growing entrepreneurs being buoyant in nature exert their own efforts in order to provide greater opportunities to the society. A number of families are benefitted with the Microfinance products and also have an opportunity to magnify their accumulation of income.

1.7.3 Education to children are offered

Majorities of household struck with poverty are involved much with agriculture; therefore, they do not feel the need of education to significantly important. The households must infact aim to make their wards productive and knowledgeable in order to fulfil the financial needs of the family. Thus, the women of the economy have restricted opportunities to work and give a real earning to life. But with Microfinance services, the girls of the society will also be privileged to educate themselves and earn a living.

1.7.4 Creation of real jobs

Microfinance with emerging entrepreneurs brings along new employment opportunities for the society. People are able to earn a living with these employment opportunities and then benefit the society by enhancing the standards of living of the people. The Grameen Bank, situated in Bangladesh employs approximately 21,000 persons, giving job opportunities.

1.7.5 Serves the Women of the society

The Microfinance products are extended most to the women in various developing countries, on a figure of 95%. Women who face difficulties in meeting their basic daily requirements or are not employed or are disabled are benefitted with the Microfinance Institutions.

Also in the developed countries, women economy needs to be strengthened. With specific surveys and researchers, it has been figured out that the women in business hold a leading role in the functioning of the business. They profit the business by maximizing the returns on the capital invested to 66%, whereas 425 more in the sales return when compared with the male workforce.

Women, thus have become the driving force for maximizing benefits to the business in the developed countries and also are helping the process of eradication of poverty very effectively.

1.7.6 Possibility of future investments

Microfinance functions to alter the cyclic repetition of poverty in the society. When there is shortage of money, there is shortage of food. Consequently, this adds to poor sanitation and cleanliness and better living conditions. Thus, Microfinance aims to

fulfill the urgent basic requirements of the society first. Children can focus more on studies and healthcare facilities will also be enhanced.

1.7.7 Sustainable process

Microfinance is no doubt a sustainable process. Its mechanism is to function sustainably with respect to financial performance and social performance. It is not just meant for today, but will also be required in the future; this should be the prospective of the Microfinance Institutions. The targets of the MFIs must be achieved in order to be sustainable in the future.

1.7.8 Savings is encouraged

The offering of Micro-credit is accompanied with savings too. Once the basic needs of the people are met, they should be encouraged to maximize their savings. The potentiality of investing the savings again increases with this mechanism. People surviving in poverty are benefitted with the help small credits provided to them.

1.7.9 It offers a better overall loan repayment rate than traditional banking products

Women in the economy are also empowered in the current scenario and when compared with men, they have a better rate of credit repayment. Zenger Folkman, go a survey published which concerned the scores of honesty and integrity with respect to the gender and their leadership roles. The mean of such statistics showed that the women exhibiting such traits are 55% whereas for men it was 48%. Integrity is the utmost requirement of any business. Thus, this trait, as per Microfinance Institutions are best found in the Women.

The developing society of the country has changed their perspective towards women by treating them as an asset and not a liability. A woman no matter working hard in a developed company or working in any SHG will always object to eradicate poverty and benefit their living standards.

1.7.10 Reduces Stress

Few Micro-credits are used to let off the household expenses. During the phase of poverty, even childbirth is seen as a stressful mechanism. The Micro credits offered reduce the stress of the ones especially residing in poverty. The MFIs focus on delivering the best of credit products to the downtrodden parts of the society.

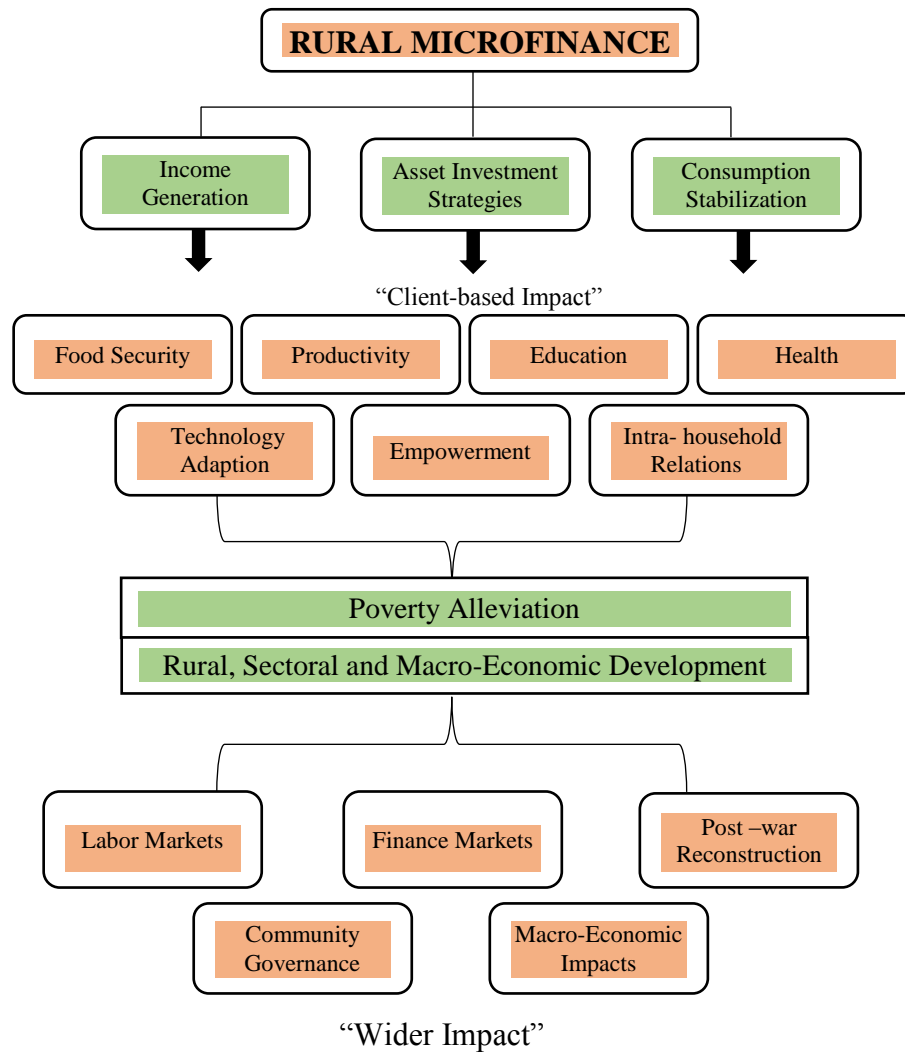


Figure 1.2: Pathways and Impact of Rural Microfinance

Source: Computed based on Zeller et al. (1997) and Chowdhury et al. (2004)

1.8 Growth of Microfinance in India

The eradication of poverty is still the key concern and the contemporary issue in India. Government has significantly improved the apportionment of provisions of health, education, sanitation and various other facilities that encourage the capability building and the welfare of the poor. Since Independence, the main aim was to offer the best of financial services to the under-privileged and the poor ones of the society. In 1969 the commercial banks got nationalized and were lend 40% of their total credit to the private sector at concessional rates. The private sector comprised of the agricultural sector and other rural activities and the downtrodden parts of the society in general. With the influence of the poor incorporation and manipulation exhibited by the officials of the government, the activities launched by them with an objective to eradicate poverty could not accomplish their desired results. The corrupt officials

locally manipulated and misused the public funds which were destined towards eradication of poverty.

Also, the private sector launched various programmes with an objective to offer micro financial services in India. This can be rechecked with the data recorded from past periods of time, wherein Shri Mahila Self Employed Women’s Association abbreviated as SEWA, Sahakari Bank undertook various steps in 1974 for offering banking services to the women employed in the rural sectors or the unorganized sectors in Ahmedabad, Gujrat. In India, formerly, various Non-Government Organizations MFIs were financed by the borrowers support from grants and the revolving funds. There is an extensive scope of micro-credit in the rural parts of India. In 1992, when the National Bank for Agriculture and Rural Development was introduced, the mechanism of Microfinance got boosted up. RBI promoted the financial inclusion to a major part of the population for the economic development of the nation. With the access of financial services particularly insurance and credit increases the opportunities of better livelihood of the deprived ones.

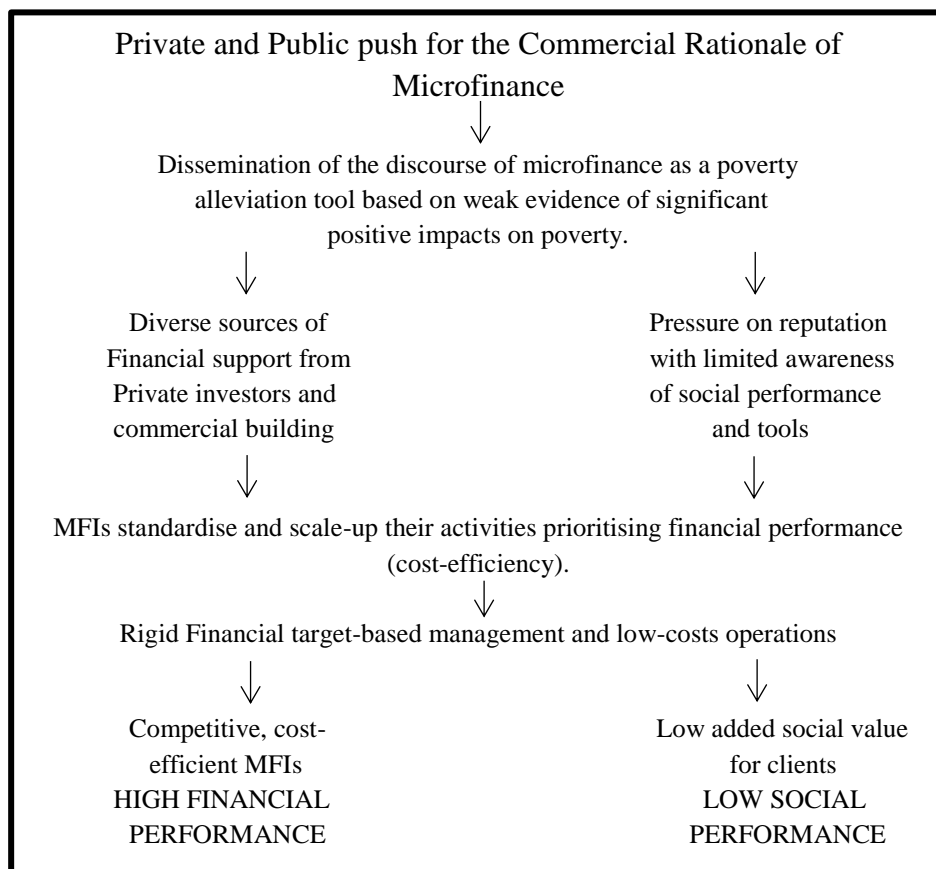


Figure 1.3: Microfinance Industry Developments

Source: Author’s Compilation

1.9 Nature of Micro Finance Institutions

Microfinance Institutions are such identified institutions which are providing micro-credit as their key significant objective. Microfinance services are offered by various organizations differing in sizes and their legal forms. The conception of Joint Liability Group (JLG) is followed by such institutions. A Joint Liability Group is nothing but an informal group consisting of 5-10 members who jointly aim to fulfil their objective of facilitating bank credits either through the methodology of groups or individually against a joint a shared guarantee. The main purpose towards the existence of distinct Microfinance Institutions for providing micro-credit is as under:

- Non-existence of collaterals, i.e. the poor people of the population are not in an appropriate position wherein they can afford to provide collaterals in order to secure the loan.
- As there is increased transaction cost in banks, the credits provided by the MFIs are reduced down to the break-even point of the loans offered by them.
- Usually, the credits are taken for very shorter periods
- Greater rate of incidences of refund of the installments and even increased default rates.
- Societies and Trusts, Section-25 companies, Co-operative societies, Non-Banking Financial Companies (NBFCs), they as Microfinance Institutions operating in the sector of Microfinance establish MFIs and collectively account for an approximate contribution of 42% in the Microfinance sector with respect to the credit portfolio.

Table 1.1: Nature of Microfinance Institutions in India

Sl. No.	Type of MFI	Legal Registration
Not-for Profit MFIs		
1.	NGOs	Society Registration Act, 1860 Indian Trust Act, 1882
2.	Non-Profit companies	Section-25 of Indian Companies Act, 1956
Mutual Benefit MFIs		
3.	Mutual benefit MFIs Mutually Aided Cooperative Societies (MACS)	Mutually Aided Co-operative societies, Act enacted by State Governments
For Profit MFIs		
4.	Non-Banking Financial Companies (NBFCs)	Indian companies Act, 1956 Reserve Bank of India Act, 1934

Source: M-CRIL Microfinance Review (2014)

In the developing nations, the issues began to come up by the informational imbalances which have distinct characteristics towards the credit markets and that they are strengthened as the lower-income population does not have collaterals which can be offered against the credits and also due to the legal system being weak the implementation tends to be impossible. Usually, the poor population being the sufferer, find getting money from the formal money lenders difficult. Henceforth, this limited access of loan facilities to the poor result in the increase of poverty and the disparities in income (Beck, Demirguc & Levine, 2007).

In the initial periods, most of the Microfinance Institutions functioned as a not-for-profit organization, generally known as a Non-Governmental Organization. When the NGOs begin earning profits, this surplus is utilized in the funding of the financial services, resulting in profit retention in the organization as well providing multiple benefits to the clients. With this, various NGOs started the mechanism of accepting deposits in the form of savings as they understood that this facility of savings will facilitate their operations of micro-lending. When such not-for-profit organizations, NGOs, move to take the permission from the government with respect to accepting deposits, they are then expected to transform their business model into an organization which seeks to earn profits and is owned by the shareholders. When this model is actually implemented, the private investors or the shareholders tend to pocket up the profits, inevitably target on obtaining the maximum returns on investment, whereby charging higher rates of interest from the poor clients, who do not much tactic of negotiating as their choices of credit are restricted (CGAP 2009). This leads to the birth of the most significant question that whether the rates of interest of the microcredits are way too high.

The Microfinance Institutions have to resolve the concerns of increased rates of interest and its serious impacts on the clients coming in lower-income groups. The reason to this may be figured out as the inexorably increased operating costs of the little amounts of loans when compared with the credits offered by the traditional banks. For instance, the salaries of the staff, being a constituent of the administrative costs are usually high when 2 lakh rupees is distributed to one thousand borrowers, wherein each of them gets two hundred rupees when matched with the single loan of 2 lakh. Hence, the Microfinance Institutions charge increased rates of interest as compared with the rates of interests on the loans offered by the traditional banks.

Consequently, the Microfinance Institutions state that helping the poor of the society is their significant objective but with such higher rates of interest, it becomes inevitably difficult for them. These interest rates are significantly high when compared with the interest rates charged by traditional banks on their loans to the high-profile customers. In a way, a negative impact of this was delivered to those viewers who usually did not identify and as well did not favor the beliefs and view point where the Microfinance Institutions can provide benefits to their customers efficiently, if their operations result in profit maximization, rather incurring losses which will require a continuous backing of subsidies and grants.

During late 1970s, when the Microfinance movement was emerging, the rate of interests of the micro credit got convicted largely. However, such criticism got more reinforced in the former years. The rates of interest were deliberated as ceiling across various nations in the world. Such increased concern regarding the rates of interest is that the Microfinance sector started to get an increased attention of the public everyday thereafter maximizing the scope of this sector and thus allowing them to charge high rates of interests from their clients.

Alternatively, few Microfinance Institutions, in the current scenario got altered from being a mere organization for delivering micro-credit to private profit-seeking corporations. It has become significantly important to observe the link between the social and financial objectives having a direct influence on the rates of interest levied by the Microfinance Institutions.

Henceforth, this research study attempts to observe the correlation between the funding cost and the lending rates of interest. This research study also takes into consideration several indicators of financial and social performance of Microfinance Institutions and their influence on the rates of interest levied by them on lending. Therefore, this research focuses on investigating the dynamics influencing the efficiency of production of the Microfinance Institutions.

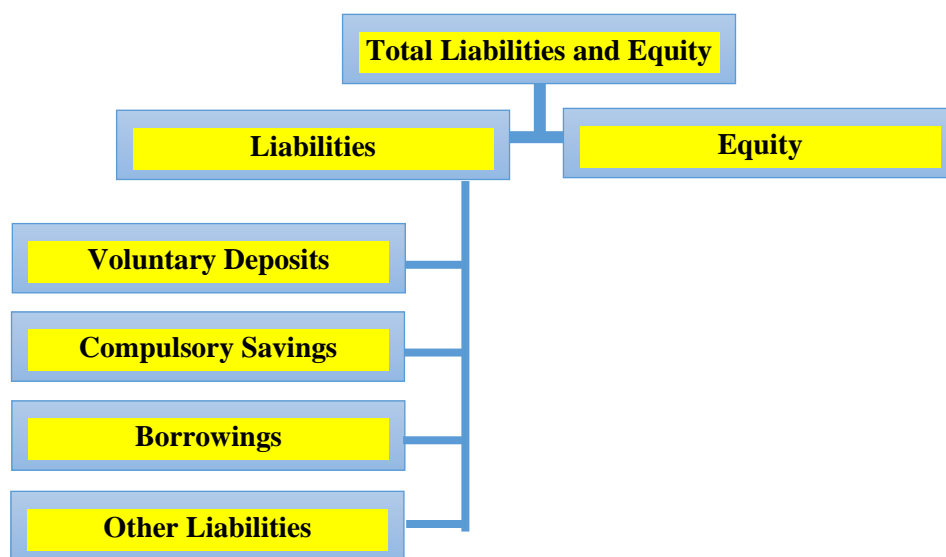


Figure1.4: Financial Structure of a Microfinance Institution

Source: Adapted from Sapundzhieva (2011), Hermes et al. (2011) and Hsu (2007)

1.10 Status of MFIs in India-Contemporary Status of MFIs as on 2017-18

The Microfinance sector, across the globe, witnessed high leaps of growth in the past two decades. There has been a considerable growth in the count of non-banking finance corporations offering savings and credit products from being few in number and now large in number. A self-regulatory corporation, Sa-Dhan estimated the overall composition of Microfinance customers in India to be 30 million in the mid of the year 2017. Although, this estimate does not involve those customers who were provided services by 6 Microfinance corporations having received the license of banking from the Reserve Bank of India.

An impractical deed of economical intimidation, i.e.; demonetization was unsuccessful to discourage the zeal of the Microfinance Institutions, entrepreneurs, lenders and borrowers who persistently recompensed the micro-credits notwithstanding with slight setbacks in the schedules of repayment. Due to demonetization, the credit portfolios were observed to get narrowed down also turning the formation of capital to negative.

Proceeding on it is significant to a mass and then study the observed data from the commercial corporation be certain about the fact that the Microfinance Institutions stay on to reinforce the agenda of financial inclusion in India. Sa-Dhan instead

released the updated version to facilitate this from its Bharat Microfinance Report 2017.

The significant outcomes from the report study are as under:

- The mechanism of Microfinance is carried out in 563 districts, 29 states and 4 Union Territories of India.
- The unsettled loans increased by 26% in the Financial Year 2017 when compared to Financial Year 2016.
- The overall unsettled loan portfolio was 47,000 in an estimation of the Microfinance Institutions situated in India.
- The unsettled average loan for each borrower was estimated to be 12,500.
- Out the total number of borrowers, there were 96% of specifically Women borrowers.
- An employment of approximately 90,000 employees was being offered towards the society by the Microfinance Industries. 60% of the overall workforce was of particularly field staff.
- A diminishing count of the urban customers was also predicted.
- Out of the total number of borrowers the Scheduled Castes or the Scheduled Tribes were 20% of all the borrowers, also the minorities constituted to be 10%.
- The Self-Help Groups had a growth in the course of year; also, the count of families being allied to the SHG-BL program increased over 112 million.

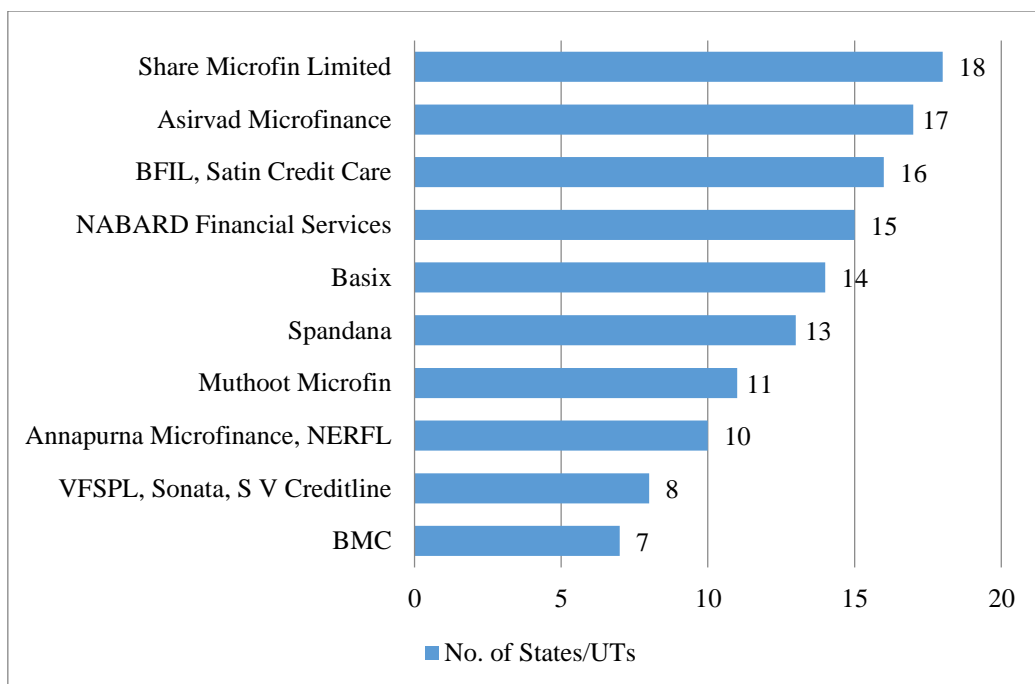


Figure 1.5: Top 10 MFIs Operating in Number of Indian States/ Union Territories

Source: The Bharat Microfinance Report 2018

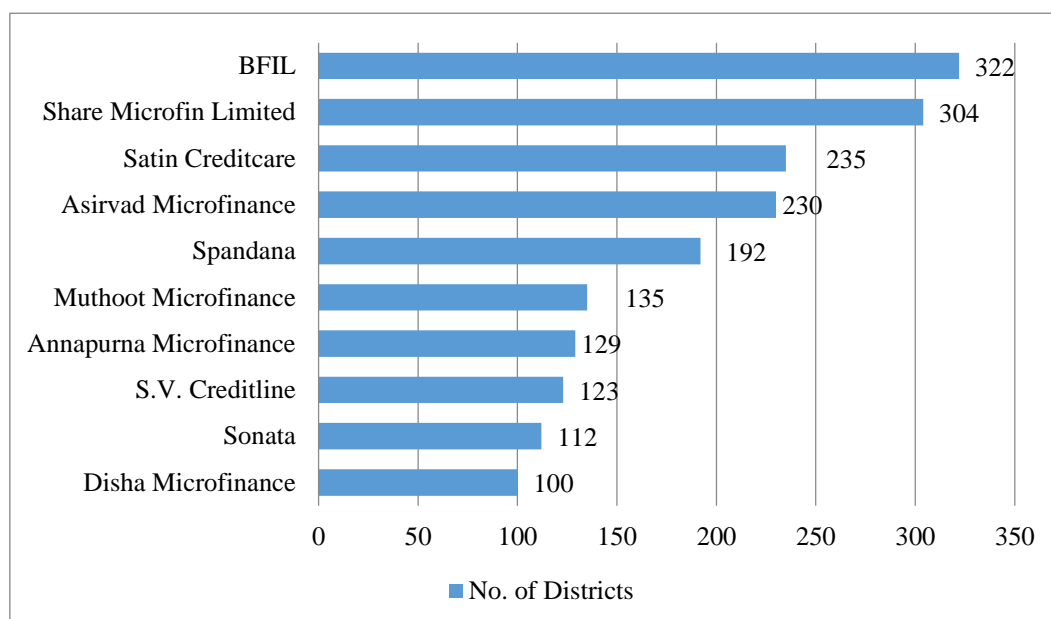


Figure 1.6: Top 10 MFIs Operating in Number of Indian Districts

Source: The Bharat Microfinance Report 2018

1.11 Why Measure Performance?

The measurement of performance can be done with a view to serve various other purposes. The measurement performance of Microfinance Institutions is done for internal as well as external purposes. As per CGAP, if the performance of

Microfinance Institutions is measured, then they work the best. This can enhance the performance, apart from only reporting and recording the important costs and benefits which are helpful for the shareholders CGAP (2006). With an objective of achieving the desired goals measurement is done, moreover, to enhance the performance of the Microfinance Institutions such assessment is also very important. As per Simons (2000), the measurement of performance of the business organizations is a mechanism to stabilize the key issues within an organization:

- Stabilizing growth, profit and control
- Obtaining an equilibrium between the short-term outcomes and the proficiencies of growth in the long-run
- Balancing the expectations of performance of various sectors
- Stabilizing the attention towards the opportunities
- Stabilizing the objects of a human and his behavior

1.12 Capital Structure

The capital market of India had faced various noteworthy alterations in the past few decades. There have also been frequent changes in the rules and regulations of the Government. With the above mentioned alterations, the beliefs and hopes of the investing companies also underwent changes. When talking about the corporate sector and its financial performance, the raising of funds and the effective utilization of the funds by them has become an important issue of discussion. The degree of leverage, remains to be the most key concern for the investors, shareholders and as well as the companies as a whole. The term ‘leverage’, although being a positive concern for a company, does not completely entail to all the financial situations.

The analysis of the factors affecting the capital structure and the financing techniques of the companies helped them to understand their financing operations. There are various policy issues which are involved in the decisions related to finance of companies.

A firm’s capital structure refers to the mix of its financial liabilities. However, the financial capital, though uncertain in nature, is a prominent resource for organizations, wherein the supplies of funds are capable to have complete control over the organizations. Harris and Raviv (1991). The two variants of liabilities are equity and

debt and the investors to them are equity holders and the debt holders. Every source in a way is accompanied with different proportion of benefits, risks and control. It is the technique the company provides finances to its assets from side to side some grouping of debt, equity, or hybrid securities. An industries capital arrangement is then a work of art or configuration of its liabilities.

A combination short-term debt, long-term debt widespread equity and preferred equity of a company's Capital Structure. Capital Structure is the decisions made by an organization to decide about the financial sources of accumulating funds, in a way to represent the leverage of the organization as well. Debt is derived in the appearance of bond issues or long-term notes owed, while equity is confidential as widespread stock, preferred stock or retain earnings. As per Harris and Raviv (1991), the Consensus refers to the impacts on the degree of leverage with non-debt tax shield, fixed assets, business size, investment opportunities, decrease with unsteadiness, publicity spending, the likelihood of insolvency, productivity, and individuality of the product. Titman and Wessel (1988) proposed that the Asset organization; growth, non-debt tax shields, industry classification, uniqueness, earnings Volatility, profitability and size are the determinants that might impact the degree of leverage relatively to the varying theories of Capital structure. Still, many other authors may offer one more set of possible factors of capital Structure. This clearly depicts that even the researcher's thoughts are summed up what determinants may comprise the little set of attributes (Harris and Raviv, 1991).

Capital structure relates to the mechanism of enduring source of finance, funds allocation sources required especially to purchase fixed assets. The composition of capital structure may either be a combination of debt and equity or 100% equity financing or 100% of debt financing. The long-term debt financing comprises of debentures and medium/long term bank loans. Various firms believe debt in their capital to what's more expand their behavior or finance its operation Kasilo (2011). Pandey (2010) proposed that, the financial managers must figure out a perfect capital structure for the institution that must maximize the significance of the firm.

In the literature, the relation existing between the capital structure formations and thereby the performance evaluation has been studied evidently. An attempt has been made to comprehend the importance of control for the varying types of investors and

the performance of the firms and also the concerned governance used as a mechanism for the private business firms.

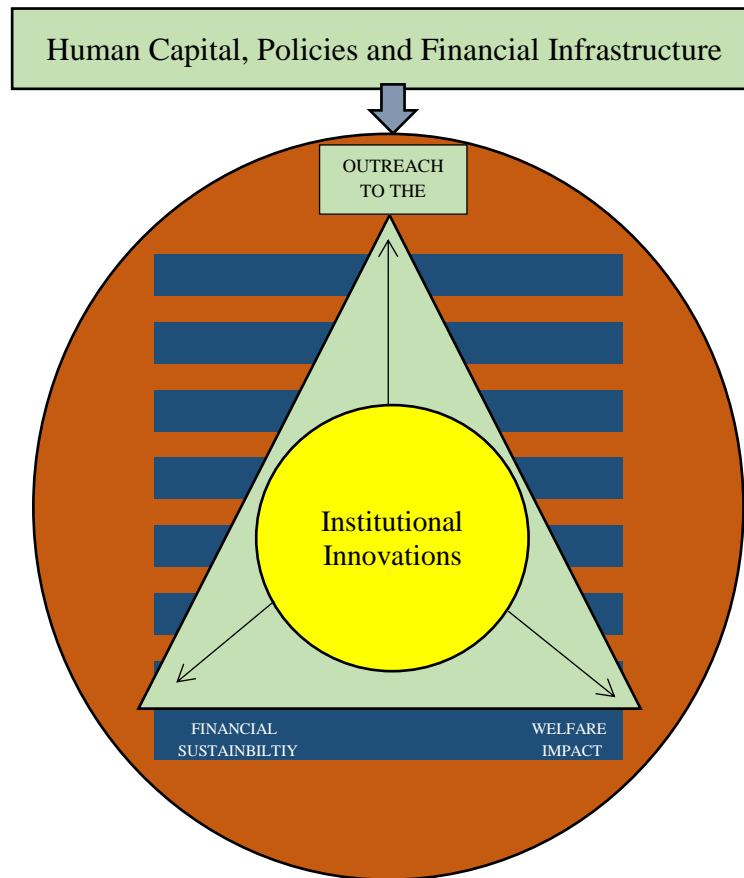


Figure: 1.7: The Critical Microfinance Triangle

Source: Meyer (2002)

Meyer (2002) proposed “The Critical Microfinance Triangle” to measure the performance of Microfinance Institutions. This triangle is delineated in Figure 1.5; the figure has three general policy objectives which are as follows: outreach to the poor, financial sustainability, and welfare impact. To measure the Microfinance performance exhaustively there are essential performance criteria for all three objective. In further explanation, it was found that the inner circle demonstrates the innovation of the Microfinance Institutions in organization, Management, Policies and Technology that influences every objective that is achieved. The outer circle demonstrates the scenario’s wherein MFIs functions which affects the performance. The environment included the human-social capital that poor possess, the quality of the financial infra that favors financial transactions and the economic policies of the

country where MFI are situated. Several enhancements in the environment make it relatively easy for Microfinance Institutions to achieve these objectives.

1.13 Financial Performance

An institution's financial performance, with the outlook of the shareholders, is evaluated with respect to how well the stakeholder is at the finish of a duration as compared to he was in the initial and this can be derived by using the ratios resulting from the financial statements, especially income statement and the balance sheet or by incorporating data on the stock prices from the market Berger and Patti (2002). Such ratios give a sign of whether the company is attaining the objectives of the owner and keeping them better-off and such that it can be used to link a company's ratios with other company or to sketch out the inclinations of performance for over time. Charreaux (1997) in Severin (2002) proposed that assessment of suitable performance should provide a description of all the investment portfolios, on the ultimate profit of the shareholders. The basic objective of the investors in any business is to capitalize on their wealth. Thus the dimension of presentation of the business must provide a suggestion of how better-off the shareholder, has develop into as a product of the venture over a definite time period.

The term financial performance relates to the methodologies incorporated by a company to use its assets from the primary business and then create revenues. Erasmus (2008) demarcated that financial performance actions like productivity and liquidity in the middle of others delivered an exclusive tool to shareholders to appraise the earlier financial performance and the prevailing position of a company. Brigham and Gapenski (1996) argued that Modigliani and Miller model was legal in their practice, the costs incurred during bankruptcy also existed and also that such costs were directly related to the levels of debt of a company.

1.14 Evolution of the Social Performance Concept within the MFIs

The companies presently are focusing to develop and create a sustainable society. Though there are many relationships but the mechanism of this objective varies in the approach and the requirements of every organization. In the past decades, the society and the organization have been communally in interaction with the Corporate Social Responsibility (CSR).

Future Foundation and BT Grimshaw C, Howard M & Wilmott M (1998) defined Corporate Social Responsibility as a contract which considers the interests and opinions of the people, companies and other members with whom the organization can have an agreement on a continuous basis. All the more, CSR includes legal, economic, discretionary and ethical classes, thus, there is an emergence of expectations in the minds of the society with correspondence to the company's functions, that they must fulfill their expectations of the relative classes. The main objective is to formulate a healthy relation between the society and the business, as if the firm attains to create the idea of social sensitivity, it can fulfill the requirements of the society conferring to its business segment.

With reference to Microfinance Institutions, Social Performance becomes the uniqueness of the Corporate Social Performance or CSP theory. The companies use the mechanism of Corporate Social Performance to measure the performance of CSR. In a way, CSP relates to the mechanism of how an organization achieves and respects its societal mission, evaluating it with the principles, schedules and the instigated remedial measure, which means the effective conversion of the company's mission into applied actions that heads to the attainment of societal objectives. Therefore, the Social Performance Assessment (SPA) must also be equally systematic and continuous as the assessment of the financial performance.

The Microfinance Institutions have interconnected financial and social objectives from their establishment. Due to this, the requirement to assess the methods of evaluating social performance begins. The Microfinance Institutions need to cope with both the aspects as this will facilitate the attainment of social objectives wherein an effective financial performance will also be achieved. The MFIs must include the social objectives along with the social mission, being based on the underlisted principles:

- Offering services to an increasing number of susceptible and non-included target groups.
- Enhance the sufficiency and the quality of the services
- Improves the customer's political as well as social capital
- The Microfinance Institutions may include their customers, society and employees in the social activities (Social Performance Task Force, June 2009)

All the more, as per Woller (2006), the term social performance is not just described with reference to poverty. In the actual practice, it is productive to have a different mission towards the society than to benefit the poor. Nevertheless, Crompton (2007) proposed that the Microfinance Institutions must function in accordance with the social outcomes, with respect to socio-economic effects and also financial outcomes, with respect to financial sustainability. However, it is all the more to stabilize and thereafter balance both these aspects.

These days, the Microfinance Institutions objectifies to attain its societal objectives as a segment of an alteration majorly in the industrial practices, which includes financial performance concept more of to have much more active concerns in their customers. Such alterations is an impact by an increase in the concerns in many types of market research, impact assessments and in the growth of fresh products, that assists a better comprehending of their clients and a better range of services as per their requirements. Thus, to conclude, the constant method of gathering the information of the customer, altering the Microfinance Institutions products and progress to enhance their functions and the attainment of the societal objectives is completely a gist of the concept behind the measurement of social performance proposes to reflect.

1.14.1 Social Performance

The prime objective after this study is that each and every Microfinance Institution can and must evaluate their social performance. But social performance actually relates to what? Currently, no such extensively accepted standards for social recording in Microfinance actually exist. Tools varying in its features are in existence to measure the social performance, all of them having their own specific level of details and conceptual frameworks. Each one is lawful and legal and that each one signifies an effort by its emerging organizations to relate to the topic of discussion of assessment of social performance.

Social performance refers to the efficient transformation of a company's social mission into actual functioning. Social performance along with evaluating the results, also considers the corrective measures and actions which are essential to bring out these results. Thus, social performance focuses on the overall process as to which influence may be exerted.

1.14.2 Why Measure Social Performance

Ian Davis, Managing Director of McKinsey recently wrote, “Social Issues are not so much tangential to the business as fundamental to it”. There is no existence of tradeoff between social and financial performance. But considering social matters could support institutions to construct both economic and social values simultaneously.

Microfinance Institutions have diverse ambitions to measure the social performance, reliant on their company style and maturity. Such reasons involve:

- Offering information as to how the MFIs is observed by the customers , staff and the society to the shareholders, for instance community liable donors
- Enhancing the performance of the organization, by emphasizing the strengths and weaknesses in many areas of social performance
- Identifying risk- especially political risk of higher control - by indicating transparency and willingly revealing a wider combination of information to the shareholders.
- Classifying their brand from various other financial companies

Rationale for measuring social performance involves, the investors, who are willing to financially associate with the MFIs are:

- Observing the process as to how the investee of the Microfinance Institution is achieving its mission.
- Assessing the opportunities of investment
- Accountability towards shareholders
- Enhancing the governance
- Circulating information for promoting opportunities of investment

In order to make the social performance successful, the social investors along with the Microfinance Institutions to get collaborated is very essential.

Observing the social performance is a multifaceted task that involves a substantial investment of resources and time. Then, why is the measurement of social performance so significantly important and what are its advantages?

- Concentrating on only the indicators of financial performance cannot give the

complete information about the scenario, thus the factors involved also needs to be considered and their impacts too; wherefore, an effective financial institution may also cause harm to the community, for example, by not including some definite groups and hence forming clashes within the population.

- A Microfinance Institution can not only rely on the financial indicators otherwise they might experience a shift in their mission when the societal objectives are substituted with the financial ones.
- The shareholders or the social organizations require information and data concerning social performance with an objective to plan and take decisions, the absence of data relating to the social performance delays private investment in the Microfinance by creating information on societal risks and proceeds even more costly.
- The absenteeism of social performance data deflects private investment in Microfinance towards a relatively small amount of “safe” investments; predominantly large Microfinance Institutions offers relatively high financial returns, in fact other Microfinance Institutions may yield higher returns when taking into consideration both financial and social aspects.
- Private stakeholders in Microfinance look forward for transparency and full disclosure, not just of financial data but of social performance as well. When numerous investment alternatives are given to private investors they will direct their money towards investments that can probably offer higher risk-adjusted and blended returns.

The above statements suggest that the Microfinance Institutions need to comprehend the relation existing between the social and financial proceeds and they require to develop a combination of tools with an objective to attain the social and financial objectives.

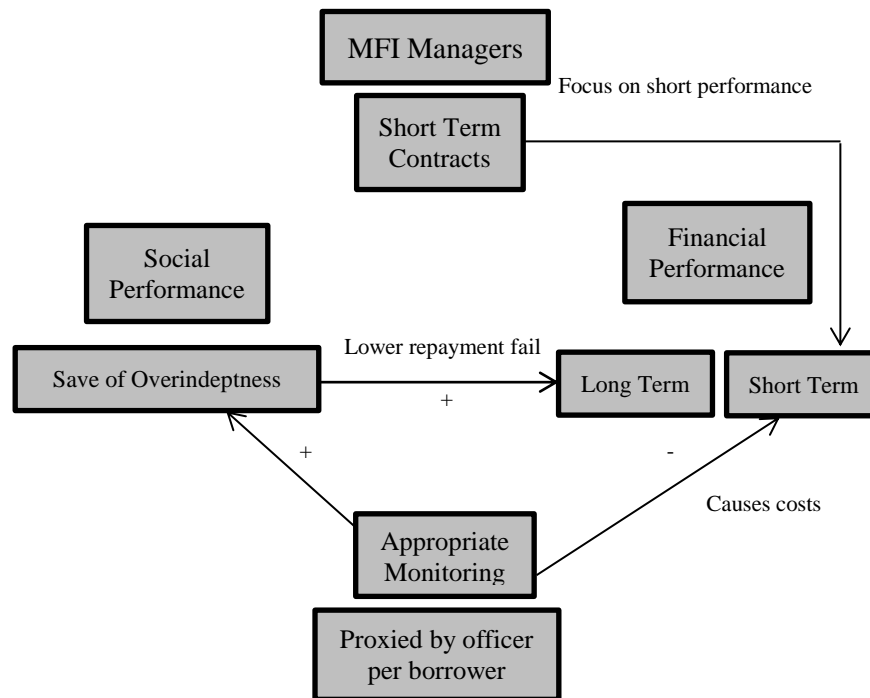


Figure 1.8: The effects of Monitoring

Source: Financial Performance and Social Goals of MFIs, Julian Schmied (2014)

1.15 Significance of the Study

The development of Microfinance Institutions remarks to be the most appropriate question in a country like India wherein even a slight financial shift would be the only possible way to pull it back on the developmental paths. Surprisingly, India could never attain the desiring growth level which it envisioned all through its financial plans. These results, furthermore made the development researchers more keen on sketching out the related problems affecting the depressing development indices and figures and giving an appropriate explanation to it. India is deeply affected with the nonexistence of economic wisdom, knowledge, awareness and levels of literacy among the poor. Therefore, the Microfinance Institutions are unsuccessful to attain the targeted standards which it had decided to achieve primarily. So, it is very important to link out the main reason behind such performance by the MFIs and that why they couldn't achieve the desired levels of excellence. Moreover, the social and financial performance standards requires to be defined for the Microfinance Institutions in India which atleast provides an appropriate justification for the diminishing and weakening standards of performance of the Microfinance Institutions, wherein this being the significance of the research.

The study done on the capital structure pertaining in the Microfinance Institutions was of significant importance because of many reasons. Some of them are discussed below:

- The ultimate findings of the research study will aid to be the primary source and major means of providing data to the Microfinance Institutions, the chief shareholders of associations and management in the process of making decisions regarding their capital structure and settling upon the ratio of fund accumulation over expenses and debt financing over equity financing for appropriate decisions to be taken.
- The findings of the research will facilitate the MFIs to choose appropriate financiers of debt and the exact ratio of savings for their functioning with respect to agreement of contracts and interest and also to comprehend and understand the ways to estimate the debt financing's maximum amount which can be believed and that will bring an increase to the value of the firm.
- The Microfinance Institutions are using the various strategies implemented by the Government to minimize the amount of funds borrowed by them and also to provide assistances to the members sustainably.
- This study contributes to addition of knowledge towards the fields of management and finance specifically in many organizations while in the process of decision making and it also facilitates researchers to conduct their research in future.

1.16 Organization of the Thesis

Thesis is organized in the following chapters:

Chapter 1: this chapter includes an introduction to Microfinance and performance, the overview of the birth of Microfinance with its issues and current status of Microfinance in India with its growth is discussed. The chapter also presents the gap in financial system and need of Microfinance and the significance of the study.

Chapter 2: the chapter reviews the relevant literature available. Firstly the approaches and models of Microfinance, concepts, theories and determinants of performance and capital structure are discussed. Then the literature regarding the

relationship of capital structure and performance of MFIs and the factors affecting the relationship are reviewed. Further, the chapter identifies the gap in the literature and formulates the research model and objectives based on the research gap.

Chapter 3: this chapter exhibits the conceptual framework of social performance and financial performance of Microfinance Institutions with its Capital Structure. The chapter is bifurcated in two sets and outlines the variables taken into study the social and financial performance of MFIs and explains the meaning in which sense every variable is taken into study.

Chapter 4: this chapter describes the research methodology employed to conduct the study. The chapter is covered by following six major heads research gap, objectives of study, research hypothesis, sampling design, data collection techniques and data diagnostic tool.

Chapter 5: this chapter fulfills all the objectives of the study. Data analysis and its interpretation start with this chapter. The chapter covers the descriptive statistics for objective 1 & 2 which is done through frequency tabulation and graphical representation of the variables along with the analysis of mean and standard deviation, Correlation and Regression for objective 3 is performed to find the association between socio-financial performance of MFIs with the capital structure of same by analyzing the adjusted R square, F value in ANOVA and Coefficients - Regression Model and Factor Analysis is done to fulfill objective 4 where the framework is established in the context of MFIs to understand their social and financial performance.

Chapter 6: this chapter presents the detailed findings of every objective of the study; implications are also discussed leading to the suggestions for the policy makers and the Microfinance Institutions.

Chapter 7: this chapter discusses the limitations of the study followed by contribution of the study and ends with directing the scope for future studies.

Chapter 8: Finally, this chapter presents a brief conclusion of the study.

1.17 Summary of Chapter

This Chapter outlines the philosophy and thought-process behind organizing this research. The chapter prolog the need of the research study highlighting the relevance

of the topic. Further, the section intends to give an introduction of the crux of the research. The chapter explains the significance behind selection of such a topic. The indispensable need of Microfinance is to eradicate poverty and supply financial services to the poor excluded from the financial system is explained. Further, the scope of the construct is also defined delineating what is meant and what it did not mean clearing any room for enigma. People often get confused in terms Microfinance and Microcredit. Although the concept of Microfinance has its roots in Microcredit, but the former is a broader term. It justified the rising significance of Microfinance and the issues related to Microfinance. It also explained the reasons as to why there is an imminent need for the government and policy makers to focus on social and financial performance of Microfinance institutions.

Chapter 2

Review of Literature

REVIEW OF LITERATURE

2.1 Introduction

The living in hardship with limited available resources, known as poverty, has always been a bone of contention for the government and the society as a whole. With the passing time, it has become a significant topic of research, aiming for a better quality of life. In some or the other way, the deprived have been left out from the financial system for over years. The poor people have always had a constraint of accessing the formal financial services. So, it has become the utmost responsibility of the various formal sector organizations, including the private, semi-government, non-government as well as the government to fulfil the requirements of the needy ones. Thus, to overcome poverty, the term Microfinance came into picture. Brau and Woller (2004) recommended that, Microfinance is “doing well by doing good”. Microfinance relates to providing the various financial services through formal and informal measures to benefit the living standards. Over the last few decades, Microfinance has transformed the ideologies of the poor towards the banking services. The deprived ones of the society have actively started using the banking techniques and methodologies. This has, thus taken place due to Microfinance, as it has started providing better financial services. Eradication of poverty, being the most significant barrier of development in the society, has been accomplished by Microfinance over the years.

Microfinance as a topic, did not take much lead to become a subject matter to be published in an article in the various academic journals. In the realm of academics, Microfinance was not found in the journals of academics prior to 1997. But subsequently, numerous academic journals published the articles after having ample reviews over the topic of Microfinance. Such articles have been integrated in this chapter. Microfinance as a topic has been depicted in a very clear and concise manner in order to be reviewed with more minuteness. This chapter has been articulately divided into eight segments.

2.2 Definition of Microfinance

Microfinance is a collection of financial services, fairly of smaller monetary amounts, aimed particularly to fulfil the financial needs of either an unemployed or a lower

income group person. Microfinance, as a subject matter, basically got a prominent recognition as most of the poor entrepreneurs and the lower income persons could not avail the standard banking services.

Asian Development Bank (2000) states Microfinance to be the establishment with a wider scope of providing financial services such as payment services, borrowings, deposits, transfer of money and providing insurance services to the poor and lower middle class income group people, as well as to their microenterprises.

Robinson (2001) expressed his view over the term Microfinance as such financial services provided at small-scales with services including lending credits and accepting deposits, for providing extensive benefits to the individuals who earn their bread and butter with the help of fish trading or farming or with the flock of herds. Microfinance as to his perspective is also extended to the SMEs that operate where goods are manufactured, traded, repaired or recycled, services provided by them; function for commissions or salaries; earning a substantial amount of income from vehicles, hiring out of small plots of land, tools and machinery, drafting of animals and to all other people and resident group of people in the developing countries irrespective of urban and rural areas.

Many authors quoted Microfinance to be a methodology which offers standard financial services to the deprived ones, in order to make them self-sufficient by offering them significant amount of monetary benefit.

There are three types of sources by which Microfinance services are provided. They are:

- Formal organizations, including rural banks and business cooperatives,
- Semi-Formal organizations, including non-government institutions; and
- Informal organizations, including money lenders or financiers and salesperson

The financial needs of the institutions are fulfilled by such organizations. The Microfinance services rendered by formal organizations and semi-formal organizations constitute what is termed as institutional Microfinance.

The chief motive of Microfinance organizations is to provide Microfinance services to the much needed institutions where without funds operating becomes a battle.

The Canadian International Development Agency (CIDA) described Microfinance as such financial services provided to the poor with a wider scope, benefitting the lower income families and to the micro-enterprises being unable to avail the formal financial services from the financial institutions due to lack of access to it.

NABARD (2000) demarcated Microfinance as provision of prudence and savings, lending of credit and various other financial services and goods to the needy individuals in the urban, semi-urban or rural areas assisting them to enhance their levels of income and bring advancements in the living standards. RBI, i.e., The Reserve Bank of India defines Microfinance in the same way (RBI, 1999).

CGAP (2003) stated the term Microfinance as a mechanism of providing credit which utilises the substitutes of the collateral effectively with a view to provide and pull-back the short-term credits of working capital to benefit the micro entrepreneurs.

Hudon (2008) described Microfinance in India with reference to the individuals concerned with its execution as the mechanism of provision of prudence, lending of credit and various other financial assistances and services and the enhancement of the products being manufactured in the Microfinance industry being in very small quantities to the needy individuals, especially the women economy in order to assist them to enhance their earnings and income and bring advancements in their standards of living. Few individuals had their own perspective and stated that the Microfinance credits are of much need to the activities relating to income-generation.

However, in Hyderabad the Centre for Microfinance of credit borrowers believed Microfinance as a valuable mechanism in improving the methods of consumption and discharging periodic liquidity crises that affect the poor households and that it averts the requirement for high-cost of lending from sources informal in nature, RBI (2011).

The growth of the Microfinance sector was still moving at a snail's speed. So to give it a growth a separate category of NBFC-MFIs has been created so as to motivate the sector with a suitable authorized framework. These formal implementations were based on the suggestions of a sub-committee of the Central Board of Directors of the RBI, the Malegam Committee.

The Non-Banking Financial Corporations Microfinance Institutions defined Microfinance as a business corporation (apart from such other companies registered in

Section 25 of the Companies Act, 1956) that aims to deliver varying financial services mainly to the lower income group of lenders with credits involving small sum of amounts for short-term periods, on non-secured basis, predominantly for such activities relating to income generation, with settlement programmes that are much more frequent rather than those usually postulated by the banks falling under the commercial sector, which thereafter gets accustomed to the systems recognized in that framework, RBI (2011).

2.3 History of Microfinance

The Microfinance, as a much needed initiative, had to be implemented in order to bring up the downtrodden parts of the society and to get the deprived out of poverty. In the middle of 1800s, Lysander Spooner, an economic theorist, was penning down the different ways of getting the maximum advantage from the short term loan. Such funds could easily benefit the entrepreneurs at large and the people engaged in agricultural sector too. It had to be instigated in the rural area at the earliest in order to save the agricultural sector which held one of the most important share of contribution to the Indian economy. Therefore, this concept of utilizing the short term credit came into much of influence by the end of World War II.

With the passage of time, the deprived once still have to keep suffering. In the course of 1950-70s, the rural people were offered banking services by the administration and management of the government. The contribution was done in the form of rural advances scheme at a subsidised rate but this was also not of much impact. This line instead resulted into high losses with high default rates. Ultimately by the end of this it was unable to actually reach to the much needed once, the usual poor people.

With much of these inabilities in the economy, the actual concept of microfinancing came into practice. In 1970s, the Grameen bank of Bangladesh with the Mohammad Yunus, the influence to introduce the concept of Microfinance, began to give it a shape. Akhtar Hameed Khan, the most unknown pioneer in the financial sector, also came up with Mohammad Yunus. At that moment, the financial sector started to experience the financial innovations introduced by the pioneers. Many revolutionary industries started finding the poor with the credit advances. Thereafter, during the 1970s, the people started to experience the credit benefits and this led to a better outlook in the poor people. The sole objective of initiating the theory of Microfinance

in the 1970s was that the deprived once had a belief that they could with some procedures, pay of the credit advances on them. It is noteworthy, that by that time, providing financial services without subsidy to the deprived ones of the economy with the help of the enterprises of financial motions were successful. Therefore, Microfinancing during that time started to take a new curve. Also, In Chicago, in 1974, the Shore Bank was founded as the first and foremost Microfinance and social development bank.

With the approaching of 1990s, Microfinance, the plan for funding, became the most powerful strategy to eradicate poverty. Microfinance, as a tool of only providing micro credit, also started savings and other tools of finances like insurance and transfer of money and remittances.

In the early 2000s, microcredit progressed to Microfinance, along with new patterns of technology. The use of smart cards, payment platforms, biometrics, became more prevalent. Financial ‘inclusion’ or ‘inclusive finance’ emerged as the leading theory.

The ‘International Year of Microcredit’ was 2005 as declared by United Nations.

Also in 2006, Mohammad Yunus was awarded with the Noble Peace Prize for the successful establishment of the Grameen Bank of Bangladesh, the most iconic organisation in the sector of Microfinance.

The International year of Microcredit includes the under listed significant five goals:

- Evaluate and stimulate the aids of microcredit to the MFIs.
- To mature Microfinance and make it an easy mechanism for the awareness of the public, along with considering it as a most significant part of development.
- The financial sector must be included in the promotion.
- Develop a support system for tenable approach of financial services.
- Encourage new partnerships and modernizations to grow and increase the outreach and success of Microfinance for every individual and assist strategic partnerships.

The effective incorporation of Microfinance was accepted by the population, especially deprived ones because they were the people who actually required to take the maximum benefit of the opposite in order to upgrade their standard of living at

their own responsibility. Initially the main objective of Microfinance was to provide credit to a population at a lower cost, but gradually this concept progressed and now the MFIs provide a wide of financial requirements to the Entrepreneurs and the farmers. Microfinance in today's scenario has occupied the attention of the developmental sectors in short and the financial sectors at large. With many financial institutions at work, they are fulfilling the target demands along with a high volume of investments with specific investors who manage the funds.

In progression to the practices, the model began to gain attention by its incorporation in the developing and under-developed countries. With time, the financial institutions started to have a crisp idea about the financial requirement of the poor people whether in urban or rural area. Their needs might constitute capital building, management of income, dealing with shortage of funds, or other crises including, natural disasters, death, sickness or may be conflicts.

With the advancement of technologies, the opportunities of financial services have also broaden. In contrast to the 1970s, where the poor were unable to obtain the maximum advantage of the funds, now everything is available to them at the easiest resource, i.e. the mobile phone. With the help of mobile phones, the financial services not only helped the needy ones to make a reach, but also captured the market with the enhanced design of the product and its delivery.

In 2006, Mohammad Yunus, the great economics professor, the founder of Grameen Bank, for the efforts exerted by the bank to bring a tremendous growth in the economic and social advancement and development of the poor people. It was cited that Yunus from the past three decades, since the beginning of the modest commencements, being the initial and the foremost through Grameen Bank, he established a micro-credit into a forever significant mechanisms in the struggle for eradication of poverty. A major source of models and philosophies for various financial institutions in the area of micro-credit came from the Grameen Bank that pounced across the world. The enthusiasm of Microfinance growing world-wide started gaining more recognition as it had transformed offer of financial support sustainably and at a reasonable price with fair returns to the investors involved.

This change in the model led itself from poverty eradication to the development of organisation. The industry began to focus on transforming Microfinance to building

up NGO models. These models would lead to many large financial institutions to enter into the Microfinance sector, which includes the Credit Suisse, Deutsche Bank, ICICI Bank, Citigroup. As a result of such transformations, by 2008, there came a huge amount of funds into the market focussing on development like the World Bank.

At present, Microfinance has become a tool which has broadened the financial inclusion system. It has although increased with time, but has increased with an increasing rate. With the private financial players in picture, it has not only attained the objective of eradicating poverty, but also is striking to deliver the best quality of financial services to the population.

Microfinance today has become that bridge where the entrepreneurs and the low-income people can move from the actual to the future, successfully with fixed returns to the investments.

2.4 Approaches to Microfinance

Microfinance, as a subject matter, was introduced to broaden its objectives from just poverty alleviation to providing micro credit to the poor. The commitment of dividing the enterprises to their establishment and growth was the main principle. But comparatively in the past decades, Microfinance Institutions were not regarded to earn high returns and thereafter be stable financially, in view with business perspectives. The financial sustainability and its upliftment was not actually obtained in the past era. The Microfinance Institutions had to be more financially strengthened. The eradication of poverty mainly dominated the nourishment of the financial structures. Microfinancing, as a drive, encompassed the formation of institutions and lenders, the proper systems of delivery of financial services and also a wide range of philosophical approaches.

This movement of Microfinance, later on, got divided into two comprehensive approaches. Both the approaches were having a difference of opinion, but relatedly a specific objective. The two approaches namely are the Institutionists Approach and the Welfarists Approach. The mentioned two approaches, although differed in their concept, but focussed on the procedures of providing the best of financial services to the poor. This differentiation is termed as the 'Microfinance schism', given by Morduch (1998).

2.4.1 The Institutional Approach

Morduch (2000) and Woller et al. (1999) states that a Microfinance Institution, at first should be stable enough to make out its financial costs as well as operating costs. An MFI must be depended on only the subsidies and grants of the government. The main focus of the Institutionists approach is to build financial institutions in a way so that they can serve the best of the financial services to their customers who have either availed or failed to avail the services from the formal financial system. This approach emphasises on achieving the fiscal 'self-sufficiency'. The impacts of the positive clients are kept as an assumption; but the number of customers are kept as superior to the actual stages of poverty eradicated. This impact of priority is what is known as the 'Breadth of outreach' kept over the 'Depth of outreach'. The institution is kept as the core focus, therefore its progression and success depends on the amount of 'self-sufficiency' the organisation has achieved. Higher the 'self-sufficiency' higher will be the success and progress factor of the institution. Lower the 'self-sufficiency' lower will be the success and progress factor of the institution. The researchers of Ohio State university's Rural Finance Programme, after conducting various researches, became the first ones to come up with the theory of institutional approach. In 1960s and 1970s, the researchers of the University examined that the actual reason for the downfall of the rural credit facilitating agencies was due to the absence of financial sustainability notion. This objectified that nonetheless, institutional sustainability is a must, as otherwise the sole purpose of the concept would turn to be vague. Eventually, it became clear that two aspects, in the eyes of the credit institutions, needed to be clear, firstly, the sustainability of the institution financially along with availing the financial services to the deprived ones of the society and the fulfilment of the mandatory objective of attaining financial 'self-sufficiency' of the institution secondly. The institutions following the Institutionists approach do not depend on the subsidies and allowances of the government. The reason behind this is such that the methods of granting allowances, grants and donations did not result in complete eradication of poverty instead resulted into a big failure. The institutions operating on the donor funds do not concentrate on the depositors funds, intending to lack of capital, ownership of poor, transaction cost getting higher as well the corruption level increasing with an increasing rate. The contributors of funds at the World Bank, the United Nations, CGAP and various other European NGOs encourage the development

of the newly established industries. They objectify this methodology stating that a Microfinance Institution requires such financial support in the form of grants and donations at their initial stage so that they can stabilise first and then reach to a level where they can manage themselves at the global level or national level. The Infant MFIs for sustaining themselves should reduce the service cost and charge high interest rates of interest of the financial services offered by them. The MFIs will have to innovate their practices and move forward by lowering the cost of services as they have had already taken up the banking practices and were now not dependants of the donors and their subsidies. Conning (1999). The institutions following the institutional approach argue that 'financial deepening' should be the key objective of Microfinance. The term 'financial deepening' refers to the formation of financial sustainability for the immediate needs of the poor. The approach of 'financial systems' to Microfinance elaborates how Microfinance gets dominated by the various wide-ranging, extensive profit-motive financial institutions which offer the best quality of financial services to the needy and deprived clients. Due to the objective of 'financial self-sufficiency', the Institutionists disdain the subsidies and grants from the donors. The position of the Institutionists is expressed fundamentally in the researches of the World Bank, the Ohio State University Rural Finance Program, USAID and the Consultative Group to Assist the Poorest (CGAP). The approach of the Institutionists has been advocated and published by most of the researchers in their research in the Microfinance sector. One of the best examples of this approach are Banco Solidario (BancoSol) in Bolivia and Bank Rakyat Indonesia (BRI).

2.4.2 The Welfarist Approach

On the contrary, emphasises more on offering the best of financial services to the poor without focusing on the achievement of 'financial self-sufficiency'. It stressed on the 'depth of outreach'. The Welfarist were concerned about the maximum and the best of the benefits provided to the poor in order to improve the standards of living of the same. They focussed mainly on the eradication of poverty which affected many communities and the society without hesitating the use of the donations and subsidies. Instead, the Welfarist approach didn't support the banking practices much as a measure of providing financial services to the poor. The core focus of the Welfarist approach was to promote 'self-employment' to the poor and the actively poverty affected poor. They moved on to the empowerment of the women of the poor with a

view in their minds that this will increase the income and will lead to savings as well and hence, will upgrade the living standards of their life as well as of their children. The subject of matter in the Welfarist approach is 'family'. The Welfarist, same as that of the Institutionist, had presumed that this approach of 'family' will be more impactful and resultant than what they had observed. The Welfarist approach states that the donations offered will be their prime capital and the people donating it will be their investors. Such investors unlike the actual equity shareholders will not have any expectation over their return on investment and will also serve as a large proportion of funds accumulated. In this way, such variables, known as 'social variables' will strive for measuring the success of the institutions. The Welfarist approach do not stand for against the Institutionist approach, instead they are the believers of the fact that in a way to follow the Institutionist approach, institutions oversee the fact of actual poverty eradication overcome.

Helms (2006) confer the term 'mission drift', which relates to the practices of an institution of overseeing the Welfarist approach and only looking forward towards their institutional financial sustainability. The MFIs, with an attempt to be sustainable financially, have transformed their legitimate status from being an MFI to being a NGO and then to being a NBFIs. In this way, the MFIs started to ignore their principle of existence, that is, to provide financial services to the poor ones and instead began to focus on securing more profits.

Thus, the conflicting views of both, the Institutionist approach and the Welfarist approach, stated as the "Microfinance schism" by Morduch (2000), showcases the deviation of perceptions of both the approaches likely where the financial sustainability is over and above of the 'Depth of outreach'.

Basically, the concern is that the Institutionist approach, have made their active attempts of proving their approach to be higher above the Welfarist approach. They state this in a way that their Institutionist approach not only stables the institution financially but also promotes the best of practices for the eradication of poverty and the welfare of the poor as a whole. Both these approaches have their own set of importance and therefore, none of them can be a replacement of each other in the actual operating of the institution. Henceforth, a combination of both these

approaches are a must and essential prerequisite in the functioning of the financial institution, nevertheless how divergent their goals are.

2.5 Delivery Models of Microfinance

The Microfinance institutions initially followed some set approaches for an appropriate financial functioning of the institution. Although Microfinance Institution being the oldest pattern of financial institution globally, has adapted to changes with the changing time. Now, Microfinance has also started to follow numerous loaning and lending models. In India, the services of Microfinance can be offered with a variety of methods and models. In India, there exist 14 diverse models of credit lending. It comprises of Bank Guarantees, Associations, Cooperatives, Community Banking, Group, Credit Unions, Individual, Grameen, NGOs, Intermediaries, ROSCAs, Peer Pressure, Village Banking and Small Business models. The models, in reality, in some or the other way are related to each other. The best Microfinance Institutions take up the best models for their active functioning and sustainable growth in the market. The credit lending patterns of the Microfinance Institution differ from each other on either in its procedure of delivery or channels followed, their legitimate stature, their processes of governance, their methodology of sustainability, also their complete efforts of governing its funds and functioning of the Microfinance Institutions.

The prime most methodology which is used in the Microfinance commercially in India was originated by the Grameen Bank and thereafter taken up and transformed by various other private and public players. There is no sole model being placed in all the situations. Therefore, different states and countries have their separate choice and different Microfinance models adjusting to their need and circumstance.

In a way there are six delivery methods of Microfinance under listed below:

- Grameen Bank Model
- Joint Liability Group Model
- Individual Lending Model
- The Self Help Group Model
- Village Banking Model

- Credit Unions and Cooperatives

2.5.1 Grameen Bank Model

This model was at first recommended in Bangladesh by Mohammad Yunus. The Grameen Bank Model is one the most successful and oldest Microfinance model. The Grameen Bank model functions basically to lend financial credit to the rural poor people, women specially. The Grameen bank, unlikely to other banking services do not secure the credits by any materialistic insurance, for instance, any land or property kept as insurance. Instead the credit is secured by guarantees. The credit amount is borrowed to a five member group in this model. For a certain time period, every member has to make a compulsory contribution to the savings fund of the group. The loan is given to the members at given turns and not to each member equal intervals of time. It is the responsibility of the members to repay the credit amount back or further such credit lending transactions. The proper facilitation of the financial services is mandatory and therefore, the formulation of the groups is done by MFIs and its prescribed patterns are followed. The Grameen Bank model has been thus, implemented extensively in 40 countries in Latin America, Africa and Asia, adjusting to the respective local traditions and conditions.

2.5.2 Joint Liability Group Model

In the Joint Liability Group, a minimum of 4 and a maximum of 10 persons are involved in a group. It functions unlike to the Grameen Bank Model. Here the individuals do not have to guarantee against a savings fund. Rather, the group members can secure credits from a bank against a mutual agreement of guarantee.

The members of the group jointly sign a combined liability bond, where each member of the group is equally responsible to repay back the credit. In this way, such a contract acts as a security to the Microfinance Institution.

The Microfinance Institution are assured that the funds will be recovered from the group on time and that the funds will be appropriately mobilised by the group members. The default risk of the Microfinance Institutions is reduced by the joint liability group model. Ultimately, it results in a practice of management of financial services among the deprived ones in a proper discipline.

2.5.3 Individual Lending Model

In the above two mentioned models, the basic method of lending was into groups. Though, as the name suggests, in this model the credit lending is done to particular individuals in order to facilitate the financial services at an individual level too. This method is not constrained to the lending done in condition of an individual being a member of a group. The Microfinance Institutions, in this model, provide the credit facilities to the individuals as per their needs. The loans provided by the Microfinance Institutions are dependent on the personal credit standing of the individual. This process of credit lending is done with those individuals who generally require a large amount of credit and also they have the calibre to provide guarantee to the MFI. In this way, the MFIs rely on them and then provide the credit facility. The Financial Institutions, before lending the credit try to get complete knowledge about the individual, as in, his/her background, his/her profession, his/her colleagues, his/her society, his/her creditworthiness, his/her sources of income and his/her position in his business. Thereafter, the MFIs appoint a specialist to come into good contacts with the individual and then help him to comprehend the entire process of repayment. In this way, the person educates the borrower the ways how his return will be secured. Microfinance Institutions, at the time of providing credit, enquire about an individual to be the guarantee for the individual. The Microfinance Institutions even ask for post-dated cheque too. The guarantors may be a friend or any relative who is close to the borrower and as well take up the liability to repay the loan back, if at any case the borrower fails to do so. If the credit amount is considerably large, then the Microfinance Institutions could also take some added security from the individual. The model is practiced by numerous financial institution, including, Bank Rakyat, Senegal Egypt, Association for the Development of Micro Enterprises (ADEMI) in Dominican republic, Self-Employment Women's Association (SEWA) in India, etc.

2.5.4 The Self Help Group Model

This model came into existence during 1990s by the primary initiative of National Bank for Agriculture and Rural Development. To encourage the saving practices of the poor, especially the usual poor, NABARD grounded this model on 'savings first'. The SHGs have now become a significant body in the development of the rural sector. The SHGs, hence, can be located in most of the parts of India. In fact, with time, its

number is increasingly growing. SHGs have become a mode for promoting the developmental practices and so they are established by either the government agencies or the NGOs. The habit of savings inculcated by this model, a loaning fund is credited and from there, a group can lend money. The group should at least comprise of ten to twenty members, either men or women. These members are then motivated to save their money in the form of savings and thereon the members are lent from the collection of savings. However, from the patterns of performance, the women members actively take part in this type of model. At many places, a mixed group is not taken into preference as people have a variety of interest contradictory to each other. The main benefit of this model is that, it reduces the cost of transaction at the time of lending money. This is such because the Microfinance Institutions confer with a group and not with particular individual.

2.5.5 Village Banking Model

This model came into existence by the innovation of the Grameen Bank. Although, it was later established by Foundation for International Community Assistance (FINCA) and internationally established by John Hatch. Under this model, the management of the transactions are not done centrally, whether the Microfinance Institution manages everything at a local level for numerous villages. This model works with approximately thirty to sixty women members. Thus, village banking model provides the under listed significant financial services:

- Credit lending to a group consisting of fifteen to thirty members
- Voluntary or forced means of services to promote savings
- The provision of Internal accounts, which offers non-financial services, saving services and added credit lending facilities.

2.5.6 Credit Unions and Cooperatives

A Credit Union can be referred to as a financial Cooperative which is governed democratically by the members, who also own it. It functions with various purposes, including economic well-being of the members, credit lending at lower rates and most importantly providing the best of financial services to the members. Numerous Credit Union offers services in order to develop the community or to develop them sustainably. The members create a deposit among them collectively and also share a

common deed of credit lending. In this model, lending is not preferred. In some countries, they offer business credit to the farmers and also promote mortgages, whereas, in some place, they only offer non-secure individual loan.

Table 2.1: Comparison between Indian SHG-Bank Linkages, Grameen model, and the American individual lending model

Features	India (SHG)	Grameen Bank	United States
Socio-economic & Political context	Former British colony till 1947. Chose socialism.	Former British colony. It was a part of unified India till 1947 and later of Pakistan till 1971. Chose socialism.	Former British colony till 1776. Chose capitalism.
Rationale for Microfinance	Social justice and social equity	Social justice and social equity	Reduction on welfare expenditure and promotion of economic activity
Development services	Some associated programs	Small social projects	Enterprise support
Clients	Primarily women	Primarily women	Primarily men
Services	Savings and credit	Credit-regular cycle	Credit
Role of MFI staff	Guide and facilitate	Organize (group dependent on staff)	Organize
Meetings	Monthly	Weekly	Monthly
Savings deposit	Mandatory in case of SHGs. Rs20-100/month	Mandatory. Tk 5-25/week	Flexible. Not mandatory.
Measures of success	<ul style="list-style-type: none"> • Provide service to nontraditional clients • Low rate of loan default • Asset accumulation by the poor • Target rural poor Especially women • Increased status of women in the society 	<ul style="list-style-type: none"> • Provide service to nontraditional clients • Low rate of loan default • Asset accumulation by the poor • Target rural poor especially women • Increased status of women in the society 	<ul style="list-style-type: none"> • Provide service to nontraditional clients • Low rate of loan default • Creation of new businesses and jobs
Initial loan amount	INR 5 – 10,000 approx. (\$0.10-\$200)	Tk. 2 – 5000 approx. (\$0.03-\$70)	\$500 - \$50,000 (average \$5,500)
Effective interest rate	24-28%	32-38%	8-15%
Model	Group lending. 15-20 clients per group	Group lending. Usually 5 clients per group (organized into centers of 4-6 groups)	Individual lending
Target Market	<ul style="list-style-type: none"> • Nontraditional clients • Poorest of the poor 	<ul style="list-style-type: none"> • Nontraditional clients • Poorest of the poor 	<ul style="list-style-type: none"> • Nontraditional clients • Working

	<ul style="list-style-type: none"> • Women 	<ul style="list-style-type: none"> • Women 	<ul style="list-style-type: none"> • poor
Challenges for MFI	<ul style="list-style-type: none"> • Unsustainability • Limited funding • Keeping the interest rate low • Expensive operations • Too much scrutiny by external researchers • Quantifying/proving impact made by the MFI 	<ul style="list-style-type: none"> • Sustainable but the fact has been questioned by many. • Keeping the interest rate low • Expensive operations • Too much scrutiny by external researchers • Quantifying/proving impact made by the MFI 	<ul style="list-style-type: none"> • Limited funding • Unsustainability • Low demand for products of microenterprises • Need for business related training of clients • Expensive operations • Higher default rate • Quantifying/ Proving impact made by the MFI
Strengths	<ul style="list-style-type: none"> • Has substantiated that Microfinance can be profitable, generating interest of the commercial financial institutions • Serves poorest of the poor • Empowerment, especially for women • Collateral free • No need of credit history • Savings and asset building over long term • Personal relationships with the bank officers 	<ul style="list-style-type: none"> • Has substantiated that Microfinance can be profitable, generating interest of the commercial financial institutions • Serves poorest of the poor • Empowerment, especially for women • Collateral free • No need of credit history • Savings and asset building over long term • Personal relationships with the bank officers 	<ul style="list-style-type: none"> • Tremendous Growth potential • Empowerment
Challenges for Clients	<ul style="list-style-type: none"> • High rate of interest on loans • Microminimalism or no business training of clients • Peer pressure • Social disgrace in case of loan default • Cannot access personal savings as and when needed • Sometimes harsh treatment by male loan officers 	<ul style="list-style-type: none"> • High rate of interest on loans • Microminimalism or no business training of clients • Peer pressure • Social disgrace in case of loan default • Cannot access personal savings as and when needed • Sometimes harsh treatment by male loan officers 	<ul style="list-style-type: none"> • Industry is very formal and regulated • High competition from retail chains • High rate of interest on loans

	<ul style="list-style-type: none"> • May fall in the loop of debt 	<ul style="list-style-type: none"> • May fall in the loop of debt 	
Criticisms	<ul style="list-style-type: none"> • High rate of interest on loans • Microminimalism • Scarcity of long term research • Peer pressure especially on women • Cannot access personal savings as and when needed • Clients may fall in the loop of debt 	<ul style="list-style-type: none"> • High rate of Interest on loans • Microminimalism • Scarcity of long term research • Peer pressure especially on women • Cannot access personal savings as and when needed • Clients may fall in the loop of debt 	<ul style="list-style-type: none"> • Does not target poorest of the poor • High rate of interest on loans • Requirement of collateral • Requirement of credit history • Impersonal relationships • Tremendous scarcity of short term as well as long term research

Source: Author's Compilation

2.6 Profitability Theory and Financial Sustainability

Profit, as a term, can lead to financial sustainability? Of course, an addition of returns is always beneficial to any organisation in its functioning. The organisation never needs to worry about the funds for investment with accumulation of profit. But financial sustainability is a major concern for most of the organisation. Speaking about Microfinance Institutions, profits are also needed in some way or the other for a sustainable future.

As we discussed earlier, the Institutional approach, states this fact in detail, noting how profits are necessary for obtaining financial sustainability. The profits, although, never disclosed to the borrowers, act as a weapon to gain credit worthiness when needed. Either way, we will be discussing about the Profitability theory on the financial sustainability of the Microfinance Institutions. However, the theory of profit will be studied in detail from the perception of the economic grounds as well as the accounting grounds. It is an effort to link profit with the sustainability of the Microfinance Institutions, to see whether it actually puts an impact or not.

2.6.1 Economics concept of Profit

Bodie et al. (2009) defined the term profit as that, same amount left over with the organization it started with after it has distributed or spend out on its expenses. This elaboration relates to the unrealized profits or losses in the financial market of the institution's assets and liabilities are also seen.

Majorly, the economists refer the income of the institution or any sort of earnings as profit. Obviously, profits are an added amount of investment done, but in the eyes of economics, what is earned is profit. On the contrary, profit is that amount, which can be gained if it was invested in a different option.

2.6.2 Accounting concept of profit

The accountants, point of view differ from that of the economists, they consider profit on the book value, rather the economists consider it on the market value. Therefore, they don't take the profits or losses unrealized into consideration. Unlike the economists' point of view, the accountants do not keep the earnings or income as equal to profit. (Bodie et al. 2009). Henceforth, as per accountants, profit is that amount what is left over after the accounting of the costs is done. Also, at times, this theory is discussed as the residual theory. (Glautier and Underdown, (2001); McCullers and Schroeder, (1982). At last, profit is the accounting concept, is the net income (Edmonds et al. 2000).

The profit earned in the concept of accounts, is the leftover money after removing, the external cost incurred during the functioning of the business. Profit in the eyes of the economists is different as compared in the eyes of the accountants, by the fact, in accountancy, only monetary expenditure incurred by any institution, also the monetary income earned by an institution is depicted. Thus, the amount of profit earned clearly picturises where the institution has positioned itself.

Thus, profits, in economists point of view, the gains or losses evaluated immediately by the economists, whereas, in the accounting point of view, the assets or liabilities are revaluated at the end.

2.6.3 Profit and Financial sustainability

The financial position and sustainability of Microfinance Institutions can be related with the profitability of Microfinance. As per Woller and Schreiner (2002), the term "financial self-sufficiency is the non-profit equivalent of profitability".

Glautier and Underdown (2001) insist on that if other variables are kept constant and equal, the profit of a Microfinance Institutions can be deliberated as the chief component in quantifying the financial sustainability of the firm.

Hicks (1946) stated the concept of income earned by the Microfinance Institutions with focus on maintenance of capital. The term capital maintenance refers to the distribution of profit, which is regarded as a residue, after some capital being fixed.

Nikolai et al. (2009); Glautier and Underdown (2001). Hence, financial sustainability can be understood much better, if keeping profitability in relation, also giving a clear idea of the income concept. Some Microfinance Institutions, survive only on the earned income from the operations done with that income, they try to target high platforms of operations. Thus, profitability is used to calculate the financial sustainability of the Microfinance Institutions. This leads to the long term survival of the financial institution.

To measure the financial sustainability of Microfinance Institutions, the profitability calculation by the accounting perspective should be used. It is significantly noted that the assumptions are effective, if and only if the Microfinance Institutions follows the principle of accounts, of being a going concern, of its existence forever, and if it aims to achieve higher ladders of profit in the course of action.

2.7 Self-Sufficiency and Sustainability of MFIs

The achievement of financial inclusion s an objective was effectively possible with the functioning of Microfinance Institutions. To fulfil this objective even more efficiently, it is very important that the Microfinance Institutions be adaptable enough to reach even the poorest population of the society. This reflects that the Microfinance Institutions need to be effectively sustainable to fulfil the future requirements as well of the poor. The term Sustainability, is referred to be working smoothly even if the Microfinance Institutions is not being funded with any of the subsidies or financial grants during its functioning. The major hurdle in the way of Microfinance Institutions is the ability to reach the poor ones in the society. While in this entire process, reaching other parts of the market was considerably cheaper as compared to the poor segment. Conventionally, the Microfinance Institutions who brief about the term sustainability actually mean to confer that after certain duration of sustainable functioning of operations, a firm becomes financially sustainable.

An institution if wondering to become financially sustainable needs to at first cover its costs such as, funding cost, default cost, administrative cost, operational cost, etc. Most of the Microfinance Institutions are not able to fully utilise the cost-based

pricing and therefore, due to this they are not able to cover its costs (Pollinger, Outhwaite and Cordero Guzmán, 2007). In Microfinance Sustainability, can be measured at various levels like, group or individual level, institutional level, organisational level, managerial level and financial level too, (Sa-Dhan, 2003). The financial sustainability as a subject matter, of Microfinance Institutions has included more responsiveness towards the actual cost of the sustainability of the borrowers.

As per Sharma and Nepal (1997) when Microfinance is capable enough to cover all its relatable operating costs, with the help of credit in the form of operating income, the Microfinance Institutions has reached the level of performance. They, in their research, oppose by stating that a Microfinance Institution's sustainability includes both self-sufficiency and financial sustainability. On the other hand, the 'Micro Credit Summit Campaign states that a Microfinance Institution is financially viable and self-sufficient, if at all it is capable enough to pay off all its operating expenditure from the income, which is created from its financial operations and delivering of financial services, once the subsidies and price increments are adjusted. In this summit it has been stated that, the study of sustainability should also comprise of other principles as well, such as accumulating funds from the market at market rates, along with the utilisation of the available resources.

Therefore, the research suggests that sustainability should also include repayment rate, cost of operating ratio, the interest rates of market and the management of the portfolio also. A Microfinance Institution requires to be financially self-sufficient, if it objects to provide reliable services for a longer duration of time.

The definition of sustainability of Microfinance, Woller et al. (1999) with reference to the definition given by Brinkerhoff, states sustainability as the 'capability of a system to yield outputs which are sufficiently valued by the recipient and other shareholders that the system receives ample inputs and resources in order to continue its production'.

Modruch (2000) specifies that presently, in the world there are only approximately one percent of Microfinance Institutions which are financially sustainable. They also connote that not beyond five percent of Microfinance Institutions will be ever able to reach at a level where sustainability is equal to financial self-sufficiency. It is also noted that, most of the Microfinance Institutions throughout the world will be able to

operate efficiently and sustain effectively with the subsidies, grants and gifts from the donors or the government. Also, at last, sustainability is defined as the capability of a Microfinance Institution to maintain its constant flow of activities and delivering of financial services with respect to fulfil its objectives.

Acharya and Acharya (2006) came up with a view that sustainability is a measure where the operating income of the firm exceeds the operating costs. This idea views the perspective of sustainability from a banker's eye, which comprises of both financial self-sufficiency and institutional sustainability till the end with providing the best of benefits to the poor (Schreiner, 1997).

Pollinger et al. (2007) stated sustainability as the measure to cover the annual budgets with the subsidies, donations, raising of funds, grants and gifts.

Randhawa and Gallardo (2003) propose that if there will not be a continuous backing, technically and financially, the sustainability of the Microfinance Institutions will become uncertain and indefinite. Though, it is very significant to sketch out the means and way of ensuring the sustainable growth of the Microfinance section and the reduction and eradication of poverty. Various studies have even pointed out the factors disturbing the operational and financially self-sufficiency of Microfinance Institutions in many countries. However, the importance of the affecting factors to the operational and financially self-sufficiency of the Microfinance Institutions differ from study to study and from country to country. Hence, the determinant factors may be significant in one country or state of economy of the Microfinance Institution, but may not be significant for others (Cull et al. 2007; Shreiner and Woller 2002; Christian et al. 1995).

Most of the researches describe financial sustainability as the capability of the Microfinance Institutions to overcome their cost from the revenue earned from the operations. Rosenberg (2009) recognised six scopic pointers of the performance of Microfinance Institutions and its sustainability. They are Return on Equity (ROE), Return on Asset (ROA), Financial Self-Sufficiency (FSS), Subsidy Dependency Indicator (SDI), Operational Self-Sufficiency (OSS) and Adjusted Return on Asset (AROA).

Bogan (2011) elaborates that in a Microfinance sector, Microfinance Institutions have increased to the stage where they can lend and provide assistance towards the developmental process of the underdeveloped or developing countries. But to him, the most conspicuous matter is the capital structure of such Microfinance Institutions. With providing assistance to the poor ones, the constraints of the capital formulation have narrowed down the growth of the Microfinance Institutions and its programmes and become a major issue for the self-sufficiency of the Microfinance Institutions. He stressed to generate the information for providing a better explanation and understanding of the relation between capital structure and the performance of Microfinance Institutions. He also focussed on exploring the impact of capital structure in taming the efficiency of the Microfinance Institutions and enabling financial self-sufficiency by observing the optimality of the capital structure of Financial Institutions in East Asia, Africa, Latin America, Eastern Europe, South Asia and Middle East for the countable years, 2003 and 2006. This was done by gathering data and information from 'MIX', a database of market and also characterised the procedures of finding of Microfinance Institutions into the theory of profit incentive and life cycle theory. The most widespread elucidation of the relation between Sustainability, Self-Sufficiency, Efficient Capital Structure and Outreach is the life cycle theory.

Osoimehin et al. (2011) examined the outreach of the Microfinance Institutions in South-West Nigeria. They focussed on the factors determining the outreach of the Microfinance Institutions by means of annual panel data of approximately 80 Microfinance Institutions in Ondo and Lagos States for more than a period of six years, commencing from 2005 to 2010.

Research depicts that the term sustainability has different meanings at different levels of operations of the Microfinance Institutions, but for this theory, sustainability will be the measure to ascertain financial sustainability. This directs that the costs of the Microfinance Institutions should be less than the income earned from the financial services provided by the Microfinance Institutions.

Most of the experts measure sustainability basically, at two levels. These are Financial Self Sufficiency (FSS) and Operational Self Sufficiency (OSS). Operational Self Sufficiency (OSS) elaborates that if the cost of capital is excluded and the actual

financing costs are included, whether adequate revenue will be earned to pay off all the direct costs of the Microfinance Institutions, whereas the Financial Self Sufficiency (FSS) indicates the real financial health of the Microfinance Institutions. This includes adjusted cost of capital in addition to Operational Self Sufficiency (OSS).

Dutta and Das (2016) they observed that the Microfinance industry in Assam has developed as a market comprising of small or medium NGO-MFIs. The MFIs are operational in twenty two districts of Assam, with a grid of 199 branch offices. The study concluded that the total expenses of the MFIs, which take account of Operating Expense, Financial Expense and Loan Loss Expense, exhibit an increasing trend in Assam. The personnel expense appears to be the chief contributor to the MFIs operating expense. The salary and incentive of the staff covers of 68 to 87 percent of the total personnel expense. The key contributors of administrative expenses were rent and traveling expenses. There are a number of factors of the operating expense of MFIs; out of which the Legal Structure of the MFI, Lending model of MFI, Number of Active Borrowers and the Number of Borrowers per staff were the key factors of operating expense. Finally the study suggests that MFI can achieve sustainability, either by increasing their yield, or by decreasing their expenses. Henceforth, with proficient utilization of resources the MFI can minimize the expenses and increase their revenue.

Prakash and Malhotra (2016) observed the trend in the Microfinance industry for the period of 2005-13 by take in the variables which impact financial sustainability are Return on Assets, Portfolio at Risk, Operational Self-Sufficiency, Return on Equity, Operational Expenses to Loan Portfolio, Age, Profit Margin. The research study examined the determining factors of financial sustainability of the Microfinance Institutions with the help of balanced panel data set for 30 Microfinance Institutions computing 270 observations that were carried for econometric analysis. The dependent variables were Return on Assets (ROA), Return on Equity (ROE) and Operating Self-Sufficiency (OSS), also the effects of other variables in the concern were analysed and evaluated. It is found that Capital Asset Ratio, Operational Self-Sufficiency, Portfolio at Risk and Operating Expenses to assets impact the financial sustainability. Hence, it can be concluded that by managing these factors, financial sustainability of the MFIs could be improved.

2.8 Determinants of Financial Performance

A Microfinance Institution to be financially sustainable needs to put in a lot more effort in its operations. The delivering of financial services needs to be more efficient. To attain the level of sustainability, the Microfinance Institutions are worried to enhance their operations. Various researches and studies were piloted to define the factors determining the operational as well as financial performance of Microfinance Institutions. However in India not many researches were progressed in this sector.

The experts and the academicians became more focussed on the concerns of financial sustainability. They moved forward to sketch out the important and significant factors influencing the financial sustainability of the Microfinance Institutions. The researchers, henceforth, figured out the different pointers to assess the financial sustainability.

Yaron (1992) came forward with the two most significant purposes of a rural based financial institution to be sustainable financially, successful operationally and to outreach the targeted needy population. A Microfinance Institution is said to be financially self-sustainable when its total returns on the subsidies, also termed as equity, either is equal or exceeds the actual opportunity cost of the funds accumulated.

As per Khandker et al. (1995) the theory of financial self-sufficiency of Microfinance can be parted into four interconnected concepts, viz., economic viability, financial viability, borrower viability and institutional viability. Economic viability refers to the covering of the financial costs of the funds which is used for loaning and other operational activities with the revenue it earns from the credit activities. Financial viability refers to the process where the financial institution should at the minimum, make its opportunity cost occurring per unit of the amount credited be equal to the rate of interest the financial institution charges its clients. He figured out that the repayment of the loans at the default rates would indicate the sustainable position of the Microfinance Institutions.

Meyer (2002) stated that the poor are the actual needy ones to have the right to use the financial service for a longer period of time instead of financial support only or once. He also mentioned that loans for a shorter term would even deteriorate the well-being of the poor people (Navajas et al. 2000). He discussed that the Microfinance Institutions are not financially sustainable because of the low rate of repayment or

dematerialisation of funds which were once promised by the government or donors. He explained and elucidated the mechanisms of measuring performance of a financial institution involves that the Microfinance Institutions retain a good standard of the financial statements and follow the accepted accounting practices that offer complete transparency for the expenses, income, potential losses and recovery of loans.

The Women's World Banking and ACCION, also gave some of the most profound measures for measuring the performance and the standards for Microfinance Institutions. In the same way, the Women's World Banking characterized the indicators of performance measurement into quantitative and qualitative factors. The main focus is on the Microfinance Institutions to at least touch the minimum levels of performance standards and also to take the significant steps to growth and to performance improvement.

Kereta (2007) conducted a study on the availability of the Microfinance Institutions to the poor (outreach) and performance of the Microfinance Institutions in Ethiopia for a deviation of 5 years. To measure the operational sufficiency, he used the factors of Return on Equity and Return on Assets. He figured out that the selected Microfinance Institutions were sustainably operational for the given duration of time. He, thereon, used the Non-Performing Loan (NPLs) and Dependency ratio as well to loan. The study hence concluded that the selected Microfinance Institutions were financially sustainable. At last, it figures out that there is no evidence of exchange between the financial sustainability and outreach.

Ayayi and Sene (2010) researched over the effect of Portfolio at Management, Risk, Productivity, Interest Rate, Age of financial sustainability of Microfinance Institutions and their outreach. It took a sample of around 217 Microfinance Institutions. To conduct the research, it also kept a check whether they had a 5 diamond rating from the database of MIX. The time period ranged from 1998-2006. They hence found out that the Quality of Portfolio, Management of sound, Outreach to the client, high Interest Rate and the Age actually affected the financial sustainability of the Microfinance Institutions, in a positive and efficient way. On the other hand, the percentage of women depicted a negative effect on the Financial Self-Sufficiency.

Nyamsogoro (2010) conducted a study on the Microfinance Institutions financial sustainability based in Tanzania. He took a sample of around 98 Microfinance

Institutions for a period of four years. He figured out that the Microfinance Institutions charged rates of interest, their capital structure, cost incurred per client, varying in the credit lending types, Microfinance Institutions size, Type of product, Productivity of the staff, Number of clients, level of Portfolio at risk, earnings on the Loan Portfolio, level of liquidity and the efficiency of the operational activities puts a major impact on the financial sustainability of the rural based Microfinance Institutions in Tanzania.

Rai (2012) conducted a research too to figure out the chief determinants of financial sustainability of the MFIs. They undertook eight variables, namely, Debt Equity Ratio, Age of the firm, Capital Assets Ratio, Total Active clients, Loan portfolio, Operating Expense, Yield/earnings of the firm, Number of Women Borrowers and the Portfolio at Risk. He thereafter used the model of multiple regression analysis, in order to classify the significant factors that affected the financial sustainability of a Microfinance Institutions. They took a total of 26 Microfinance Institutions including from Bangladesh and India from the database of MIX and used the technique of simple random sampling for time duration of two times, including 2005-2006 and 2009-2010. They concluded with the fact that the Operating expenses/ Loan Portfolio, Capital Asset Ratio and the Portfolio at Risk were the chief factors which deeply impacted the Financial Self-Sufficiency of the Microfinance Institutions.

Kinde (2012) conducted a study on approximately 14 Microfinance Institutions in the country Ethiopia. He did his research for time duration of 2002-2010. He used the technique of balanced panel data and also used the model of bivariate multiple regression analysis. With the help of this, he figured out the Depth and Breadth of the Outreach of the Microfinance Institutions, Dependency ratio and the Cost per borrower. He could study the impacts of these on the financial sustainability but the productivity of the staff and the capital structure were unaffected of the impacts on their sustainability.

Quayes (2012) conducted a study with a sample of around 702 Microfinance Institutions. They were operating in 83 countries. He conducted this research to study the inputs of the outreach depth on the financial sustainability of the Microfinance Institutions. They, therefore, concluded that there is a positive and healthy relationship between outreach depth and financial sustainability.

Tehulu (2013) also conducted a research on 23 Microfinance Institutions. He did this research for a period of 2004-2009. In his study, he objectified to examine the effects of the determining factors (Deposit Mobilization, Breadth of Outreach, and Portfolio of Risk of outreach, Inefficiency of Management, Size and Intensity of Loan) on the Financial Self-Sufficiency of the Microfinance Institutions residing in Eastern Africa. He used the model of ordered probit and ordinary probit and took the unbalanced data. He, at last, figured out that the Portfolio at Risk, Management Inefficiency, Size and Intensity of Loans are the chief significant factors of the Microfinance Institutions financial sustainability in eastern Africa. Also, that the Deposit Mobilisation and the Breadth of Outreach did not place a big impact on the financial sustainability.

Sekabira (2013) took a sample of 14 Microfinance Institutions to conduct a research from Uganda. He investigated to sketch out the impacts of capital structure on the Microfinance Institutions performance. He studied that the donations and debt and grants were placing an adverse impact on the financial and operational sustainability of the Microfinance Institutions. He, at the end also recommended that the Microfinance Institutions should take the capital markets also into consideration for the sustainability of the Microfinance Institutions for a longer period of time. The same research was piloted by Bogan (2009). He researched over the effects of capital structure for the Microfinance Institutions residing in Eastern Europe, Africa, east and South Asia, Latin America and the Middle East. He concluded with the fact that the grants, donation and debts all placed an adverse impact on the financial sustainability of the Microfinance Institutions for a longer duration of time.

Bhanot and Bhapat (2014) implemented a research with a sample of around 81 Microfinance Institutions chosen from the database of MIX. They conducted the study to test the impacts of Portfolio at Risk, Gross Loan Portfolio, Return on Capital Assets, Debt Equity Ratio, deposits on Indian Microfinance Institutions and Cost of borrower per staff. They did the study for 2010 and used the model of panel data regression for analysis. They, ultimately found out 4 factors to be fundamental to the financial sustainability, viz., Return on Capital/Assets, Gross Loan Portfolio, Staff Productivity and Portfolio Quality. Moving forward in their research, they recommended a financially sustainable and self-sufficient index to rank and place the Microfinance Institution residing in India asper their score obtained on sustainability. The score was grounded on the approach called TOPSIS.

Rahman and Mazlan (2014) used the model of multiple regression to determine the noteworthy relationship among different determining factors and financial sustainability.

Sharif (2018) in his study measure the performance of the Microfinance institutions in India, the pertinent information relating to Loans Disbursed, Loans Outstanding, Client Outreach, Assets, etc. was gathered for the time period 2012-13 to 2016-17. Simple statistical tools like averages, percentage, etc. were used to derive the implications of the study. The indicators relating to overall financial structure such as Return on Assets and Return on Equity, Capital Adequacy Ratio have increased over this period. The average OSS of the MFIs has increased from 113 per cent in 2016 to 114 per cent in 2017. The client's base of different states /UTs in 2017 with 2016 has declined. The loan outstanding against MFIs increased all the subsequent years over their previous years. The profit margin has also declined from 10 per cent in 2016 to 8.08 per cent in 2017. Non-Performing Assets increased during this period from 0.15 per cent to 0.69 per cent.

2.9 Impact of Policies and Regulations on Microfinance

Franks (2000) researched over the effects of the stabilization in macroeconomic view of the Microfinance Institutions. He concluded with the fact that the stabilisation of the Microfinance Institutions is very effective for the financial sustainability of the Microfinance Institution, for a longer duration of time, although it may appear to be expensive in the shorter duration of time.

Quinones and Siebel (2000) further supported the study, who also researched the Philippine Microfinance Institutions and thereafter confronted that the supervisory and regulatory framework had a positive and efficient impact on the deprived households.

Mcguire (1999) on the other hand, decided to conduct a study on the Microfinance Institutions residing in Asia. His main objective was to examine the impacts of the policies and programmes and the regulation of the Microfinance Institutions. He took into consideration 9 countries, i.e. Bangladesh, Asia-Philippine, Nepal, India, Pakistan, Malaysia, Indonesia, Thailand and Sri Lanka. These countries were reviewed on the criteria which measured the 'good practice' form in the framework of the policies and programmes and the administration regulation which included the

government's and the contributor's agencies programmes, policies and regulation of the administration. In this approach, 250 Microfinance regulators, practitioners as well as the bankers were interviewed for the collection of data for each area. The research concluded with the fact that Bangladesh and Philippines have the utmost advantageous environment for the sustainability of Microfinance Institutions for a longer period of time. Whereas, Pakistan was ranked at the least in the order.

Nadolnyak and Hartarska (2007) studied the effects of the guidelines on 114 Microfinance Institutions functioning of 62 countries by using a pragmatic model where the effectiveness of functioning is quantified as performance of the Microfinance Institutions, using regulatory, specific institutional and macroeconomic variables. The study resides on to the conclusion that the involvement of the administration regulations do not impact either the outreach or the Operational Self-Sufficiency. The study also states that the firms being less influenced have a more sustainable life. The researcher points down that there is increase in the outreach of the Microfinance Institutions, lead to lesser savings are the collected savings are led to be borrowed to the lenders; hence such regulations do not enhance the practices of savings.

Haratarska (2009) extracted data of 108 Microfinance Institutions from a database, functioning in across 30 countries. He studied the effects of the market determinants and the parameters for an effective functioning. The performance is quantified by the sustainability and outreach of the Microfinance Institutions. It is also pointed out that the performance of a Microfinance Institutions is not affected by either the controls or the status of the supervision, where, in the research, it is clearly cited that the credit rating organisation may exhibit a disciplining role. The researcher, at the end, comes up and states that owing to the non-existence of the external control, the practice of internal governance is significantly important for the achievement of sustainability and effective functioning.

2.10 Best Practices in Microfinance Institution Management

With the advancement of technology and the growing power of the country, the nature of business practices of Microfinance Institutions and the adaptability of the clients, are also expanding. The Microfinance Institutions, thus, should implement such

effective practices so as to suit and be adaptable to the region where they are dealing with their clients.

Bhatt and Tang (2001) studied the three most proactive concerns in the field of Microfinance. They were technologies, performance assessments and vehicles. They summed up with the study that such differences can be sorted out modifying the Microfinance Institutions to the needs and wants of the clients and also the plans and policies of the management and the financial institution as a whole.

The main concentration of this fragment is to analyse the main subject matters of Microfinance Institutions. They include the determination of the optimized interest rates that should be applied for the borrowings, the credit, whether needs to be credited to the group or particular individuals, size of the loan, the credit scoring and the growth of the Microfinance Institutions along with the bonding with the clients. In those organisations where the achievement of profits is the chief objective, the determination of interest rates is done at the rates which will maximise the wealth of the investors. But in the eyes of Microfinance Institutions, it is a tough task to come to an amount of the initial principal money, overcoming the fixed costs appears to be the greatest challenge and thus, high administrative costs also needs to be covered as compared with the norms and proceedings of the Microfinance Institutions. Therefore, the Microfinance Institutions need to improve comparatively high rates of interest with a view to achieve financial sustainability and viability.

Conning (1999) with the data of approximately 72 Microfinance Institutions from the database, built a hypothetical model to figure out the problems of selecting an alternative to take the full advantage of the impacts or stay in the outreach to the poor or to achieve the platforms of sustainability. He sums up by stating that Microfinance Institutions to be completely self-sufficient must impose higher rates of interest than those focussing on the poor creditors.

On the other hand, Hollis and Sweetman (1998) studied the Irish credit funding, taken place in the mid of 19th Century. They focussed on the capability of the Microfinance Institutions to provide credit assistances to the poor at lower rates of interest without subsidies. Another subject matter, in this part is that whether the Microfinance Institutions should focus on individual credit lending or group credit lending.

Gomez and Santor (2001) conducted a study of approximately 52 individual borrowers and 612 group borrowers. They found that there was a progressive effect on the self-employment pays by the process of group credit lending. It even helped in reducing the default rate of the credits.

Woolcock (1999) proposed the head of group credit lending model. After examining five instances of failures of the Microfinance Institutions in India, Bangladesh, Ireland, he summed up that the performance of the group is dependent on the factors, namely cost structures, Microfinance Institutions credit lending policies, degree of togetherness amongst the group members, nature of the group members and the staff of Microfinance Institutions as well.

With few dissimilarities, in the next research conducted by Armendariz de Aghion and Morduch (2000) focussed their study in supporting the credit lending to the individuals in China, Russia, Eastern Europe. They also decided the practices of Microfinance Institutions which would lead them to new frontiers of expansion and inclusion in new sectors. They included either regular repayment schedules or direct monitoring.

With concern to the size and structure of the credit, Schreiner (2001) classifies the seven aspects of the Size of Loan, viz., dollars disbursed, term to maturity, dollars per instalment, average balance, number of instalments, time between instalments and “dollar-years of borrowed resources”, and how they effected the depth of profitability and reach of the Microfinance Institutions in Latin America.

Painter and Nelly (1999) examined the determining factors that affected the size of loan and the growth of loan and summarised the concept that they differed through their loan cycles. They demarcated that at the initial loan cycles, the preliminary program orientations and promotion required to clearly communicate the program terms and requirements. Lately the loan cycles, strategies relating to the access of savings, meeting the requirements of membership and the frequency may perhaps entail arching to improve the users.

Reviewing the institutionalist approach of Microfinance Institution, USAID and CGAP and other chief contributors disseminated the principle of ‘best practice’ which elaborates that an efficient Microfinance Institution focuses on appropriate banking practices and must attain the mission of poverty eradication at the earliest. They kept

the approach living in their view. They also reviewed that the Microfinance Institutions would grow sustainably and without the help of donation or grants. They always became a constraint by either the donors or the government.

A book was presented by CGAP in 2004 named, “Building Inclusive Financial Systems: Donor Guidelines on Good Practice in Microfinance”. It provides the directions to the practitioners and the donors as to how to take a wise decision over investments and also suggests them to quantify their investment in Microfinance and also to analyse that the invested amount ranges to the best extent and attain maximum number of clients.

As per Consultative Group to Assist the Poorest, 2004 for financial institutions the minimum indicators of performance are mentioned below:

Table 2.2: Minimum Indicators of Performance

Variable	What it means	What it Indicates
Outreach	How many clients are being served?	Number of active clients or accounts.
Depth of outreach	How poor are the clients?	Average outstanding balance per client or account as a proportion of Gross National Income (GNI) per capita
Portfolio quality	How well the loans are collected by financial institution?	Annual loan-loss rate or portfolio at risk > 30 days (PAR) and write-off ratio
Financial sustainability	Is the financial institution profitable enough to maintain and expand its services without continued injections of subsidized donor funds?	Indicator for unsubsidized institutions: return on assets (ROA) or return on equity (ROE) Indicator for subsidized institutions: financial self-sufficiency (FSS) or adjusted return on assets (AROA)
Efficiency	Is the services provided by financial institutions are at the lowest possible cost to clients?	Operating expense ratio or cost per client

Source: Building Inclusive Financial System, CGAP (2004)

Henceforth, according to this approach, the mechanism of grants and subsidies is effective only at the early stages in which the Microfinance Institutions require to ground itself and become self- sufficient, thereafter which no subsidies and grants would be needed and the Microfinance Institutions should be competent enough to draw the attention of new depositors from the market with their own share of profits.

2.11 Theoretical Framework of Capital Structure

Capital Structure is the decision made by an organisation to decide about the financial sources of accumulating funds, in a way to represent the leverage of the organisation as well. An organisation's leverage relates to the potential risks held by an organisation to deal with its competitors and to maximise the welfare of the shareholders as well.

Shapiro and Balbirer (2000) elucidated the term capital structure of an organisation as the blend of equity capital and debt in order to meet the financial requirements of an organisation and also to finance the purchase of assets of the firm.

Saad (2010) proposed the function of capital structure to be the way or means used by an organisation to fund its assets with the debt and equity mix.

The maximisation of an organisation's value by means of reduction in the value of the capital cost is what is termed as an optimal capital structure. An optimal capital structure is a must as it fetches a better value to the firm with reduced cost of capital. Modigliani and Miller (1958) in their work made an attempt to state that the optimal capital structure of an organisation is inappropriate if implemented under the condition of perfect market. Later, in the year 1963, Modigliani and Miller, recognised the significance of optimal capital structure after bankruptcy costs and taxes were also included. Various researches were conducted in the past to satisfy the significance of optimal capital structure. The financing decisions of an organisation are the most fundamental decisions taken by the accounts managers of an organisation.

Song (2005) identified that the assets of an organisation are the basic fund providers and mobilisers of cash flow, thus forming the pillars of the basic capital and funds resources. As per the requirement of finances of the organisation, they issue either preference share or equity share or types of hybrid securities or debt. Hence, the funds secured by these securities form the capital structure of the organisation. However, with transformation, many theorists attempted to establish the best combinations of funds to form the most challenging capital structure. Hypothetically, the most economical source of funding is financing through debt as it implies reduced cost of capital and also implicates tax benefit.

Gill, Biger, and Mathur (2012) gave definition to optimal capital structure as the mix of equity capital and debt. However, debt is not completely or cent percent used as debt in this. It also includes the equity capital of the organisation in order to maximise the value of the organisation, also to minimise the cost of capital of the organisation and then decrease the probabilities of bankruptcy.

Cuong and Canh (2012) stated that the optimal Debt to Equity ratio should not extend beyond 59.27 percent, reason being that a higher rate of Debt ratio will not impact the value of the organisation in a positive way. They conducted their study for the period of time commencing from 2005-2010, on two seafood processing organisations listed on the stock exchange markets of Vietnam for measuring the optimality of their capital structure.

Heng et al. (2012) analysed the relationship between the capital structure and board features of 75 organisations listed on the stock exchange of Kuala Lumpur, Malaysia commencing from 2005-2009. As per them, amongst the 3 most vital financial decisions, viz. financial decisions, investment decisions and dividend decisions, capital structure was placed as the most significant decision for taming the value of the organisation. They significantly sketched out the importance of capital structure on the financing decision, as it is directly related to the functioning of the organisation and also puts an impact on the capability of the organisation to face the upcoming challenges and to deal with competitors.

Hypothetically, the most economical source of financing is through debt financing. Although, not so frequently, the inclusion of debt in larger percentage gives rise to an optimal capital structure, reason is being the risk of bankruptcy and the financial risk increase as the debt financing increases. A company, if having an optimal capital structure, directs that the leverage taken by the company is judiciously selected. Hence, the board of directors must be very practical and outrightly select the best form of capital structure for the organisation, with a view to provide welfare to the shareholders as well encourage the maximisation of value of the organisation. The researchers underwent a study to investigate the factors affecting the capital structure of an organisation. Thereby, they concluded by denoting that corporate governance, as a factor, impacts at the most to the debt contributor in an organisation. With the

effective implementation of corporate governance in relation to it serving the best practices, the board members aids to take up the best financing decisions.

Gompers et al. (2003) recommended that if best practices of corporate governance will reside in an organisation, the strategic decisions of an organisation will be affected significantly. The board of directors take note of strategic decisions to be as equally vital to that off capital structure decisions. It is the prime responsibility of the board of directors to practice good corporate governance as they hold the top managerial authority of the organisation. A proper corporate governance will initiate appropriate practice of effective management of business. It gives lead for effective ways to administer and manage the organisation. Therefore, good corporate governance aids to minimise the chances of failures of an organisation, bankruptcy, a poor corporate structure and an inefficient internal administration system. Henceforth, the features of the Board embers like the presence of directors, the dichotomy of CEO and the size of the board, may place an impact on the decisions over capital structure by the firm.

2.12 Major Theories of Capital Structure

Abor and Biekpe (2005) conferred by their study that, the decisions pertaining to capital structure is necessary as the maximisation of returns is of utmost importance as they need to be repaid back to the shareholders. Also, strengthened capital structure enhances the capability of the organisation to deal and stand boldly against its competitors.

There are numerous theories of capital structure when flipped over the researches done. However, the theories of capital structure studied under this study are as under:

- Modigliani and Miller Theory
- Trade-Off Theory
- Pecking Order theory
- Market Timing Theory
- Shareholder Theory
- Agency Theory
- Cash Flow and Free Cash Flow Theory
- Stakeholder Theory

- Dual-Investor Theory
- Stewardship Theory

2.12.1 Modigliani and Miller Theory

The first theory on capital structure was proposed by Franco Modigliani and Merton Miller, in the year 1958. They, in their first proposal, stated that in a perfect market structure, no model of optimal capital structure exists. In a perfect market competition, amongst all other types of market structure, features with no taxes, no transaction costs, free and timely availability of information to the customers, and homogenous in nature. All the combinations of the said factors of a perfect market are always equal and also the capital structure of a firm does not place any impact on the overall value of the organisation, which means, the funds of the organisation are either raised through equity or debt or a mix of both. In perfect market structure, the actual worth of an organisation is calculated by the real assets the organisation holds with it. Baker and Wurgler (2002) proposed that the Modigliani and Miller approach in their study assumed that there are no profits to the organisation if they alter amidst equity and debt.

Brealey et al. (2008) came up with a view that the choice of either short-term debt or long-term debt will not have any impact on the overall worth of the organisation. Therefore, the decisions pertaining to capital structure did not impact the operating policies of the organisation or borrowings or investments of the organisation. Modigliani and Miller proposition-II demarcates that the returns on equity rises in with the share of proportion to the Debt-Equity ratio and any increase in the estimated rate of return is precisely offset by a rise in the fiscal risks.

Huang, & Song (2006) also delivered that the propositions of the Modigliani and Miller approach were based on the notion of a perfect market structures and also the value of the firm will be left unaffected by the debt policies of the firm.

Nevertheless, there was no perfect market actually existing. All sorts of businesses are functional in an imperfect market. Also, with the list of limitations of the Modigliani and Miller approach, the theory was not competent enough to state the fact that the Debt-Equity ratios differed from one industry to another on a regular basis. Nevertheless, of the shortcomings and the incongruities of the Modigliani and Miller approach, it is treated as significant as it was the establishing theory of capital

structure that lifted the concerns of the researches towards the capital structure of an organisation. In 1963, Modigliani and Miller impoverished their theory by including company tax into it. The Company Tax along with Personal Tax was included further by Miller in 1977 to make the model more authentic and specific. Debt, as a source of fund, provides to be the most significant benefit to the firm as a 'tax shield', which means protection from paying tax.

2.12.2 Trade-Off Theory

The limitations and shortcomings rising from the Modigliani and Miller Theory, with its irrelevance into effect, gave the grounding of the trade-off theory. Myers suggested the trade-off theory in 1984. Jensen and Meckling (1976) in their study proposed that if debt will be included in the capital structure as an integral part, it may lead to rise in the conflicting of interests. Such conflicting interest may give rise to agency costs, in the form of agency costs of equity or agency cost of debt. Agency costs if charged on equity, includes the friction of interests amongst the management of an organisation and the equity shareholders. Such costs occur when the management's perspectives, i.e. the financing decisions, investing decisions, job securities which maximises their personal affluence, do not accord to that of the incentives of the stakeholders, i.e. the maximisation of the value of the organisation.

Fama and French (2002) in their study proposed the facts that with the occurrence of agency costs, the organisation will be able to effectively classify the optimal leverage of the organisation by studying the costs and advantages of every additional input of per dollar of debt. Thereafter, Burgman (1996); Chen et al. (1997); Berk et al. (2010) in their corresponding studies, identified that the trade-off theory recommended the trade-off amidst the tax benefits of debt and the bankruptcy costs. They also termed the optimal capital structure of the firm as the collection of financing securities, which focuses to maximise the value of the organisation. The trade-off theory recommended that by setting a leverage ratio as a target, the management then attempts to attain the optimum capital structure.

De Wet (2006) clearly demarcated the factors influencing the target leverage ratio. They are as understated:

- Tax
- Agency costs

- Financial distress costs

De Wet (2006) and Eriotis et al. (2007) in their corresponding studies stated that the tax shield or the payment of interest of debt is tax-deductible for an organisation. This means that an organisation when using debt capital will have to pay a lower amount of tax. This clearly states that if an organisation will use a high portion of debt capital as fund employment, it will have a lower liability of payment of tax with the achievement of maximisation of the organisation's value. Although, the tax benefits are also allowed only upto a definite level. However, the using of debt in the funds of an organisation maximises the legitimate liability of interest. If the rate of interest increases, the profits of the organisation are used to repay the interest to the creditors. The inadequacy of funds disturbs the overall functioning of the organisation, leading to a stressful financial condition of the organisation. The value of the organisation tends to decrease whereas, the chances of bankruptcy increases when the organisation has increased costs due to financial funds fluctuation, resulting into the inability of the organisation to fulfil its financial requirements.

Bauer (2004) defined the constituents of financial distress costs. It comprises of two costs:

- Direct financial distress costs: It includes bankruptcy costs which generally consist of administrative fees and legal costs.
- Indirect costs: It comprises of the economic losses or expenditure incurred from the occurrence of bankruptcy.

Brealey, Myers, & Allen (2008) proposed that the organisations which have tangible assets, are safe and comprise of ample taxable income for prevention at distressful times, must aim at high target leverage ratios. Whereas, the mechanism of financing through equity must be selected by organisations having intangible assets and being risky in nature. Henceforth, the trade-off theory recommends that different organisations must focus on the target ratios in order to maximise the value of the organisation.

Theoretical optimum capital structure is achieved when,

Present value of tax savings = Increase in the present value of costs of distress (due to further borrowing)

2.12.3 Pecking Order Theory

Donaldson (1961) established the pecking order theory. He in his study examined and summed up with a conclusion that an organisation religiously follows the mechanism of retained earnings for funds accumulation. Donaldson attempted to study the behaviour of the financial managers. Myer's in the year 1984, debated over the point that the traditional theories of capital structure were unable to elucidate the real financing behaviour, with an aim to figure out the hypothetical base of Donaldson's theory. He, thereafter, explored the Donaldson's pecking order theory. He viewed to present the pecking order theory with a different outlook as well in order to quantify the optimal capital structure of the organisation. As per this theory, an organisation when reaches to the maximum capacity of retained earnings and the accumulation of debt securities; must consider equity as the major source of financing. The pecking order theory has a different outlook towards financing as compared to other theorems of financing. This theorem works on the assumption that managers of an organisation have more detailed information about the organisation, as compared to the external investors or debenture holders. On the other hand, the financial managers of an organisation do not have an appropriate knowledge regarding the risks of the organisation, the portfolios of investment and the values too.

Fama and French (2002) had a supportive viewpoint towards the pecking order theory with an aspect that the organisations which are more profitable in nature will have a less leverage instances.

Singh et al. (2003) proposed that in a condition of availability of distorted information, debt as a source of financing is a wiser select than equity. Pecking order theory assumes the benefits of tax interests as it shields over the financial distress, also this theorem has less consideration of optimal capital structure.

Smart et al. (2004) debated over the fact that there is no model of optimal capital structure in the pecking order theory. Also, he stated that the organisations attempt to reduce the associated costs rather than selecting an optimal Debt to Equity ratio.

La Rocca et al. (2007) summed up from their findings that organisations wish to accumulate funds either through internal financing or retained earnings rather than through external financing measures. This depicted that the process of raising funds, follows the usage of first the retained earnings of the organisation, then the new debt

issued, thereafter the use of convertible debentures or risky debt and the preference shares and at last the newly issued equity shares are used.

Allen, Brealey and Myers (2008) debated that the organisations issue new shares, when the prices of the shares are either impartially priced or high-priced. The share prices of the shares get reduced as the investors do not turn up to participate in the announcement of issue of new shares, as the investors are informed well in advance. Consequently, in such circumstances, an organization, while in need of funds, have a preference of debt rather than understated shares. The organisations try to issue the new shares at the correct time, when the prices of the shares are properly priced or overpriced.

Morri et al. (2009) proposed that the pecking order theory has no definite optimum target debt ratio. It is such as the existing leverage of the organisation replicates the necessary increasing needs of outside financing.

Adesola (2009) stated that an organisation may by their preference choose debt above equity financing mechanism due to the disproportionateness of information.

Shyam-Sunder and Myers (1999) summed up in their research that the pecking-order theory is a significant theory that aids to describe the corporate leverage as it covers larger discrepancies in real debt ratios rather than in trade-off theory.

Goyal, Frank and Nevertheless (2003) controverted that pecking-order theory is inefficient to elucidate the financing behaviour of low growth organisations as they have a higher disproportionateness of information.

2.12.4 Market Timing Theory

The behavioural finance also includes the Market Timing Theory. Baker and Wurgler, in 2002 discussed that the financial managers are much more informed than the shareholders or investors, typically in an ineffective market. The financial managers try to take additional benefits by issuing new shares at an overpriced value and then exploiting the entire situation, while repurchasing the shares when the share price starts to fall. The Market Timing Theory is dissimilar to the concepts, theorem and mechanisms of the pecking order theory and the trade-off theory.

Baker and Wurgler stated that the market timing theory has a noteworthy impact on the capital structure of an organisation because the leverage of the organisation is adversely linked with the organisation's historical performance.

2.12.5 Shareholder Theory

As per Heck, Danielson and Shaffer (2008) the stockholder or shareholder theory reflects back to Friedman (1962) and Berle and Means (1932). Although, the father of the stockholder theory is a renowned theorist, Friedman (1962). His deliberation over the theory states that the prime duty of the financial managers of an organisation is to maximise the profit of the organisation (shareholders wealth) with all the legitimate means and mechanisms.

According to O'Sullivan (2000) the believers of the stockholder theory present their perspective towards the theorem that an organisation must function according to the shareholders' interests as they fund the most to the finance of the organisation in the form of equity, but nevertheless this is not so. The shareholders have faith on the efficient functioning of the organisation. However, the stockholders of the organisation are the chief principals of the organisation, therefore, the maximisation of the stockholders wealth must be the key objective of the organisation. Also, it is quoted that if an organisation aims to maximise the wealth of the stockholders, they will in turn also improve and enhance the economic conditions of the country. Moreover, it is deliberated that the income earned and saved from the taxes and interests serve as financial benefits to the stockholders as they are the sole ones to bear the risk on investment.

It is universally accepted almost in all varying economic sectors and also in financial sectors that the stockholders are entitled to enjoy the benefits of the remnant profits of an organisation as they are the ones to bear the residual risks. Furthermore, it is also stated that the normal or equity stockholders have no assurance or any legal agreement signed for procuring the returns for their investments, even though they are the sole individuals investing into the organisations and dealing economically. Henceforth, the remnant profit takers, the stockholders are apprehensive about the allotment of funds into the varying investment options available, as their chief objective is to attain maximum profits from the investment done, even though the organisation earns profits or suffer losses (O'Sullivan, 2000).

2.12.6 Agency Theory

Jensen and Meckling (1976) described the agency theory as the one in which one or more than one individuals or the principal's involve another individual, the agent to carry out some services which includes assigning some authority and responsibility concerning decision-making. Agency theory is associated to agency problems instigated by the cash flows of the organisation between the stockholders and the managers, or by means of advantages of conflicts (Ayen & Oruas, 2008). The Agency theory proposes that in the procedure of waning of agency problems, the agency costs are also related with it (Chambers & Lacey, 1999). As per Berger and Bonaccorsi (2006) an organisation must take strengthened decisions on its capital structure in order to reduce the agency costs, also to reduce the equity capital cost along with higher levels of leverage to be taken, hence by the effect of which, the value of the organisation will be maximised. They observed that with every one percent of reduction in the Equity Capital ratio (including equity as well as assets) generates a sixteen percent increment in the efficiency of the profit earned. Although this research was conducted in the banking sector of United States. This study might have varying implications in other sectors, no directly related to financial activities.

The agency theory relates to the factors affecting the relationship complexities which exists where there is a definite relationship amongst the agent and the principal head. When a principal gives the discretionary power to the agent to perform the tasks or arrive at certain decisions and decentralises authority, the agency relationship then begins to exist. The complications in the agency arise when the activities and objectives of the principal are not in conjunction with the agent. The Agency theory functions on the vital assumption that the agents are self-interested, risk takers and also act judiciously. Although, there exists two major complications that can arise in an agency relationship. At first, the agent is inadequately monitored by the principal of the agent to keep a check if the agent behaves in the instructed way or not. Secondly, the issue of risk distribution pertains, because both, the principal and the agent have their individual perceptions towards risk.

Companies with small shareholders are inefficient to minimise their total agency costs as compared with larger companies who have larger shareholders. It is such because the companies having larger shareholders have better incentives and resources for

monitoring and observing the financial managers of the companies (Kallunki, Nilsson and Zerni, 2010). One of the best examples of the agency relationship is the relationship existing between the top management of the company, i.e. the board of directors, referred to as agents and the shareholders of the company, referred to as principal. Thus, the agency relationship highlights the mechanisms as to how to effectively manage the existing relationship. At first, the Agency theory demonstrates that the agent's self-interest can be monitored and observed by means of using information system. Henceforth, the formal and official systems used by an organisation in its functioning, viz. systems of budgeting, reporting done by managers and the various other bases of information, including observation or monitoring and surveillance kept by management, are the finest examples to showcase the controls of monitoring done by the management. All the more, the agency theory illuminates that maximum control systems, in fact all the control systems, as conferred above, describe the framework of functioning of the authority delegated to the agents and accurately bring them into an order of the objectives of the organisation (Leong, 2005).

2.12.7 Cash Flow and Free Cash Flow Theory

The sources of internal funding of an organisation are considered as the Free Cash Flow theory. Although the processes through which the financial managers of an organisation transact with the free cash flow incurs some expenditure which are related with it. The basic objective of the Free Cash Flow theorem is to keep a balance between the costs of the free cash flow and the cash flows in an organisation. Scott (1981) proposed that if an organisation has sufficient flow of cash to repay the expenses incurred, especially debt, then the organisation will be able to sustain itself very smoothly. He also elucidated that with the help of the historic records of cash flows of an organisation, the financial manager can foresee the financial health and the prospective performance of the organisation. He related this theorem with the capability of present cash flows to forecast the upcoming financial status of the organisation.

Jensen (1986) established the Free Cash Flow Theory and its connection with the cost of agency. He discussed over the impacts of efficient cash flows and free cash flows with respect to the overall performance of the organisation. He reasoned the fact that

inspite of the positive impacts placed by the cash flows of an organisation on its commercial performance, free cash flow will not exert the same; instead it will impact the commercial performance of the organisation in a negative way. The financial manager of an organisation, in case of free cash flow, may use the funds in an unproductive task or may invest the money in a negative project of Net Present Value (NPV).

Harris and Raviv (1990) was the first one to explain the significance of debt in decreasing the costs of free cash flow. The mechanism of debt financing can decrease the cost of agency of free cash flow, as debt financing guarantees that the managerial decisions of an organisation with respect to investment will be efficient and effective. Moreover, formations of individual objectives of managers are restricted by the mechanism of debt financing. Consequently, as per this theorem, a high degree of risk ability will serve better profitability standards for the organisation. Nevertheless, many other researches over this topic has showcased a negative relation between free cash flow and debt financing. For instance, Hart and Moore (1995) stated that the financial managers taking decisions over investments of an organisation get restricted due to the long-term debt financing. They also conferred that the organisations with high debt financing face a lot of difficulty in raising the capital of the organisation, as the new debt holders also wish to have given the equal importance as given to the existing creditors. Companies having low debt financing will invite new debt holders in order to raise funds from them and also provide importance to the new debt holders. Hart and Moore (1995) said that if the management of a company commences profitable or unprofitable investments, an optimum mix of junior and senior debts and also an optimum degree of Debt-Equity ratio will be formed. The studies deliberated as above, sums up that the free cash flow and normal cash flow of an organisation act as the factors determining the use of combination of debt and equity in the capital structure mix. Moreover, the free cash flow can majorly impact the organisation's functioning and work performance. Nevertheless, the impacts of free cash flow and cash flow over an organisation's performance are still said to be indistinctive, likewise the impacts of a capital structure mix has on the profitability or the work performance of an organisation.

2.12.8 Stakeholder Theory

In finance and business, the Stakeholder Theory and the Shareholder Theory are regarded as the two most combative theories. As discussed earlier, the Shareholder theory identified the basic responsibility of the financial managers of an organisation to highly quantify the wealth of the shareholders. Freeman (1984) formerly established the stakeholder theory in his book *Strategic Management*. It commences with an assumption that the standards and morals of an organisation, are the most integral fragment of business (Freeman, Parmar & Wicks 2004). Freeman proposed that the financial managers while making decisions, along with the shareholders, must also keep a keen concern on the welfare of the stakeholders (Jensen, 2002). Notwithstanding the argument amongst the stakeholders and the shareholders, together concentrate on the maximisation of an organisation's worth as well as provided maximum benefit to the recipients.

The contract theory specifies that interests and the well-being of the stakeholders, i.e. the negotiating power of the security holders, must be given the utmost importance. However, this theory magnifies this perspective more precisely. The stakeholder theory explains that the sustainability and welfare of an organisation are retained by the outlooks of the society. Henceforth, an organisation must significantly provide benefits to the society and also function with a motive towards the well-being of the community, also securing the society from getting into the illeffects otherwise. It is also described that the significant authority of the community, delivers popularity of an organisation along with it the sustainability also grows, on the other hand, the society if does not enhances the popularity anyway, still the organisation will have to function towards the betterment of the society (Wei, 2003).

2.12.9 Dual-Investor Theory

The Dual-Investor Theory was established to solve the ambiguity between the stakeholder theory and the shareholder theory. Schlossberger (1994) stated that the Dual-Investor Theory was introduced with the hypothesis that there are majorly two types of financiers in every commercial venture, viz. the owners of the stock, who deliver the capital for the efficient functioning of business, and the overall society, who deliver the opportunity capital. Consequently, both the investors enhance the worth of the organisation, so they have a complimentary relationship amongst them.

The society is considered in the Stakeholder theory and the Shareholder theory. Although the external society, i.e. the stakeholders, is more significant to the organisation rather than the owners actually owning the organisation, as they are the majority providers of funds to the organisation. It is the society that facilitates the efficient performance of the organisation and the mobilisation of capital.

2.12.10 Stewardship Theory

The Stewardship Theory is an alternate to the Agency Theory. It deliberates an additional description of cost of agency, i.e. the management of the organisation is encouraged by the willingness to accomplish the targets, successfully perform stimulating activities and delegate authority and responsibility to provide benefits to the organisation (McClelland, 1961; Herberg, Mausner & Snyderman 1959). Therefore, to initiate the interests of the management of the organisation concerning the benefits of the organisation and also looking forward towards the concerns of the shareholders, any financial incentives are no longer required.

2.13 Financial Leverage, Liquidity and Profitability

A Financial Institution focuses on the financial leverage, liquidity of the institution along with its profitability more keenly.

Rajan and Zingales (1995) deliberated several processes based on accounting patterns and the concerned information. They recommended the implementation of efficient measures in order to aid to effective estimation of the degree of leverage, wherein the processes to be implemented must be grounded on the basic objectives of the study. Random selection is not to be facilitated. The researchers also advocated that the proportion of total liabilities to total assets can be taken into account if and only if it concerns the remnant requirements of the stakeholders after liquidation. They also proposed that the bills receivables and bills payables included unvaryingly are involved for the calculation of ratios and particularly used for maintaining the financial transactions which further on used for ascertaining the business fiscal standing of the institution. The ultimate subject matter of the institution is that the institution needs to undergo few of those non-operative liabilities which are existent in nature and also are to be significantly met for instance, liabilities towards the employees such as providing pension, thereafter leading to undervaluing the degree of leverage.

Long and Xinlei (2005) keeping in view of the consistencies researched over the two integral financial interpretations. Primarily the financial institutions having a high degree of profit are apt to having a lower degree of leverage ratio, ambitious of inclining towards the internal financial funds by the institutions having a high degree of profit. The contemporary and hypothetical progression has implemented dynamic considerations of tax to elucidate this condition. The researchers attempted to depict that such phenomenon continue to pertain fundamentally even when the factors are controlled precisely. In the second place, the researchers tried to elucidate that with the hypothetical and practical incidences, the study tends to depict that that the degree of leverage ratios can transform to instinctively describe that irrespective of other factors, which concept describes the financial decisions at the best, also that the contradictory inferences can be drawn with dependency over either leverage ratio or financing decisions variations are to be analysed. Henceforth, the variations in the degree of leverage ratio may not be helpful enough in describing the opposing studies. The researcher also notifies that the usual mechanism of counting upon the methodologies of degree of financial leverage ratio varies while drawing inferences on the cogency of the firm's capital structure. Subsequently, after deliberating and conversing the different capital structure studies in the preliminary parts of the research, the researcher notifies that the financial institutions having a high degree of profit are apt to having a lower degree of leverage ratio. This is analysed from the subject matter of fact that the degree of leverage ratios are not adequate enough for the liquid institutions and such other firms having a higher degree of profit. The institutions earning higher profits tend to accumulate a substantial share of capital funds from the internal accumulation of funds in order to avoid debt financing as it leads to a larger debt liability on the financial institution.

Ricardo and Arturo (2010) casted the samples from Latin America, they researched over the data of 185 registered institutions. The key objective of their research was to analyse the effects of the degree of leverage on the profitability of the institutions over other factors viz., Institution's Growth, Size of the institution, Tangibility, etc. The research was carried out when the conditions of the America was at a subprime crisis, where it affected almost the entire Continent of America in the past. The researchers observed that the institutions earning a higher degree of profit or have growth at an increasing rate for over certain years, keep the mechanism of debt borrowing at the

least. Also, the researchers studied that firms earning a higher degree of profit rise with a growth pace and are benefitted with the internal funds and accumulations overcoming immediate requirement of funds. As per the researchers, profit maximization leads to capital appreciation. Such profit accumulations, thereby are utilized in the areas deficient of growth and development and thus lending from external sources are swiftly avoided. The researchers chose various institutions situated in America with an objective of avoiding any sorts of partiality with regard to the merits and demerits of various regions being differentiated on the grounds of either the rule or regulations or governing laws followed in certain regions or the strange societal limitations pertaining in the other regions. The researcher while summing up the research, concluded with the most significant matter that due to the increasing cost of lending credit in America, debt financing has to face a downturn. Also, it was noted that with the passing time the companies focusing to come up with a good capital hold and public issue, also consequently rising with the patterns of time will avoid financing through debt in order to shed off the debt liabilities from the head of the financial institution and also get rid of the excessive burden of fix custodial expenses. The capital to be raised with equity had to face adverse impacts by the investors and shareholders with this view. With all the aspects keeping in view of the research, the researcher doesn't fails to focus on the fact that the institutions do not fail to finance through debt at times of financial crisis, specially financing through long-term debt. No significant patterns of change towards debt financing were observed from the companies. Although, in the short-run, the existing financial conditions did not affect the risk bearing capacity of the investors.

Puwanenthiren (2011) conducted a research and briefed about the correlation between financial performance and capital structure which attracted towards finance works. He stated the importance upon the company performance or the type of investor investing is the question which is generally pitched up for long time to find the answer. The research, on the effect of capital structure on financial performance provides an additional assistance in knowing about the root cause and all the possible problems in determining capital structure to all the graduate learners, scholars and the financial managers and the functional assistant of the company. To analyse the research objective, he collected the data to find out the relational factors from different primary source of business companies which is listed in the Colombo Stock Exchange of

stipulated period commencing from 2005-2009, and different secondary data from reviews of different literatures, articles and researches. After using different tests to find the correlation of the hypothesis which concluded that there is inverse relation between capital structure and financial performance. The researcher also suggest that performance standards should be determined and communicated to all the stakeholders so that they can take better decision and chance of negative fall of investment can easily be seen and determined to improve the financial performance of them.

Anand (2002) conducted a research where his objective was to come up the comparative significance of the management in decision making for which he conducted the primary research and asked varying questions from his sampled respondents. The researcher analysed with 85.10% that maximizing EBIT and EPS are the important factors and 75.90% focus on maximizing the relation of ROA and WACC being the prime objective.

Jain and Yadav (2002) conducted a research in which he stated the prime two objectives in decision making in management finance in India are: Firstly, maximization of EBIT and EPS and secondly, to maximize of the relation concerning WACC and ROA. He also found the secondary key factor in decision making are capitalization of the market and enhancing the ROI with maximizing the EPS.

Smith and Watts (1992) in his research analysed that company with growth options and high cash volatility have positive trend in the market that they can reduce debt in their capital structure over the period of time. In his research, he states inverse relation between growth opportunities and debt. As per the Signaling Theory which he conducted in his research that blue-chip company or growth company expected to have higher debt levels in higher quality which shows the positive relation concerning debt and opportunities of growth.

Amidu (2007) conducted the research to find relational impact of capital structure on Ghana companies. With his research, he sourced out the secondary data from the studies made with the data ascertained from the accounting records and reports of the registered companies on GSE at the stipulated period commencing from 1997 to 2004 and used the mechanisms of regression to find the outcome. With the analysis of data, he summed up with the fact that there is the positive effect amongst the progression of

sales including the policies of dividend, ROA but showed the inverse relationship with the degree of leverage.

Kapoor and Kanwal (2008) conducted the research to find and analyse the different factors that impact the relationship between the capital structure and Information Technology firm's decision making in India by implementing the multiple regression test and collected the secondary combined data with the records of seven years commencing from 2000 to 2006. With his research, he concluded with the suggestion that the Pay-Out ratio and Debt Equity ratio have a positive relation with respect to cash flows, profits and has a negative relationship with the market value ratio and the growth of sales.

Gupta and Banga (2010) through his research find all the factors and its contributing factors of business capital structure using different test to find the correlation between factors. The conducted tests resulted into the decision making factors including Liquidity, Leverage, Profitability, Structures of Ownership, Growth and Development. With the help of regression test, it was found that degree of leverage and the ratios of liquidity are the chief factors that impact the capital structure of the Indian firms.

Mehta (2012) conducted a research in fields of energy sector, real estate, construction sector, health care, telecommunications sector, industrial sectors to find all the determinants of capital structure for the complete duration of the years 2005-2009. He with his research analysed effect of capital structure policy by correlation analysis in the first stage and multiple linear regression analysis in second stage. He summed up by stating the determinants of the policies of capital structure and also mentioned the Level of Risk, Profitability, Size of the company, Liquidity and Degree of Leverage of the company amongst which he stated Profitability of the firm and Size of the firm as the most key factors influencing the capital structure policy.

Hijazi and Tariq (2006) conducted the research with the aim to determine the capital structure of Pakistan cement industry. The researcher took 16 of 22 firms in the cement sector, listed at the Karachi Stock Exchange and with the study, it was found that the cement industry's capital structure have special factors and attributed which don't exhibits in other sector. The researcher conducted the regression and concluded

that there are some determinants i.e. Profitability, Tangibility of Assets of the firm, Growth and stated the assumption of excluding turn-out size.

Boamah and Richard (2014) conducted the research to study the effect of capital structure and its factors Ghana Stock Exchange listed companies of 2006 to 2011 period. With the research and OLS model of regression, the various determinants have been studied i.e. Profit After-Tax, Price Volatility, Size, Earning per Share, Return on Equity, Growth in Assets, and Liquidity. The study concludes the analysis the main determinants of listed companies which are Cost on Equity, PAT and Size of the company and conditioned with the note that PAT as the most important factor in paying dividend to the investors.

Serrasqueiro and Nunes (2007) conducted the secondary research on various theories in determining various investigate determinants of debt i.e. main capital structure theories- Trade-off, Pecking order, Signaling Theories and Agency Theory of 162 companies situated in Portuguese during the period of 1999-2003. The conclusion concluded on various remarks. The ultimate conclusion of the study depicted the negative relationship of debt and profitability (confirming the Signaling theories and the Trade-Off theory).

Shubita and Alsawalhah (2012) conducted the extended secondary research of Abor's (2005) with the objective to find the effects of capital structure by targeting the industrial firms situated in Jordan and their profitability. The study sample comprises of 39 companies from the period of 2004 to 2009 years. He concluded in his research that there is an adverse relation amongst profitability and debt on the basis of company's equity as source of finance.

Saleem and Naseem (2011) conducted the research to objective to analyse the profitability and leverage of Pakistan companies relating to oil and gas for the period of 2004-2009 and observe the influence of the degree of leverage on EPS and Profitability. The researcher conducted the hypothesis, but failed positive relationship i.e. leading to an adverse relationship amongst the profit measures and the degree of financial leverage which means that company with high leverage have low risk in this sector.

Gill, et al. (2011) conducted the research with of 272 American firm listed on New York stock exchange from 2005 to 2007 period with the objective to find and analyse

the effect relation of capital structure on the profitability of the American manufacturing firms and service providing firms with the help of various test like correlation and regression to find the relation with ROE mechanics of capital structure. The study concluded that there is a positive relation pertaining amidst the short-term debt and overall debt to total assets and profitability in service industry.

Akbarpour and Aghabeyzadeh (2011) researched on the objective to find the relation between accounting statements and the financial structure with the aim of evaluating performance i.e., ROA, ROE of 101 registered companies in the stock exchange of Tehran. The research was conducted on three factors comprising of three techniques for financial structure, two techniques for assessing the performance and also involving various test to find the relation like t and F statistics and multiple regression. The study concluded that there is positive relationship between ROA and financial structure but there is an inverse relation existing amid ROE and financial structure.

Pathak (2010) had conducted the secondary research to find and analyse the significance of the determining factors in the decisions concerning the capital structure of the Indian firms publicly traded for which the data of 1990-2009 periods has been collected of 135 firms registered under BSE. The research has found the fluctuation in the capital structure using the model of regression. The determinants of capital structure had been identified which was the objective of the study and analysis of these factors were been studied concerning leverage. Thus the study concluded that there is a positive relation of leverage and various determinants.

Psillaki and Daskalakis (2008) conducted the research to study all the determining factors of capital structure of the SMEs of French, Greek, Portuguese and Italian small and medium sized enterprises (SMEs) and studied with the objective to find whether different country characteristics have impact on capital structure. They found various determinants and its dependency on debt like Size, Structure of Assets, Risk and Profitability with the incorporation of regression tool. The research concluded with the positive correlation between asset structure and leverage, risk and profitability being adverse. They also conferred that growth is not the noteworthy determining factor for the degree of leverage for the mentioned countries.

Frank and Goyal (2007) researched with the objective to find and study all the factors determining the decisions pertaining to the degree of leverage of the American companies operating publicly from the period of 1950 to 2003. With the research, he concluded the factors that have either positive or negative impact on leverage. The factors have the impacts respectively including, Market-to-Book ratio (negatively affected), Median Industry leverage (positive effect on leverage), Profits (negative), Tangibility (positive), Expected Inflation (positive) and Log of Assets (positive).

Shah and Hijazi (2004) conducted the research to analyse the capital structure and its determinants on Pakistani non-financial listed firms for which he took 445 firms for the period of 1997-2001. He concluded the research that there is positive correlation between tangibility and debt but not directly significant with the help of data regression test. They also concluded that the Profitability, Growth and Size of the firm have a positive and significant relation with the degree of leverage.

Gonenc (2003) conducted the research to find the impact of capital structure decision of Turkish industrial firms on various parameters like Asset Tangibility, Profitability, Growth Opportunities and Size with the objective to determine and study the impact of corporate governance and equity ownership structure on the relation between debt ratios and firm's characteristics. He concluded that various determinants impact the capital structure of Turkish firm using regression analysis test and also stated the exception that growth opportunities of the firms surges both long-term debt ratio and total debt.

Rani (1997) in her study examines those variables that significantly impact the capital structure with the implementation of model of multiple regression. For her study she took Leverage ratio as dependent variable and Growth, Size, Business Risk, Operating Leverage, Dividend Pay-Out ratio, Profitability, Cash flow coverage and Debt coverage as independent variables. She concluded that company should focus on designing capital structure with the giving importance to independent variables.

Bhatt (1980) conducted a research on the factors determining the degree of financial leverage with the objective to analyse in the engineering industry the relationship between financial leverage and the factors like Business Risk, Size, Profitability, Growth Rate, Operating Leverage, Dividend Pay-Out and Debt lending capability of firms. In the study, he concluded his findings i.e. there is no relation between firms

financial leverage and other determined factors and also stated that profitability is the prime factor to measure financial leverage of Indian Companies.

Baral (2004) conducted a research on the factors determining the capital structure of the companies registered in Nepal. The objective of the study was to find and analyse the determinants of the capital structure of banks and companies registered in the Nepal Stock Exchange Ltd. The objective included the factors which should be affecting it such as Growth Rate, Business Risk, Dividend Pay-Out, Earning Rate, Size, Debt Service Capacity and Degree of Operating Leverage. In this research, the sample size taken out of the population comprises of firms involving commercial banks, manufacturing companies, finance companies and insurance companies. The study conducted was exploratory and concluded that there is positive and significant relation amongst the variables of Earning Rate, Size and Growth rate.

Črnigoj and Mramor (2009) conducted a research on the factors determining the capital structure in the upcoming European countries. The capital structures of 3214 Latin American companies were examined during the period of 1999, whereas 4280 companies in 2006. Various variables included in the research were earnings volatility, profitability, Tangibility of assets, size of the firms, amount of equity capital per employee and employees command in corporate governance. The research concludes with the fact that an adverse relationship existed between earnings Volatility, Equity Capital per Employee, Profitability and Tangibility of Assets and the Degree of Leverage. Consequently, it also depicted a significant relationship amongst the size of the firms, rate of growth and the degree of leverage. Therefore, the conclusion was that the shareholders of the growing European companies were securing a sluggish control in the companies.

In comparison, Akhtar (2005) conducted research with the objectives of determining the factors affecting the capital structure of Australian domestic corporations and multinational corporations. On the analysis of the research, it was concluded that the results of the determinants of leverage i.e. Profitability, Growth and Size and the impact of the level of leverage was not severe between the multinational and domestic corporations. He also stated in his conclusion and analysis that the collateral value of assets is the prime factor of leverage, not the bankruptcy costs.

The Capital Structure of a company and the degree of financial leverage of the company, registered in Indonesia, Public Listed Cement Industry, was studied by Ningsih and Djuaeriah (2013). In this research, the link between seven independent variables viz. ROE, SER, TG, ROA, QR, EPS and BMR was depicted with the degree of financial leverage, taken as a dependent variable. In the study, it was analysed that BMR, SER and ROE, the variables used for quantifying the capital structure, placed a positive impact on financial leverage. Also, it was analysed in study that the seven independent variables involved in the research, i.e. ROE, SER, TG, ROA, QR, EPS and BMR had placed a significant impact on the degree of financial leverage of a company.

A study on the relationship concerning a company's profitability and the degree of leverage was selected for the research by Mahmoudi (2014). He commenced his study from 2008 and completed it on 2011 with the research done on 28 cement companies from the Tehran Stock Exchange. The degree of leverage was calculated with the help of long term debt to equity (LTD/E) and Short term debt to equity (STD/E). Also the Profitability of the Companies was quantified with the Return on Assets (ROA) and Return on Equity (ROE). The testing of the hypotheses was done by using the regression model. With the analysis done on the companies, the summed up result arrived at the point that amidst the company's profitability and the degree of leverage, a significant and an adverse relation existed. The descriptive study presented an outcome wherein, the degree of leverage of the cement companies appeared to be high and the overall performance of the registered cement firms was calculated by the Returns on Assets (ROA) and Returns on Equity (ROE) with 19% and 39% correspondingly. Henceforth, the research concluded that the overall performance of the registered cement firms in Tehran during the period of study was quantifies to be average.

Kantawala (2001) studied the financial performance with respect to the degree of leverage, liquidity and profitability of the varying institutions of the Non-Banking Financial Corporations, commencing from 1985-1986 to 1994-1995. In the research, an effort was made to figure out the various institutions of which the ratios were found same in majority. To commence the process of examination, PBT to total income, PAT to total assets, dividend to PAT, Profitability ratios like Gross Profit to total income and PAT to net worth were implemented. For calculating the degree of

leverage of the firms, ratios like Loan and Debt Equity to Current Assets and many more were implemented. While, on the other hand, Liquidity ratio such as current ratio was calculated. The research also observed if these ratios varied significantly amongst the different groups of Non-Banking Financial Corporations. The testing of hypotheses was done by using the mechanism of Analysis of Variance (ANOVA). The summed up conclusion of the study reviewed that there was a noteworthy variance in the degree of leverage, liquidity ratios and profitability of the different groups of Non-Banking Financial Corporations.

Zoysa et al. (2009) piloted a study on the amount of profitability of the registered manufacturing firms in Malaysia and Sri Lanka for a total duration of three years, commencing from 2006 to 2008. The chief objective of the research was to embark and analyse the key main indicators, being ROA and ROE of the companies for comparative analysis. In this study, the commercial statistical records of 161 manufacturing firms were analysed, comprising of 99 Malaysian Firms and 62 Sri Lankan Firms, in selection from the database of OSIRIS. The outcomes of the study directed that in the course of that period the Sri Lankan manufacturing firms had significantly high degree of profitability and positive impacts rather than comparing it with the Malaysian firms with respect to the Return on Assets, whereas, on the other hand, the complete performance of the Malaysian firms was considerably improved with respect to Return on Equity in comparison with Sri Lankan firms. They also recognised the relatively lower standards of investments into equity pertaining in the manufacturing division of the Sri Lankan firms, comprising of a considerably poor market of equity investments, extensive distress towards investments involving high degree of risk and rate of interest being high. When the equity and profitability of the firms were observed by the industries, an analogous pattern of investments could be sketched out.

Saleem & Rehman (2011) conducted a research and studied the impacts on probability of a firm of the Liquidity ratios. He drew out a result that the Liquidity ratios impacted the Return on Assets significantly, also that the Return on Equity and Return on Investment were not impacted significantly by the Liquidity ratios. The outcomes of the study discovered that three ratios, viz. Quick Ratio, Liquid Ratio and Current Ratio, did not actually affect the Return on Equity, on the other hand, the three ratios, viz. Quick Ratio, Liquid Ratio and Current Ratio, significantly affected

the Return on Investment. All the more, it was figured out that every ratio or variable significantly affected the financial performances of the companies with different variances, keeping Liquidity ratios as the primary ratio. The financial performance of the companies was significantly depicted by the Profitability ratios of the same.

Alfan and Zakaria (2013) conducted a research with an attempt to evaluate the financial positions and financial distress of particularly the construction firms in Malaysia. The research was grounded on the collection of data through secondary resources, i.e. the annual reports data of five big firms was collected for the research, period of which was six years, commencing from 2004 to 2009. The study, out of 49 firms chose 5 firms as a sample, firms being registered in Bursa Malaysia in the construction division for the research. The analysis of the financial performances of the firms was done with the financial ratios, viz. Return on Equity, Operating Profit Margin, Return on Assets, Quick Ratio, Debt Ratio and Total Assets Turnover. The theorem of Altman Z score was implemented to forecast the financial position of the selected firms, avoidances of corporate functioning and also to analyse the processes of control for the financial hurdles of the firms in Malaysia during the economic crisis. The results of the study summed up that five selected firms in Hong Kong, the financial performance of which deteriorated very quickly in the former years. The analysis of the finance section of a firm described that in Malaysia the construction sector has arrived the stage of depletion. Also, it was summed up that the prevailing state of affairs of excessive competition, higher costs of construction and lower cooperative demand in Malaysia had resulted into increase in the level of difficulty of retreating the financial positions in the upcoming years.

Nedunchezian (2013) examined the effects of financial performance of commercial banking sector to discover the efficiency of the banks in the course of the post-merger era in the fields of Management Efficiency Ratio, Capital Adequacy Ratio, Leverage Ratio and Profitability Ratio and Earnings. In the study, the initial Ged Banks, viz. Sangli Bank with ICICI, United Western bank with IDBI, BOB With IOB and Centurion Bank of Punjab with HDFC were chosen for the research for the course of time commencing from 2006 to 2010. The research, for its further exploration, the ratios of the banks were casted to compare the increment in better performance of the local banks in the course of the duration before merger, i.e. from 2003 to 2006 with the duration after merger, i.e. 2008 to 2011. On the other hand, the significant

variances in the financial upliftment of the banks in the pre-merger period and post-merger period, was evaluated with the implementation of combined sample t-test. It was also revealed that the advancement of Debt/ Equity Ratio, Dividend pay-out ratio and the Growth rate of Total Advances to Total Assets Ratio of the banks selected as sample, apart from the Indian Overseas Bank, showcased reduced progress after the merging took place. At last, it was summed up that the complete performance of the banks selected depicted much improvement and progress after merging in most of the fields.

Rehman (2013) conducted a research study and examined the association between the financial performance of the registered sugar firms in Pakistan with the degree of financial leverage for a total duration of 5 years commencing from 2006-2011. The analysis of data was done by using correlation analysis and descriptive statistics. The final conclusion of the research revealed a mixed outcome stating that there was a positive correlation between the Return on Asset and Growth of Sales with the Debt Equity Ratio, also that the Earning per Share, Return on Equity and the Net Profit Margin had a negative correlation by the Debt Equity Ratio in the course of the research work.

Shah and Jan (2014) conducted a research and in their study they selected the major ten commercial banks of Pakistan and examined their financial performance. They used the correlation and regression techniques to analyse the varying effects of the ratios on the financial performance of the banks selected for the study. The findings of the study stated that the Operational Efficiency and the Size of Bank had a negative relationship with the Return on Assets. Also, the Operational Efficiency and the Size of Bank had a positive relationship with Asset Management Ratio. All the more, the Size of Bank was positively related with Asset Management Ratio and Interest Income, while, on the contrary, the Operational Efficiency of the Bank was negatively related with the Interest Income.

Biger, Gill and Mathur (2012) described an optimal capital structure as a balanced mix of comprising equity financing as well as debt financing. However, debt is not completely or cent percent used as debt in this. It also includes the equity capital of the organisation in order to maximise the value of the organisation, also to minimise

the cost of capital of the organisation and then decrease the probabilities of bankruptcy.

Cuong and Canh (2012) stated that the optimal Debt to Equity Ratio should not extend beyond 59.27 percent, reason being that a higher rate of debt ratio will not impact the value of the organisation in a positive way. They conducted their study for the period of time commencing from 2005-2010, on two seafood processing organisations listed on the stock exchange markets of Vietnam for measuring the optimality of their capital structure.

Abdul (2012) as well conducted an alike research with the objective of determining the relation prevailing amidst the financial performances of companies and the capital structure decisions in Pakistan. The research arrived at a conclusion that by measuring through GM, Tobin's Q and ROA, the degree of financial leverage of the company depicted an important relationship, though negative, with the company's actual performance. Also, it was noted that, when measured through Return on Equity (ROE), the relation of the degree of financial leverage and the company's actual performance was negative but was not factually very noteworthy.

Javed and Akhtar (2012) in their study examined the connection amidst the financial performance and the capital structure decisions. Their findings summed up that there was a progressive relation amidst the financial performance, Size and Growth of the companies and the degree of financial leverage. The financial data, which concentrated on the Karachi Stock Exchange in Pakistan, was tested with the regression and correlation techniques of statistics. The final outcomes of the study were reliable to the Agency theory. This study, thus, dedicatedly focussed on the degree of financial leverage and secluded other decisions relating to finance.

Saeedi and Mahmoodi (2011) conducted a research, and in their study they observed the correlation existing between the financial performances of the registered companies in Tehran Stock Exchange and the capital structure. As per the study done, the performance of the companies in the market as a whole has a positive relationship with the capital structure. Also, the Return on Assets (ROA) has a positive relationship with the capital structure. On the other hand, the capital structure and the Return on Equity (ROE) were not related to each other very significantly. The study conducted by Saeedi and Mahmoodi (2011) summed up with the findings that the

degree of financial leverage may place varying impacts on the financial performance of the companies with different means.

Ebaid (2009) conducted a research to examine the effects of the selection of capital structure on the companies functioning in Egypt. With the mechanisms of Gross Profit Margin, Return on Assets (ROA) and Return on Equity (ROE), the financial performances of the companies were measured. The capital structure, the prime most variable too, was calculated with the help of total debt to Total Assets Ratio, Long-term Debt to Asset Ratio and Short-term Debt to Asset ratio. The approximation of the correlation amidst the financial performance and the degree of leverage was examined with the help of multiple regression analysis. The findings of the study revealed that the company's financial performance is not directly affected with the capital structure. Though, the results of the study were found to be varying with other analytical researches.

Hadlock and James (2002) and Ghosh et al. (2000) on the other hand, conducted a research and indicated that there existed a positive correlation amidst the selection of optimal capital structure and the degree of financial leverage. Berger and Bonaccorsi di Patti (2006), Gleason et al. (2000) and Simerly and Li (2000) in their study indicated that there existed a negative correlation amongst the capital structure and the financial performance of the companies. In their study they discussed that lower the equity capital of the company, higher and efficient will be the company's financial performance. Although, the research recommends that for any additional study on the related topic other variant variables must also be given effective attention.

Martin and Scott (1974) in their study proposed that the companies aptly considers the common financial states of the degree of leverage viz. Profitability, Market Price, Sales Growth, Dividends, Sales Variability, Liquidity and Firm Size, while framing Debt-Equity Ratio. The companies, along with all the aspects into consideration, also compares the expenses to be incurred and the advantages relating to the financial choices and decisions caused due to the financing mechanisms (Titman & Wessels, 1988).

Zeitun and Tian (2007) conducted a research and summed up that a company's capital structure impacted the financial performance in a suggestively negative way. Nevertheless, they also observed that a company's short-term debt with the overall

assets of the company has a significant, a progressive approach and a positive hand on the financial performance in the market (Tobin's Q). All the more, Abdullah (2005) discovered that in the research done by Zeitun and Tian (2007), on the correlation among the definite features of the companies and their debt maturity, there was no factually authentic proof to determine the correlation between profitability and debt of a company. Nonetheless, he identified that the overall debt had a significant and negative relation with the asset structure of the company. Therefore, with a fundamental observation of the given researches and studies, it can be summed up that the degree of financial leverage was negatively and significantly related with the financial performances of the companies in Saudi Arabia.

2.14 Summary of Chapter

This Chapter comprises of two sections: first section deals with the Microfinance and second one deals with capital structure. This provides a theoretical grounding of the research and the review of literature is exhaustively detailed providing the base on which the research process is designed. The definitions of the constructs given over a period of time by various researchers and policy makers associated with development agencies across the globe are enumerated. It also gives an overview to the work done on the relevant area in several countries providing an academic base for the continued research in an appropriate direction. It gives emphasis to various approaches and delivery models of Microfinance. It also includes other relevant studies which display the results of past researchers attempting to associate the self-sufficiency and sustainability of Microfinance Institutions. It indicates the prominence of other works done in this area where determinants of social-financial performance such as Portfolio at Risk, Productivity, Age of MFIs, Number of clients, Earning on the Loan Portfolio, Level of Liquidity, Return on Assets etc. are found as a source of information for financial decision making and are equally important in measuring the levels of social performance and financial performance of MFIs. The second section also made an attempt to enlist major work in the research area related to capital structure and included an extensive analysis of the findings from those studies. The section intended to create a level or a framework proposing apparent relationship between capital structure and socio-financial performance of Microfinance Institution.

Chapter 3

Conceptual Framework of Indicators of Financial and Social Performance

CONCEPTUAL FRAMEWORK OF INDICATORS OF FINANCIAL-SOCIAL PERFORMANCE

3.1 Introduction

This chapter explains the conceptual framework of the study. The major financial performance and social performance variables that are considered in the study for measuring the socio-financial performance of MFIs in India are deeply explained as under.

This chapter is divided into two main sections 3.1 and 3.2. Section 3.1 lists and defines the variables which measures the financial performance whereas 3.2 lists and defines the variables which measure the social performance of MFIs.

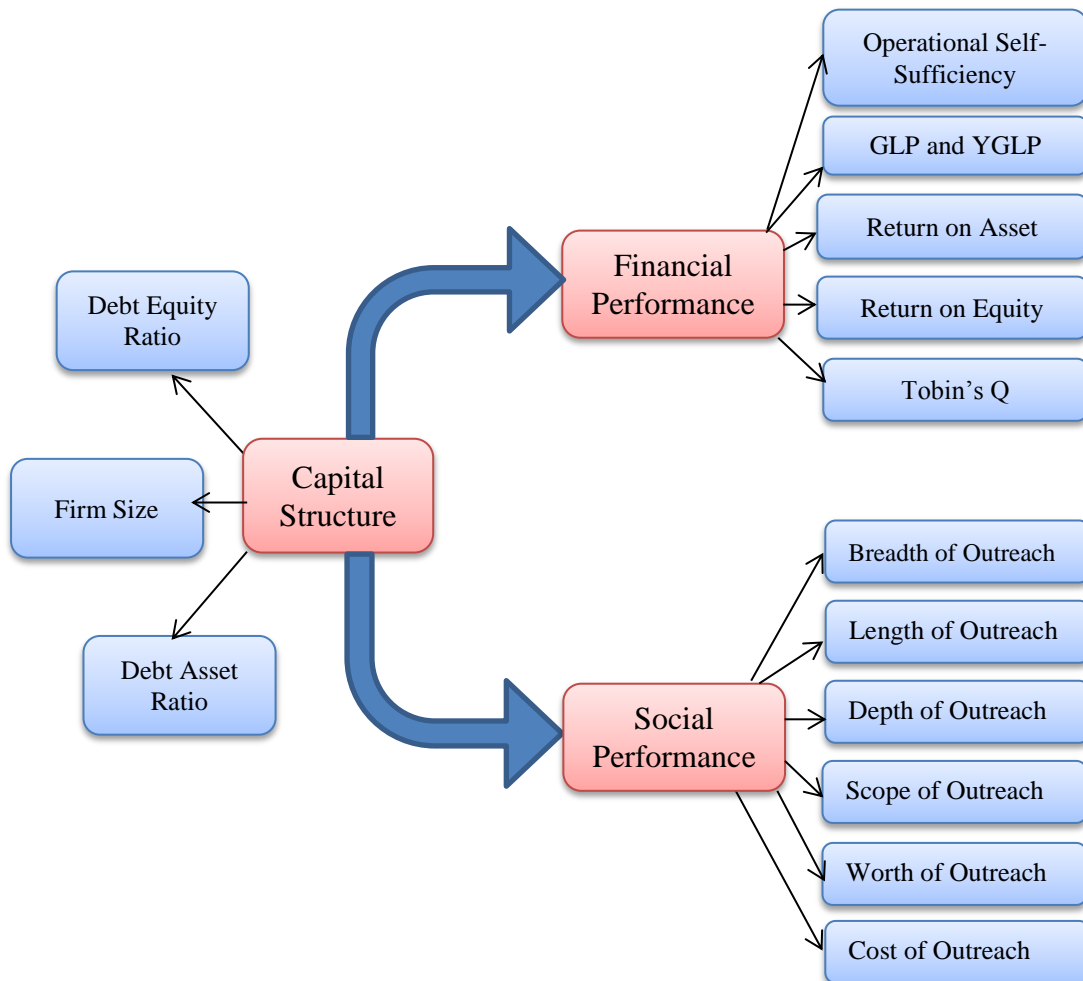


Figure 3.1: Research Framework

Source: Author’s Compilation

3.2 Variables Measuring Financial Performance of MFIs in India

With an elaborative description, penned down in the literature review, considering Microfinance to be the significant mechanism of social upliftment and hence time and again been measured on non-financial parameters. It is concluded in contemporary researches of the former year that for achieving a long-term sustainability, the MFIs must concentrate as their outreach as well as their performance. The financial performance measurement is deficient in a number of methodologies and options, even though understanding the importance of financial performance which has been supported by various literatures. In this study, the financial performance is measured by Return on Asset, Return on Equity, Debt Equity Ratio, Portfolio at Risk >30 days, Capital Asset Ratio, Operational Self-Sufficiency, Gross Loan Portfolio, Yield on Gross Loan Portfolio and Average Annual Growth rate.

3.2.1 Return on Assets (ROA)

Return on Assets is the most feasible indicator for measuring the financial performance of any firm. The basic idea of computing ROA is to find out the profitability relative to its total assets. In other words, it let us know what were the total earnings generalized from invested capital (assets). ROA also gives us the indication for the efficiency and effectiveness of the firm whether the reserves are created against earning on the usage of assets or not. The interpretation can be easily done by its result i.e. higher the ROA value, the better as the firm is earning more on a smaller amount of investment. It is also known as profitability ratio.

ROA is best practiced when comparing firm's previous performance or comparing performances of similar firms.

The outcome of the Return on Assets is presented as percentage

Formula used:

$$\frac{\text{Net Income}}{\text{Average Total Assets}}$$

Return on Assets (ROA) is computed by dividing net income by average total assets. Net Income or say net profit is the amount of total revenue that remains after accounting all expenses for production, administrative, operations, debt provision, amortization, taxes and depreciation. Net Income also includes income not directly

associated to primary operations such as income on investment or sale of equipment's or assets of the firm.

Average total assets are used for computing Return on Assets as total assets of the company may vary time to time due to sale and purchase of land, equipment's and vehicles, seasonal variations and stock changes. As a result, it is relatively more accurate to compute average total assets for the period rather than computing total assets for one period. Balance sheet of the firm gives us the clear view of total assets.

3.2.2 Return on Equity (ROE)

Return on Equity is another very important indicator for measuring the financial performance of a firm. It is also a profitability ratio which is viewed from investor's angle. The basic idea of computing ROE is to measure the capacity of a firm to create profits from its owners or shareholder's investments in a firm. In other words, ROE is the ratio that delivers the insight to investors into how effective and efficient management of the firm is in handling their money that shareholders have contributed. The interpretation can be easily done by its result i.e. higher the ROE value, the better a firm management is making profits and growing from its equity funds. When it comes to MFIs equity structure, it involves the blend or combination of different sources i.e. shareholder's capital, retained earnings, equity from donation, and several reserves. However, MFIs are not-for-profit organizations; the ROE indicator is most time and again used as a proxy variable for commercial viability.

ROE is best practiced when we are comparing firm to its opponents and all other participants in the market.

The outcome of the Return on Equity is presented as percentage:

Formula used:

$$\frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

Return on Equity (ROE) is computed by dividing net income (after taxes and excluding all grants or donations) by shareholder's equity. ROE is computed for general shareholders. We omit preferred dividends while ROEs computation as the profits out of it is not for general shareholders. Preferred dividends are then taken out of net income before computation. Whereas, average stockholder's equity is

commonly used i.e. average of beginning and ending equity is calculated. This helps in tracing a firm growth and capacity to continue an optimistic income trend.

3.2.3 Debt Equity Ratio (D/E)

The debt-to-equity ratio (D/E) is termed as the financial ratio which represents the share of shareholder's debt and their equity in order to fund the assets of the organization. In other words, it indicates how much a firm has employed in short term, long term and other fixed debts as a percentage of the total shareholder's equity deployed. It also indicates the risk and leverage borne by the firm. It is also known as leverage ratio as it reflects how firm borrows to leverage its equity to increase assets. D/E ratio is important from the perspective of investors and lenders. This ratio is very elastic in nature and should be scrutinized as frequently as possible by the firms that are highly leveraged. The interpretation can be easily done by its result i.e. higher the ratio; the greater shall be leverage and risk. The ratio usually is less than one.

It is challenging to compare Debt-Equity ratio across industries as the ideal amounts of debt vary from firm to firm.

The ratio can be calculated using the following:

Formula used:

$$\frac{\text{Total Debt (Long term+ Short Term+ fixed payments)}}{\text{Total Shareholder's Equity}}$$

Debt- Equity ratio is computed by dividing total debt (Long term+ Short Term+ fixed payments) by total shareholder's equity. The values needed for computing D/E ratio is easily available in firm's financial statements.

In the past it is been frequently observed that microfinance institutions have low debt/equity ratio, because as NGOs their capability to get borrowings from commercial financiers has been restricted. But as MFIs were transformed into regulated intermediaries somehow the ratio raised rapidly. In comparison to conventional banking the extreme leveraged MFIs still carry less debt than conventional banks as microloan portfolio are backed by less collateral and their risk profiles are still explicit.

3.2.4 Portfolio at Risk > 30 (PAR>30)

The ratio portfolio at risk is the fittest ratio to measure portfolio quality of any firm. The basic idea of taking this ratio to measure financial performance is that it represents the portion of the portfolio that is tainted by arrears and is at risk of being unpaid. As the loan repayment grows older there is lesser the probability of loan to be repaid. In simple words, it can be expressed as the percentage of total loan portfolio that is at risk of a firm for a given period. In general, any portfolio at risk 30 surpassing 10% should be alarmed as microloans are unsupported by collaterals unlike commercial credits. PAR omits the accrued interest and loans rescheduled or restructured. PAR value is used to represent the health of total loan portfolio.

Sometimes it is investigated that the ratio of portfolio at risk is certainly very high, but does not necessarily render into expected losses for the firm. There are other portfolio quality indicators like repayment rate which have much of subjective interpretations but we use portfolio at risk as it measures the consolidated risk not only the immediate threat.

Formula used:

$$\frac{\text{(Outstanding Balance on Arrears over 30 days + Total Gross Outstanding Refinanced)}}{\text{Total Outstanding Gross Portfolio}}$$

Portfolio at Risk is computed by dividing the outstanding balance of all loans with arrears over 30 days, plus all refinanced (restructured) loans, by the total outstanding gross portfolio for a certain period.

Before measuring PAR it very important to clearly state the number of days so as to measure loans affected by arrears of more than 30, 60, 90, 120 and 180 days. Usually PAR 90 an above are treated as bad loans. PAR 30 are the open loans whose repayment has not been done for 30 days or say the principal amount is overdue by 30 days. This equation is divided by total principal outstanding of all open loans. Keeping this into mind the firms can arrange adequate cash in circumstance of future loan defaults.

3.2.5 Capital Asset Ratio (CAR)

CAR is one of the other important ratio to find out financial performance of a firm. The capital to asset ratio evaluates whether the organization has ample capital in order to provide assistance to its assets or not. Capital brings up to the net worth of the firm

and assets take account of all the belongings of a firm. In other words, Capital Asset Ratio is the utilization of total capital in the creation of short-term and long-term assets which provides the information that whether the firm is in the situation to create and consolidate its assets. The interpretation can be easily done by its results i.e. the higher ratio indicates that the firm is in promising situation and can utilize its capital to create assets.

The outcome of the capital asset ratio is presented as percentage and computed as:

Formula used:

$$\frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}}$$

3.2.6 Operational Self Sufficiency (OSS)

OSS is an important indicator to measure the sustainability of the firm other than financial sustainability. It measures the lending operations of the firm. This ratio also indicates the effectiveness and efficiency of the operations in a firm. OSS gives us the clear idea to which magnitude a firm can manage its costs and credit activities. In other words, OSS represents the performance of the firm's operational sustainability by the means of managing revenues and all the cost like (direct, indirect, variable and semi-variable) incurred in the firm. The entire reserves of the firm will be exhausted if the firm is unable to maintain its operational sufficiency, hence they will not grow up for the future and consolidate their earnings for a period of time. By analyzing this ratio it is clear in the market that firm maintains its sufficiency or not.

Formula Used:

$$\frac{\text{Operating Income (Loan + Investments)}}{\text{Operating Cost + Loan Loss Provisions+ Financing Cost}}$$

If the firm doesn't match its operational self-sufficiency, in due course its loan fund capital i.e. equity will get down by losses unless additional funds are raised to overcome the operating deficits. The OSS represents, if the firm is able to maintain its business without any external subsidies then the OSS ratio is above 100%. The break-even on OSS is 100% however, if the ratio lies below 100% it indicates that firm is suffering from losses.

The financial cost and provisions to losses are added in the computation as these costs are relevant and general costs of the firm. Whereas, operating costs consolidates the administrative cost and human resource cost that are arising out of financial services provided. The operating income is the product of return on investment and interest charged on loan by the firm.

3.2.7 Gross Loan Portfolio (GLP)

Gross Loan Portfolio (GLP) is the proportion of all principal balances for clients loans, current, restructured and delinquent loans. It does not consider the loans that are written off from the balance sheet and the loans provided to the employees of the firm. GLP also omits the interest receivables from the loans disbursed but in some cases where the MFIs are regulated they have to include the receivables and accrued interest balances. MFIs are required to present the bifurcation of the sum of all principal payment outstanding and interest accrues. In other words, GLP is the computation of total principal sum to be paid on varied loans such as capital loans, current loans and shuffled loans outstanding for all the clients and customers.

There is excessive misconception in estimating GLP as it referred to as loans outstanding and loan portfolio whether they should be considered as net figure or gross figure. The interpretation can be easily done by its result i.e. as much as there will be increase in Gross Loan Portfolio substantially there will be an increase in outreach of the Microfinance Institutions.

3.2.8 Yield on Gross Portfolio

YGLP is a very significant indicator for measuring the financial performance of the firm. It is also popularly known as portfolio yield. Yield on Gross Loan Portfolio is the total earning or we can say revenue of the firm by the means of interest, commission and fee generated from its customers on Gross Loan Portfolio. In other words, it can be expressed as the total income of the firm from gross loan portfolio from its clients by the means of interest, fee and commission rendered by the firm during a period. Whereas, there are some exceptions as well, in computing YGLP those are as follows:

It does not include,

- Seized but unsold collaterals

- Post Dated Cheques (PDCs) in the form of non-cash revenues
- Revenues accrued but not compensated in cash

Formula Used:

$$\frac{\text{Interest} + \text{Commission} + \text{Fee earned on gross loan portfolio}}{\text{Gross Loan Portfolio}}$$

There are some factors that can influence the ratio like if there are frequent changes in loans terms and conditions. YGLP should be measures on the market prevailing rates. Keen observation should be done while annualizing (averaging) for determination of yield. The computation of yield should be viewed on the ratio of monthly or quarterly basis and point out any misinterpretation due to annualizing or averaging. Observing the yields for a short period of time may lead to misrepresentation of the yields and simple average should be avoided for computation by MFIs.

3.2.9 Average Annual Growth rate (AAGR)

AAGR is one of the contemporary indicators to measure the firm’s financial performance. Average growth rate is used as tool in several fields of study. This indicator is precise, simple and easy to understand. AAGR is very useful to determine the long term trends of several financial activities in the firm. AAGR basically measures the average growth in the value of investments, cash/fund flow, profits, portfolios, revenues and assets over a period of time to deliver better financial information to the investors of the firm. It doesn’t include any measure of overall investment risk involved, as computed by volatility of price in the firm. In other words, AAGR is average growth on an individual’s investment over a several time period.

It is computed on the fundamental of arithmetic mean of a growth rate series.

Formula Used:

$$AAGR = \frac{GRA + GRB + \dots + GRn}{N}$$

where:

GRA=Growth rate in period A

GRB=Growth rate in period B

GRn=Growth rate in period n

N=Number of periods

Simply, AAGR figures out the period based annual return growth rate on average while computing, it is essential that time period should be same i.e. if we are computing the average growth in months then each value should be in months and same if computing in weeks, quarters or years etc. No different time period can be computed in AAGR. It does not account for effects of compounding periods.

3.2.10 Growth Rate Assets (GRA)

Asset growth rate is the ratio that actually computes the overall financial performance of the assets in the firm. It can point out the assets that are growing well or are best performing assets; it leads the firm with the information which assets are to be taken care of in future or not growing well. GRA indicates the gross amount to be invested to achieve the target by the firm. The computation of growth rate assets is done in percentage it is computed for a period of twelve months.

The value of GRA can be determined by deducting the asset balance of the equivalent auditing period in the preceding year from the present period asset balance and dividing the outcome by preceding year balance.

GRA can also analyze the financial sustainability of the firm with the help of assessed annual growth of assets. With Semi-log model we can assess the annual growth rate of the selected microfinance institutions where log of financial measure is dependent variable and time in years is independent variable.

3.2.11 Growth Rate Borrowings (GRB)

The study analyses the trend of MFIs in long-run. Along with this the financial sustainability of the firm is also evaluated with the assessed annual growth rate of the financial performance for the chosen firm. With Semi-log model we can assess the annual growth rate of the selected microfinance institutions where log of financial measure is dependent variable and time in years is independent variable.

Table 3.1: Determinants of financial sustainability

Determinants of financial sustainability	
Wooler and Schriener (2001)	MFI Interest rates, administrative efficiency, loan officer productivity, and staff salaries
Bogan et al. (2007)	Capital assets of an MFI and its capital structure, age of the institution
Crombrughe et al. (2008)	Portfolio at Risk, 60 days past due, Average loan per borrower in 1000 INR, Age, Share of women of borrowers
Ayayi and Sene (2010)	High quality portfolio, adequate interest rate and efficiency management
Islam et al. (2010)	Interest rate, cost of funds, proportion of women borrowers
Ganka (2010)	MFI size, Capital structure, cost per borrower, product type, number of borrowers, level of portfolio at risk, difference in lending type, staff productivity, interest charged, yield on portfolio, and operating efficiency
Hartarska and Nadolnyak (2010)	Legal status of the MFIs, number of active borrowers, ratio of saving of total assets, ratio of loans outstanding, total assets, age, source of capital
Iezza (2010)	Capital structure and other macroeconomics variables such as inflation and lending rate
Kindle (2012)	Depth of Outreach, Depth of outreach, cost per borrower and dependency ratio.
Rai and Rai (2012)	Number of active borrowers, yield, ratio of operating expense to loan portfolio, portfolio at risk greater than 30 days, women borrowers, debt to equity ratio
Nadiya et al. (2012)	Financial margin to asset ratio, cost per borrower, number of women borrower, average loan size, gross loan portfolio, age, location, regulatory status, equity to asset ratio
Tehulu (2013)	Portfolio at Risk, Management Inefficiency, Size, Intensity of Loans
Bhanot and Bapat (2014)	Return on Capital Assets, Gross loan Portfolio, Staff Productivity, Portfolio Quality
Dutta and Das (2016)	Number of active clients, Gross Loan Portfolio, Average Loan Size, Number of Employees, Age, Assets of the organization.
Prakash and Malhotra (2016)	Operational expenses to Loan Portfolio, Return on Equity, Operational self-sufficiency, Profit Margin Portfolio at Risk, Return on Assets, Age.

Source: Author's Compilation

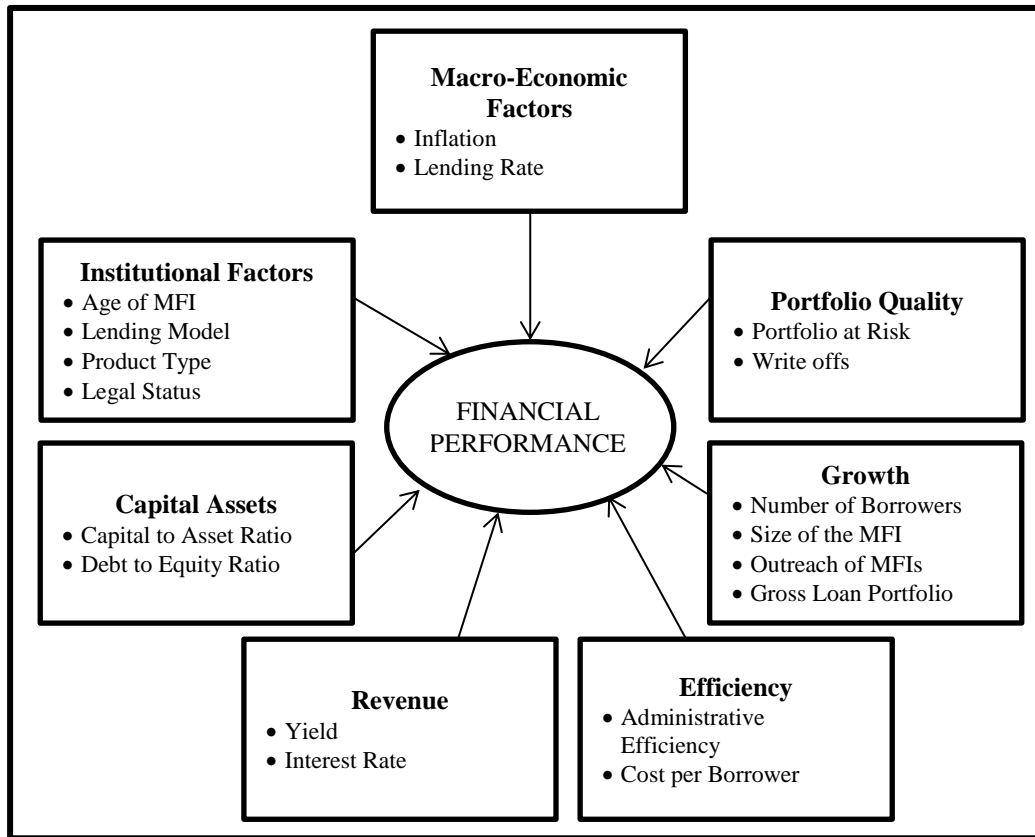


Figure 3.2: Factors Affecting Financial Performance of MFIs

Source: Author's Compilation

3.3 Variables Measuring Social Performance of Microfinance Institutions in India

As discussed in the literature review microfinance is viewed as an important instrument for social change and hence time and again been measured on non-financial parameters. Social Performance of MFIs can be studied as translation of social mission statement of the MFIs into practicality in line with the appropriate actions and corrective measures to bring desired outcomes considering social values, social responsibility, social conditions of the clients and community.

The most important social objective of microfinance institutions is to eradicate poverty and to provide financial services to the excluded people of the society. Focusing on the social mission of MFIs, they have to build financial capacity of the households, to promote economic development and reunion, extent there outreach to the remote areas, to promote women empowerment and to promote economic activities and agriculture in rural regions and lot more. Due to multidimensional task

it takes immense utilization of time and resources for evaluating social performance of MFIs.

Table 3.2: Social Performance Indicators Developed by Different Organizations

Types of SPI	Name of the SPIs
Social Performance Indicators/ Tools developed by different research organizations	<ol style="list-style-type: none"> 1. ACCION SOCIAL Tool 2. AIM/SEEP Empowerment Tool 3. AIMS/SEEP Assessing the Impact of Microenterprise Services 4. CERISE Social Performance Indicators Tool 5. CGAP Social Performance Indicators of Financial Institutions 6. FINCA’s Client Assessment Tool (FACT) 7. IFAD SPM Tools 8. MIX & SPTF Indicators 9. Microsave’s Market Research for Microfinance Toolkit 10. Oikocredit’s Tools to Monitor Social Performance Indicators 11. Social Performance Indicators Initiative (SPI) 12. Social Performance Account (SPA) Tool 13. The CGAP-FORD Social Indicators Initiative 14. Universal Standard for Social Performance Management by the Social Performance Task Force
SPI developed by Rating Agencies for Social Rating	<ol style="list-style-type: none"> 1. Microfinanza Social Rating 2. M-CRIL Social Rating Tool 3. PLANET’s Social Performance Rating-2007
Social Performance Audit Tools	<ol style="list-style-type: none"> 1. FMO Environmental and Social Risk Audit (ESRA) 2. MFC Quality Audit Tool for Managing Social Performance
Poverty Tools	<ol style="list-style-type: none"> 1. Progress out of Poverty Index (PPI) of CGAP-Grameen Ford 2. USAID Poverty Assessment Tools (PAT)

Source: Author’s Compilation

There are Eight Social Performance Assessment tools that are standardized by CGAP that are as follows:

- CERISE Social Performance Indicators Initiative
- SPA Tool
- ACCION SOCIAL Tool
- CGAP–Grameen–Ford Progress out of Poverty Index (PPI)
- FINCA’s Client Assessment Tool
- M-CRIL’s Social Rating
- Planet Rating
- Microfinanza Social Rating

The maintained six facets of SPA tool indicators are selected on the following standards and criteria that were considered and identified are mentioned below. The eight selection criteria are as follows:

- Feasibility
- Scalability
- Verifiability
- Standardizability
- Inclusivity
- Familiarity
- Availability
- Intuitive Appeal

1. **Feasibility:** This criterion implies that the indicator should be fairly simple to obtain and account without placing a major stress on the financial, physical and human resources of the MFIs. The indicator is considered feasible when it doesn't necessitate the MFI to gather additional facts and figures from clients.
2. **Scalability:** This criterion implies that the indicator is likely to be implemented by vast numbers and diversified MFIs. It is the chief selection criterion which acts as a function for all other seven criteria's.
3. **Verifiability:** This criterion implies that external sources can rationally authenticate the indicator. External sources authentication is considered vital for creation of life long legality and trustworthiness of self-assessment of social performance facts.
4. **Standardizability:** This criterion implies that the indicator is fairly standardized through nations, areas, microfinance institutions and socio-economic environments.
5. **Inclusivity:** This criterion implies that the indicator should be applicable on all the microfinance institutions. In other words, the indicator should be applicable on every institution but it is not necessary that the indicator applies equally on each type of institution. For instance, outreach of clients is applied

on all MFIs irrespective of its nature. Whereas MFIs may opt for target functioning areas, there is no fundamental restriction on them to do so.

- 6. Familiarity:** This criterion implies that the indicator should be familiar to the handlers of the data to its highest magnitude. The indicator should satisfy the recognized performance indicators and their usage stated by Microfinance Information Exchange. Whereas indicators stated by the MIX cannot be used, the chosen indicators were considered to be likely acquainted by the institutions or have a powerful intuitive appeal.
- 7. Availability:** This criterion implies that the indicator should be one that already exist in the data base of MFIs i.e. MIS or could easily compute the figures, facts and statistics from the MIS.
- 8. Intuitive Appeal:** This criterion implies that the indicator should be likely simple intuitive bond to the fundamental aspect it is measuring.

3.3.1 Social Performance Assessment Tool - Woller (2006)

The tool was developed by Woller (2006). One of the premier independent institution United States Agency for International Development (USAID) funded Woller to develop SPA tool. The tool assumes that no fresh information or new layouts are essential for social performance assessment, the information collected on finance and clients on regular basis could be used as proxies for social performance. SPA is a simple tool that comprises of scorecard distributed under six dimensions of outreach with pre- determined set of indicators. These indicators are figured out to serve existing info of MFIs. The indicators are based on clients and community like Breadth, Length, Depth, Scope, Worth and Cost of outreach.

Table 3.3: SPA Tool Indicators

S. No.	SPA Indicators	Description
1.	Breadth of Outreach	It measures: <ul style="list-style-type: none"> • No. of Borrowers • Non-enterprise loan clients percentage • Voluntary Savers percentage
2.	Length of Outreach	It measures: <ul style="list-style-type: none"> • Portfolio Quality • Financial Performance Profitability
3.	Depth of Outreach	It measures: <ul style="list-style-type: none"> • Average Loan Size • Percentage of Female Clients

		<ul style="list-style-type: none"> Percentage of Rural Clients
4.	Scope of Outreach	<p>It measures:</p> <ul style="list-style-type: none"> No. of Financial Services No. of Distinct enterprise loan products Types of Savings Offered Clients with three or more services and products.
5.	Worth of outreach	<p>It measures:</p> <ul style="list-style-type: none"> Loan Loss Rate Portfolio Growth Client Retention Rate
6.	Cost of outreach	<p>It measures :</p> <ul style="list-style-type: none"> Financial Cost of Services No. of Days in Processing Loans No. of Staff Visits

Source: Author's Compilation

3.3.2 Description of Scorecard Indicators

The brief discussion on each indicator of outreach has been done in this section of framework. The disagreement can be on some indicators as they belong to one or more dimension of outreach i.e. dimensions of the indicator may overlap but are best tailored in the building of the scorecard.

3.3.2.1 Breadth of Outreach

- Number of borrowers**

The figures of total number of borrowers in the Microfinance Institution is determined by this this indicator. The institutions provide voluntary savings in two ways; first taking deposits directly, secondly depositing at local financial institution.

- Clients with non-financial service as a percentage of borrowers**

Non-Financial services like Health knowledge, Gender equality, Gender empowerment, Training, Business operation related developments, Education etc. are the non-financial services delivered by microfinance institutions, these services are delivered directly or by formal service providers. The magnitude to which the outreach of microfinance institution to fulfill the demand in the market for non-financial services is determined under this indicator.

- **Client with non-enterprise loans as a percentage of borrowers**

The loans like Medical loans, Education loans, Emergency loans etc. are the non-enterprise loans. This indicator determines the efficiency of the microfinance institution to fulfill the demand in the market for non-enterprise loans.

- **Clients with other financial services as a percentage of borrowers**

Financial services like Money transfer, Leasing, Housing loans, Remittances etc. are the other financial services delivered by microfinance institutions, these services are delivered directly or by formal service providers. The magnitude to which the outreach of microfinance institution to fulfill the demand in the market for differentiated financial services is determined under this indicator, credit-line insurance is excluded in this indicator.

- **Voluntary savers as percentage of borrowers**

The magnitude to which the microfinance institution surpasses to fulfill the demand in the market for formal savings is determined by this indicator.

3.3.2.2 Length of Outreach

- **Return on Assets**

Return on Assets is one of the very important indicators for measuring the financial performance of any microfinance institution. This indicator determines the efficiency and effectiveness of the microfinance institution whether the reserves are created against earning on the usage of assets. ROA finds out the profitability relative to its total assets.

- **Profit Margin**

The indicator that determines the profitability most significantly is profit margin. It describes the magnitude to which microfinance institution operating revenues surpasses operating expenses for a time period. At point of time, operational self-sufficiency and financial self-sufficiency are most effective indicators to measure primary financial performance of microfinance institution. OSS determines the magnitude to which operating income bear out operating expenses of the MFI whereas, FSS determines the magnitude to

which operating income bear out both operation expenses and financial expenses (actual & imputed) tailored for subsidies received and inflation.

In the Contemporary trends of the microfinance industry the financial self-sufficiency is no longer used by Microfinance Information Exchange and has been replaced by Profit margin indicator for assessing financial performance.

- **Return on Equity**

Return on Equity is another very important indicator for measuring the financial performance of microfinance institution. ROE is to measure the capacity of microfinance institution to create profits from its owners or shareholder's investments in a MFI. In other words, ROE is the ratio that delivers the insight to investors into how effective and efficient management of the microfinance institution is in handling their money that shareholders have contributed.

- **Portfolio at Risk > 30 days**

It is defined as the risk to loans portfolio subject to loans overdue by 30 days is determined by this indicator. PAR>30 is the most significant indicator presumed for portfolio quality and is reflected as proxy for financial feasibility. Operating Expense relative to average loan portfolio: The effectiveness of operations with which microfinance institution harvests its loan portfolio can be determined by this indicator. A proxy financial feasibility can be assumed if operating expense ratio is low.

3.3.2.3 Depth of Outreach

- **Average loan size as a percentage of gross national income per capita for new loan clients**

Average loan size (ALS) is the utmost extensively used proxy for depth of outreach in microfinance industry. In divergent countries the discrete income level accounts for ALS adjusted by GNI per capita. ALS also suffers from some insufficiencies as a depth of outreach indicator. ALS degrades the performance of microfinance institutions those who hold their borrowers and convert them into gradually larger loans. The continuous commitment to serve poor clients by microfinance institutions increases the ALS/GNI ratio over a period of time.

Adopting ALS/GNI per capita is a basic modification to the typical ratio that does not degrade the microfinance institution for holding and mounting its loan customers for the new customers. If the microfinance institution is shifting itself from poor borrowers, this evident replication can be seen in upward trend in its loan portfolio among new customers who have not yet opened to opt for more and bigger loans.

- **Percentage of enterprise loan clients selected with direct poverty targeting tools**

The tools like housing indices, estimation of household income and expenditure, participatory wealth ranking and poverty scorecard are tools for targeting direct poor clients. This is a precise tool to determine the borrower's poverty status. Some experiences conclude that those microfinance institutions were very effective who employed direct targeting tool to reach poor borrowers than otherwise. The magnitude to which the microfinance institutions practice tool for direct poverty targeting to reach poor clients is determined by this indicator.

- **Percentage of female clients**

The magnitude to which the microfinance institution has reached out to female borrowers is determined by this indicator. Poverty is excessively concerned among females.

- **Percentage of rural clients**

The magnitude to which the microfinance institution has extended outreach to rural borrowers is determined by this indicator. Poverty is excessively concerned among rural regions.

3.3.2.4 Scope of Outreach

- **Percentage of clients with three or more products and services**

The magnitude to which customers go through a variety of products and services provided by microfinance institution is determined by this indicator. Entire financial and non-financial products and services are accounted in this indicator.

- **Number of distinct other loan products**

Total number of non-enterprise loan products provided by the microfinance institution is determined by this indicator.

- **Number of other financial services**

The aggregate of other financial services like insurance, money transfer and leasing etc. delivered by microfinance institutions directly or by formal service providers is determined by this indicator. It does not include savings and loans.

- **Type of savings offered**

The variety of products related to savings, the microfinance institution provides, to fulfill the demand of market for formal savings is determined by this indicator. Instead of mandatory savings with controlled access instructions, the voluntary savings with liberal access instructions is desired.

- **Number of distinct enterprise loan products**

The horizons of enterprise loan products provided by microfinance institution is determined by this indicator. A heterogeneous product is fabricated for a particular motive and to be promoted to a peculiar segment of a market. It excludes any products that already exist or is promoted unchanged or is somewhat a modified form for a distinct usage or to a differential user group.

3.3.2.5 Worth of Outreach

- **Share of portfolio growth attributable to existing clients over the most recently completed fiscal year**

This indicator determines the magnitude to which the microfinance institutions increase in portfolio through holding of prevailing customers. The best way to increase loan portfolio is holding prevailing borrowers, who are assumed to take huge loans over a period of time. This result is not typical of massive value formation and also promises for future financial feasibility.

- **Client retention rate**

The indicator implies as a proxy for customer value enterprise loans provided by the microfinance institution. Generally, if the client is giving repeat

business it is an acknowledged indicator of client loyalty. The value of loans can likely be argued if customer opts for follow-on loans and vice-versa.

- **Share of two-year enterprise loan clients still with the MFI**

Client loyalty can be determined by this indicator. It reports for the duration of time a customer is associated with the microfinance institution by presenting the proportion of customers who are regularly taking loans from the microfinance institution after two years. It determines the retention ratio of customers who were in first loan cycle and are still customers of microfinance institution after two years at a given time period.

- **Loan loss rate**

The indicator implies as a proxy for customer value access to loans provided by the microfinance institution. To the magnitude that customers value enterprise loans, by repaying prevailing loans they will strive to safeguard access to imminent loans.

- **Type of market research conducted**

This indicator determines the reasonability that a microfinance institutions marketable product fulfills customer needs and requirements. Research of the market can either be formal, informal, ad hoc or systematic. Systematic research of the market implies that the research is the part of normal operations and is conducted on routine basis periodically. Whereas, formal research of the market is the combination or may be not of formal interviews, surveys, questionnaire, schedule, focused group discussion and analysis of MIS data done as per requirement of microfinance institution.

3.3.2.6 Cost of Outreach

- **Nominal yield in average gross loan portfolio relative to the lending rate in the country**

The mean size of effective interest rate comparative to offer rate of bank in the country is determined by this indicator. Microfinance Information Exchange publicizes the lending rate of bank. It is defined as the bank rate that fulfills the short tenure and medium tenure requirements of finance of the private

sector. The soundness of the client and purpose of financing differentiates the bank rate accordingly.

- **Real yield in average gross loan portfolio**

This indicator refers to a substitute for average effective interest rate including fees levied on loans. For creating association of effective yields extra typical, the adjustment in effective interest rate by means of real portfolio yield for the inflation rate in the related country is done.

- **Percentage of loan clients providing non-traditional collateral**

The magnitude to which the microfinance institution passes policy to shrink the opportunity cost levied on requirements of collateral is determined by this indicator. Several progressive types of collateral comprises of third party guarantee, movable assets with substantial minimum market value, group/social guarantee or loans settlement history for customers demanding follow-on loans.

- **Weighted average number of days to approve and disburse enterprise loans after completion of loan application**

The indicator is a substitute for the customers opportunity cost of time. The weighted average of enterprise loans in addition to preliminary and follow-on loans is determined by this indicator.

- **Percentage of enterprise loan clients whom loan officer visit for regular financial transactions**

The magnitude to which the microfinance institutions cuts the cost of transactions by dropping the cost of time and travel to conduct financial transactions of customers. Cost of travelling is a significant factor of overall borrowing cost of clients, especially in the regions where transportation infra is underdeveloped.

3.4 Outreach to the Community

- **Percentage of employees that have left the MFI during two most recent completed fiscal years**

The indicator substitutes for how microfinance institutions serves/ deals with its employees. Probably, the employees those are well served i.e. justified

salary payment, favorable work conditions, and offered career opportunities leave the job with low employee turnover ratio and vice-versa.

- **Percentage of operating revenues back into the community during most recently completed fiscal year**

The magnitude to which the microfinance institution assists social activities and projects of the community is determined by this indicator.

- **Female-Male employee ratio among professional level staff**

The indicator determined the level of gender inequality in the microfinance institution if any. The indicator determines the professional level involvement of female employees, who were conventionally unaccepted. It omits the lower-level jobs that were conventionally managed by female staff i.e. receptionists, telephone operators, secretaries etc. and security positions, drivers/chauffeur etc. that were conventionally executed by males.

- **Percentage of employees receiving at least two days of training during the most recently completed fiscal year**

The professional growth prospects provided to the employees at the microfinance institution is determined by this indicator. Training is most significant and effective technique for professional growth. Probably if the microfinance institutions provide training as a moral responsibility to the employees they will in return furnish efficiency in work, positive working conditions, developing career, achieving personal and MFI goals, etc.

- **Whether the MFI has a formal code of conduct governing actions towards employees and clients**

The indicator is the substitute for determining the quantum of professional and ethical code of conduct at microfinance institution. Issues deal with sexual harassment, transparency, linguistics, dress, disclosures, customer's rights, employee's rights, traditions and cultural beliefs are formal code of conduct. Implementation of formal code of conduct clearly signifies the admirable deeds of microfinance institution towards high standards and excellence in professional and ethical behavior.

- **Whether the MFI has a formal CSR policy**

Whether the microfinance institution has dignified its obligation in contributing the practice of corporate social responsibility principles is determined by this indicator. Microfinance institutions assurance to corporate social responsibility can be evidently viewed by its encouraged CSR policy and growing likelihood in products, services and practices within the organization.

- **Whether the MFI offers credit-life insurance to its commercial borrowers**

The families of the borrowers are protected against the undetermined burden of debt as in the event of borrower's death by credit-life insurance. The indicator determines the protection to the borrower's family from repayment of loan in case of client's demise.

- **Whether the MFI provides clients formal access to management**

The microfinance institution has placed formal policies and practices that provide the customers a say in microfinance institutions operations is determined by this indicator. Formal access to management is relatively important for the customers in any grievances, dissatisfaction, concerns, suggestions, etc. The indicator simply indicates that customer has free access to meet with the management of the microfinance institution without any hurdles, bureaucratic barriers or other management restrictions.

- **Whether the MFI discloses its effective interest rate**

The indicator determines the transparency in the microfinance institution in relation to its interest rate disclosure and disclosure of its borrowing cost so as to take appropriate decisions by clients.

- **Whether the MFI provides health insurance for full-time employees**

The loyalty of microfinance institution headed for the well-being and welfare of its employees is determined by this indicator. It determines the health insurance only for full-time employees of the microfinance institution. In some microfinance institutions this service is provided to part-time employees as well.

3.5 Conclusion

The theoretical framework of this study is sketched in the backdrop of conceptual principles of the theories relating to capital structure which confers that more debt financing leads to reduced organizational problems and that equity and debt financing is considered. Henceforth, after going through the relative researches with reference to the performance of microfinance institution's capital structure, the researcher articulated the theoretical framework that condenses the research with respect to the dependent and independent variables.

With the reviewing of the theoretical framework, it is noted that the Capital Structure of a Microfinance Institution can impact the overall performance of the MFI by influencing the outreach, growth, breadth, depth, quality of the portfolio, productivity and many more. Not only had the above stated determining factors impacted the performance of the Microfinance Institutions but also the regulations of the government policies and procedures established and regulated by the Government of India, Reserve Bank of India and NABARD, etc. for the functioning of the microfinance institutions also impact the performance. The profitability, quality of portfolio and the growth parameters of the microfinance institutions may be impacted either directly or indirectly by the characteristics of the member's viz. gender, cultural beliefs and age.

A microfinance institution's performance not just includes functioning effectively but also functioning sustainably in both social and financial aspects. The concentration of the financial institutions swings towards the fact that how the financial and social performance of the microfinance institution complements each other and also can be improved, from a zero-sum tradeoff pertaining between sustainability and poverty. The social performance needs to be transparent with the rising diversity and number of borrowers, financial institutions and government with many techniques of motivating towards microfinance. The level of transparency may not essentially effect the institutions into having the same societal objectives, but at least will make sure that all the determining factors are held responsible for the purpose they are advertised. Therefore, with the objective of enhancing the social performance, an effective assessment of the same will be done, which will thereby affect the enhanced social performance by the microfinance institution. Such assessment will hence be able to reach out to maximum poor groups and provide them with better financial

services, also help the clients by solving their problems, thus enhancing the financial conditions of the microfinance institution and effectively contribute towards the society in which they function.

3.6 Summary of Chapter

This Chapter details conceptual framework of socio-financial performance of microfinance institutions. This chapter is bifurcated in two sets and outlines the variables taken in to study the social and financial performance of MFIs. The first set thoroughly discusses the variables measuring financial performance of microfinance institutions such as Return on Assets, Return on Equity, D/E Ratio, Portfolio at risk etc. whereas second discusses the variables measuring social performance of microfinance institutions such as Breadth of outreach, Depth of outreach, Length of Outreach etc. These variables help us to fulfill the objectives of the research i.e. to measure the levels of social and financial performance of MFIs and to analyze the association between social and financial performance of MFIs.

Chapter 4

Research Methodology

RESEARCH METHODOLOGY

4.1 Introduction

Earlier in the preceding chapters, we have described and comprehend the fundamentals of capital structure, financial performance and social performance. The main focus of this chapter is to explain the methods and mechanisms implemented towards the achievement of the objectives of the research. It demarcates the overall methodology implemented with an objective to examine the data concerning the relationship existing between capital structure and performance.

In the eyes of Clifford Woody, the term research encompasses redefining the problems of the research, articulating the research hypothesis or solutions to the problem, accumulating, consolidating and assessing the data, evaluating the inferences and arriving at the conclusions, and finally testing the derived conclusions with the formulated hypothesis to check the appropriateness of it. Thus, research is the actual and real contribution of knowledge to the pertaining pool of data for its growth. It contains various approaches inter-related in nature and with features of overlapping practices and procedures. Meanwhile, with many facets of research methodology being in existence, the actual proceeding towards an action is selected from an available range of alternatives. By evaluating the objectives effectively and comprehending the requirement, the available alternatives are compared and thus the most appropriate method is selected.

The direction of course of action of the research is defined with the Research Methodology. The research becomes credible if an appropriate mechanism is followed while deriving the research methodology. In applied research, the role of research methodology is furthermore verified, and it builds a strong establishment for the upcoming sections also. An appropriate research methodology will facilitate an effective and relevant future research study.

4.2 Statement of the Research Problem

The complete explanation of the research problem initiates the entire process of research. Across the globe, every country has always had to discuss the most

contemporary issue pertaining in the society which is poverty in the eyes of the Government and the Academia as well. After independence, various initiatives viz., subsidies and grants, health insurance, health benefits, etc. were implemented with an objective to improve the living standards of the poor and to facilitate the eradication of poverty, but somehow the ultimate results of such struggles were found to be unsatisfactory. Microfinance, after the success of Grameen Bank in Bangladesh, gained a noteworthy stand in the past decades. In the country, Microfinance became a fresh drive with a motive of sustaining the inclusive growth in the long run. Microfinance is a tool that offers financial services and also saving facilities and small amounts of credits to the ones excluded. The people residing in the downtrodden parts of the society, especially women, have been benefitted maximum across the globe with the effective functioning of Microfinance Institutions whereby offering financial services to them along with providing supreme access to it. But social and financial performance of Microfinance Institutions (MFIs) is interrogated over and over again. The Microfinance Institutions must be financially feasible and sustainable in the longer time period; nevertheless, the financial implications of the sustainability for long run are not taken into consideration. Various research studies have been done on measuring the financial sustainability, impact of MFIs on women etc. however, only small number of researches has concentrated on the overall financial performance of the Microfinance Institutions and the rarest research has been done on socio-financial performance of MFIs. Social performance and Financial performance of the Microfinance Institutions is the chief element of Microfinance sustainability.

Microfinance, as a practice grew in many parts of the world, especially with respect to being sustainable financially for long-term and functionally sustainable. Such Microfinance Institutions pressurized many countries as well as India to stay sustainable for a longer term of action and this sustainability can be achieved only when the MFIs performs well in its social and financial activities. In India, when the social performance and financial performance of the Microfinance Institutions were researched, it was found to be scanty. In the long run, to be functionally sustainable, Microfinance Institutions faces lot of problems to accumulate funds, but the contributors and the sponsors help the Microfinance Institutions to attain the societal objective. Therefore, with the occurrence of some omissions recognized in the review

of literature socio-financial performance of the Microfinance Institutions registered in India needs to be measured and so an index also needs to be developed. The index should take under all the chief indicators which are needed to measure the social-financial performance of MFIs in India.

The Microfinance Institutions at present are able to carry out their economic activities with ease with the extra fund resourced from the capital like loans from commercial banks, bank debts and bonds from the financial markets. Such financial services are accompanied with high rates of interest and terms and conditions resulting into high costs. At such times the Microfinance Institutions get diverted from their core objective of benefitting the poor because of such high costs and therefore, they increase the rates of interest.

Henceforth, this research focuses on evaluating the impact of capital structure on the financial and social performance of such Microfinance Institutions. Furthermore the research focuses on evaluating the Microfinance Institutions which provide debt financing and if they bring large number of borrowers who are poor under their outreach. The Microfinance Institutions have an uncertainty of which style of capital structure (depending on debt financing or equity financing) impacts the growth, outreach, profitability, depth and the efficiency of their performance.

The capital structure of any Microfinance Institution is a key significant factor in enhancing their performance and their standard and the varying impacts from different countries due to differences in the regulatory, economic and social conditions. Moreover the capital structure has varying effects on the firm's value, which means the firm's value differ in various countries due to difference in the regulations. Regardless of the significance of the relation between the Microfinance Institutions structure of financing and the capital structure, the current pragmatic indications are actually not persuasive on the fact that in what ways the variables of capital structure places an impact on the registered Microfinance Institution's socio-financial performance.

The above mentioned issues act as the backdrop, and thus the study has researched over the effects of capital structure on the socio-financial performance of the Microfinance Institutions.

4.3 Rationale of the Study

The socio-financial performance and capital structure are meticulously correlated and mutually dependent on each other. Thereby, they form a significant relationship with each other and the support of both the factors facilitates the acceleration of the financial ecosystem.

The findings of the research benefits the researchers and the theorists, the shareholders or investors, the investment consultants and the managers of the MFIs with appropriate information on the socio-financial performance and capital structure which will facilitate them to focus completely on the models implemented by the MFIs and their value to them as well.

The empirical researchers and theorists are benefitted with more information about the impacts of the elements of capital structure and socio-financial performance. It also contributes to them as a base to conduct any such future research on the same topic specifically with other varying variables and evaluating their economic credibility and thereafter excluding any unauthentic relationships.

With respect to the managers, if there is existence of positive impacts of capital structure, sources of funds and socio-financial performance or the stakeholder's value, then they may feel motivated to devote more efforts and time in managing and sourcing such funds. They might also find some interest in examining the fundamental bases of their relationship in order to create a base of allocation of resources too.

4.4 Scope of the Study

The study stretches out to analyze and evaluate the Social and Financial Performance of Microfinance Institutions in India during 2015-2018 and therefore, constitutes the scope of the study. The MFIs are selected from the Microfinance Information Exchange Market bearing in mind that the selected MFIs are ranked high and portfolio size in 2015-18. The targeted Microfinance Institutions are studied thoroughly with respect to their capital structure and their mechanisms of managing their funds smoothly, planning and controlling of the finances in the Institution, utilizing the available resources to their fullest and thereafter fulfilling the needs on a

whole. The key objectives of the study are to study the impacts of the capital structure on the performances of various Microfinance Institutions. Precisely, this study focuses light on the influences capital structure places on the effectiveness, efficiency and the profitability of the MFIs. Approximately, 268 Microfinance Institutions are currently working in India. Hence, this study considers only 50 Microfinance Institutions on account of restricted resources and time.

4.5 Research Gap

- Till the earlier decades, the focus on financial performance of MFIs has been overlooked and the performance of Microfinance has been measured in terms of social impact only.
- Microfinance Institutions are not shifting from grants, subsidies and donors in spite of being in market for over a decade, therefore the true cost of capital and cost of lending remains ambiguous who is adding a liability on their financial reserves and financial efficiency.
- The share in which the variables affects the financial performance is found missing in the literature and hence an effort has been made in the literature to cover the same.
- There is a reduced level of financial performance across the MFIs of developed and developing nations and needs to be catered to.
- The levels of capital structure and socio-financial performance vary across the Microfinance Institutions underlining the need to establish a tangible relationship and association between the related variables.
- Lastly, there is a relationship between capital structure, social performance and financial performance. However the nature, extent and direction of relationships are unknown.

It is distinctive in a way as it makes an effort to establish a path of relationships existing between the socio-financial performance and the capital structure of the Microfinance Institutions. Furthermore, it abstracts a conceptual framework of socio-financial performance of MFIs in India.

4.6 Objectives of the Study

The study entitled “**Capital Structure and Socio-Financial Performance: A Study of Select Indian Microfinance Institutions**” has following objectives:

Objective 1: To measure the levels of financial performance of Microfinance Institutions.

Objective 2: To measure the levels of social performance of Microfinance Institutions.

Objective 3: To analyse the association between financial and social performance of Microfinance Institutions with the Capital Structure of the same.

Objective 4: To establish a framework for understanding of financial and social performance of Microfinance Institutions.

4.7 Research Hypotheses

With an objective of providing a specific and definite direction towards the research exploration, by keeping the understanding of the subject as the base, with the help of the existing literature and objectives of the research, this research articulated the hypothesis. By reviewing the literature review, it is clear the capital structure impacts the social and financial performance of the Microfinance Institutions. An assumption can be made with this as a base that the capital structure impacts the socio-financial performance of a Microfinance Institution and hence a relationship between a Microfinance Institution’s socio-financial performance and capital structure is anticipated.

Based on the above objectives following research hypothesis have been framed:-

Financial performance:

H₀₁- Capital Structure has no significant relationship with the Return on Assets

H₀₂- Capital Structure has no significant relationship with the Return on Equity

H₀₃- Capital Structure has no significant relationship with the Tobin Q

Social performance:

H₀₄- Capital Structure has no significant relationship with the Breadth of outreach

H₀₅- Capital Structure has no significant relationship with the Depth of outreach

H₀₆- Capital Structure has no significant relationship with the Length of outreach

H₀₇- Capital Structure has no significant relationship with the Scope of outreach

H₀₈ - Capital Structure has no significant relationship with the Cost of outreach

H₀₉ - Capital Structure has no significant relationship with the Worth of outreach

4.8 Variables Considered in the Study

The objectives are achieved with the help of several variables carefully chosen on the source of literature review and discussions with the experts.

For objective 1:

Variables under study:

1. Return on Equity
2. Return on Assets
3. Debt Equity Ratio
4. Operational Self-Sufficiency
5. Gross Loan Portfolio
6. Yield on Gross Loan Portfolio
7. Average Growth rate

For objective 2:

Variables under study:

1. Breadth of outreach = Log of active borrowers
2. Depth of outreach = Average loan size per borrowers
3. Length of outreach = Portfolio at risk < 30 days
4. Scope of outreach = Number of distinct enterprise loan products
5. Cost of outreach = Nominal yield on average gross portfolio
6. Worth of outreach = Loan Loss rate

For objective 3:

Variables under study:

Model 1:

Return on Asset (ROA)

$$ROA_i = \alpha_0 + \alpha_1 Debt\ Equity_i + \alpha_2 Debt\ Asset_i + \alpha_3 Firm\ Size_i + e_i(1) \quad \alpha_1, \alpha_2, \alpha_3 > 0$$

Model 2:

Return on Equity (ROE)

$$ROE_i = \beta_0 + \beta_1 Debt\ Equity_i + \beta_2 Debt\ Asset_i + \beta_3 Firm\ Size_i + e_i(1) \quad \beta_1, \beta_2, \beta_3 > 0$$

Model 3:

Tobin Q

$$Tobin\ Q_i = Y_0 + Y_1 Debt\ Equity_i + Y_2 Debt\ Asset_i + Y_3 Firm\ Size_i + e_i(1) \quad Y_1, Y_2, Y_3 > 0$$

Model 4:

Breadth of Outreach

$$Breadth_i = \delta_0 + \delta_1 Debt\ Equity_i + \delta_2 Debt\ Asset_i + \delta_3 Firm\ Size_i + e_i(1) \quad \delta_1, \delta_2, \delta_3 > 0$$

Model 5:

Depth of Outreach

$$Depth_i = \theta_0 + \theta_1 Debt\ Equity_i + \theta_2 Debt\ Asset_i + \theta_3 Firm\ Size_i + e_i(1) \quad \theta_1, \theta_2, \theta_3 > 0$$

Model 6:

Length of Outreach

$$Length_i = l_0 + l_1 Debt\ Equity_i + l_2 Debt\ Asset_i + l_3 Firm\ Size_i + e_i(1) \quad l_1, l_2, l_3 > 0$$

Model 7:

Scope of Outreach

$$Scope_i = \kappa_0 + \kappa_1 Debt\ Equity_i + \kappa_2 Debt\ Asset_i + \kappa_3 Firm\ Size_i + e_i(1) \quad \kappa_1, \kappa_2, \kappa_3 > 0$$

Model 8:

Cost of Outreach

$$Cost_i = \lambda_0 + \lambda_1 Debt\ Equity_i + \lambda_2 Debt\ Asset_i + \lambda_3 Firm\ Size_i + e_i(1) \quad \lambda_1, \lambda_2, \lambda_3 > 0$$

Model 9:

Worth of Outreach

$$Worth_i = \mu_0 + \mu_1 Debt\ Equity_i + \mu_2 Debt\ Asset_i + \mu_3 Firm\ Size_i + e_i(1) \quad \mu_1, \mu_2, \mu_3 > 0$$

Where:

ROA = Dependent Variable

ROE = Dependent Variable

Tobin Q = Dependent Variable

Breadth of Outreach = Dependent Variable

Depth of Outreach = Dependent Variable

Length of Outreach = Dependent Variable

Scope of Outreach = Dependent Variable

Cost of Outreach = Dependent Variable

Worth of Outreach = Dependent Variable

Debt Equity Ratio = Independent Variable

Debt Asset Ratio = Independent Variable

Firm Size = Independent Variable

For objective 4:

All the variables discussed above such as:

ROA = Dependent Variable

ROE = Dependent Variable

Tobin Q = Dependent Variable

OSS = Dependent Variable

FSS = Dependent Variable

Debt Equity Ratio = Independent Variable

Debt Asset Ratio = Independent Variable

Firm Size = Independent Variable

Breadth of outreach = Dependent Variable

Depth of outreach = Dependent Variable

Length of outreach = Dependent Variable

Scope of outreach = Dependent Variable

Cost of outreach = Dependent Variable

Worth of outreach = Dependent Variable

4.9 Research Design

After outlining the statement of the problem, another significant issue in the picture ahead is to prepare the research design for conducting the other stages of the research smoothly (Kothari, 2004). It assists in taking decisions on the issues likewhere, when, what, how much, and by what means, with regard to a research study (Kothari, 2004). Cooper and Schindler (2003) describe a research design as a planned outline to conduct a research study with a concentrated control over the influencing factors which might intervene with the rationality of the findings. A research design may be elaborated further as a detailed framework and outline concerning the processes of an investigation to be held in the study.

The research design is a combination of exploratory and conclusive research design where an effort is made to primarily design a theoretical framework of socio-financial performance and capital structure and then the same framework is used to measure the levels of capital structure and socio-financial performance of the Microfinance Institutions in India.

4.10 Sampling Design

Sampling design refers to a concrete strategy designing pertaining to either sketch or select a sample from a population. The sampling frame helps to select an object from it by enabling a sampling plan. Sampling plan relates to the strategies taken up by a researcher in order to select a sample and decide the sampling techniques to be incorporated. The research design chosen is grounded on the primary data collected with structured schedule and the secondary data collected on various facets of the social performance and financial performance of Indian MFIs listed on Microfinance Information Exchange, USA.

4.10.1 Population

Denscombe (2008) stated that a population is a group derived from all the probable citations of a distinctive interest and that a blend of the observations showcasing only a certain part of the respective population is referred to as a sample. The target population should be selected in an appropriate way as it is a significant step because it demarcates the folks on whom the outcomes of the research study may be

concerned to. The target population may be a definite group of households or individuals for whom data may be gathered and collected in order to create an organized blueprint of the research process. All Indian Microfinance Institutions indexes in the list of Microfinance Information Exchange Market (MIX) designs the universe for which the research study is considered. During the formation of the theoretical framework of the study, interaction was done with numerous Microfinance Institutions representatives and the individuals having direct relation with MFIs.

4.10.2 Sampling unit

Sampling unit refers to an element or object concerning which data is gathered. In this research study, all Microfinance Institutions indexes in the list of Microfinance Information Exchange Market (MIX) are taken into consideration as a sampling unit.

4.10.3 Sample size

In this research study, 50 Microfinance Institutions of India are selected as the sample size, the ones mentioned and indexed in the list of Microfinance Information Exchange Market (MIX). The sampling frame of the study comprises of all Microfinance Institutions indexed in the list of Microfinance Information Exchange Market (MIX). While the collection of data was being done, it was taken care that the data collected must be representative in nature. The adequate sample size is decided from the inferences drawn from previous and similar research studies.

4.10.4 Sampling technique

The sampling techniques may be classified as Probability Sampling Techniques and Non-Probability Techniques. In the initial phase of the study, Microfinance Institutions of India are chosen with non-probability judgmental sampling technique. The basis of choosing the Microfinance Institutions is the scope and quality of their information. The Microfinance Institutions selected are of two categories i.e. NGO category while other is NBFC category. The frequency of reporting data to MIX by Microfinance Institutions, their age and their portfolio size are the basis on which the quality of MFIs have been viewed and judged.

4.10.5 Sampling Frame

Zikmund (2010) defined sampling frame as the list of objects with which the sample will be designed. A sampling frame of a study may be further described as the definition of the population in the research, the targeted population and the sample unit in the research. In the present study, the total population comprises of all the MFIs, the MFIs operating in India is considered as the target population and the Indian MFIs which are registered on the database of MIX for the previous three years. The research study is conducted on 50 MFIs which fulfils the following stated conditions:

- (i) Registered in the Microfinance Information Exchange, USA.
- (ii) The data for social and financial performance indicators is available for the time period of 2015-16 to 2017-2018.

4.11 Data Collection Specifications

It is essentially very important to comprehend the understated terminologies before stating and identifying the model. The terminologies are:

Cross-sectional data: The term Cross-sectional data is referred to as the collection of such data on various units at a specific given time.

Time series data: The term time series data is referred to as the data collection of one unit is done for over many time periods.

Panel data: The term panel data is referred to as the repetitive cross-sections for over a period of time, which thereon explains that along with space, i.e., individuals, firms, etc., the dimensions of time will also be required to consider. Consequently, the panel data is used to explore the time series data as well as the cross-sectional data instantaneously. The blend of cross-sectional data along with time series data will facilitate to improve the quantity and quality of the data in such a way that using either one of the data would not be sufficient, which means using either time series data or cross-sectional data. Panel data is very beneficial and most valuable data in this study as it permits monitoring for heterogeneous variables with impacts on individual firms, distinctive of cross-sectional data.

4.12 Pilot Study

Initially, a pilot study was also carried on with an objective to figure out numerous extents of research along with giving significant importance to socio-financial performance and capital structure. A rough blueprint of the questionnaire was framed with the help of various data gathered from the capital structure of MFIs and the existing social and financial performance of MFIs. The groundwork of the research study started to take shape and the formulation of the study began too after interacting with various Self Help Groups, NGOs and Microfinance officials. The research began to sketch out its meaning when the research gap was studied. The pilot study was helpful enough to sketch out the areas to be taken up as the sampling frame and moreover, it helped to screen out the necessary variables to be incorporated into the study.

4.13 Data Collection

The data can be collected from two sources first is primary sources and second is secondary sources. Data for this study is also collected from several sources as mentioned below.

4.13.1 Primary Data

The primary data was collected from respondents i.e. representatives of the MFIs by conducting face to face interviews using structured schedule as a data collection instrument. The instrument was developed after comprehensive discussions with various participants such as experts, bank officials and the targeted respondents.

4.13.2 Secondary Data

The secondary sources of data with reference to performance indicators and capital structure dimensions were taken from the database of MIX (www.mixmarket.org). Thereafter, the Microfinance Institutions were selected of which the time series data of the related variables of the social and financial performance were collected for conducting the study.

This research study collected its data and related information from the secondary sources. The essential data of the study concerning the variables of capital structure and financial statement were taken up from the annual statement of accounts of the

Microfinance Institutions from their respective websites, some from the database of Prowess published and printed by MIX (Microfinance Information Exchange) and from various other sources such as newspapers articles, journals, reports and books delivered by NABARD, Sa-Dhan, Micro finance Status in India Report, USDAI etc. The MFI managers were well informed and were also sent a letter of introduction mentioning the objectives and need of the study. While conducting the study repetitive telephone calls were made to the concerned respondents with an objective of explaining the objectives of the study and also for helping with the financial records and statements.

4.14 Data Diagnostic Tool

Various dimensions of the data distribution in case of predicted responses, their variable scores and the nature of relationship across variables were taken into consideration. It includes various parameters or levels of tests such as the tests of correlation, normality, auto correlation and multicollinearity. The test of auto correlation and multicollinearity is done in regression analysis in the next chapter. Breaching of any one of these assumptions would obviously mean that there would be certain in appropriations while using the various tests.

4.14.1 The Normality Test

This test was initialized to test whether response variable was distributed as per normality distribution of probabilities. The symmetrical nature of the curve and the shape of the bell of the distribution give an indication and validate the point whether the normality is realized. It is carried out using the SPSS which is statistical package for the social sciences.

The following table shows the result of normality test of Shapiro-Wilk Test. This test is applied since the data set is less than 2000. It is a numerical mean to test the normality mean.

When the significance value is more than 0.05, the data is assumed to be normal and hence the result. If the data would have been below 0.05, the data would have had a significant deviation from a normal distribution.

Table 4.1: Test of Normality-ROA

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.122	49	.200*	.965	49	.428
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Table 4.2: Test of Normality-ROE

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROE	.263	49	.124	.600	49	.247
a. Lilliefors Significance Correction						

Table 4.3: Test of Normality-TOBIN's Q

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TOBIN's Q	.220	49	.327	.894	49	.631
a. Lilliefors Significance Correction						

Table 4.4: Test of Normality-Breadth

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Breadth	.890	49	.636	.616	49	.220
a. Lilliefors Significance Correction						

Table 4.5: Test of Normality-Depth

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Breadth	.950	49	.421	.760	49	.288
a. Lilliefors Significance Correction						

Table 4.6: Test of Normality-Length

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Length	.351	49	.615	.651	49	.242
a. Lilliefors Significance Correction						

Table 4.7: Test of Normality-Scope

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Scope	.879	49	.305	.476	49	.594
a. Lilliefors Significance Correction						

Table 4.8: Test of Normality-Cost

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cost	.115	49	.220	.541	49	.598
a. Lilliefors Significance Correction						

Table 4.9: Test of Normality-Worth

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Worth	.227	49	.120	.980	49	.398
a. Lilliefors Significance Correction						

The test results from the table no. 4.1 to 4.9 show that the response variable had a normal distribution and was perfect for the tests such as regression to be applied. The residuals were normally distributed across the predicted dependent variables.

4.15 Data Analysis and Methods

The literal meaning of data relates to the collection of information from various diversified sources. Such raw information thereon needs to be classified and categorized with an objective of converting it to be of some relevant use in the study. The filtered data then undergoes processes of compiling, editing and coding in order to chalk out the relevancy for the consequent interpretations before comprehending their basic meaning and their repercussions. A number of statistical techniques are mechanized in order to test the hypothesis and thereafter to draw out the findings and suggestions and then arriving to certain conclusions concerning the relationship, specifically regression is used to assess the impact of independent variables on dependent variables. The diverse variables concerning the Capital Structure and Socio-Financial Performance are selected from different sources of data collection specified above, of the selected and respective Microfinance Institutions in this research study. Various Univariate and Multivariate data analysis techniques such as Mean and Standard Deviation, Correlation, Regression and Factor Analysis have been employed.

4.16 Software Used

The data analysis in this research study is facilitated with the software's including SPSS 25.0 and MS Office 2016.

4.17 Time Frame of Study

The study relates to the information gathered by the respondents commencing from the year 2015-2018.

4.18 Summary of Chapter

This chapter gives an overview of the research methodology applied in this research by the researcher. The chapter delineates the research problem, research objectives, scope of the research, the research methodology, the design of the research, the necessary hypothesis and data sources used in the study.

The research design is a combination of conclusive and exploratory research design and the methodology is a mixture of qualitative and quantitative research techniques. It further gives a description of the population under study to which the results of research can be effectively applied and the sampling technique which could give a sample that can be the best representative of the sample. Further, a snapshot of the possibility of the data analysis technique is also given which can be applied for testing the given research hypotheses which is derived from the research objectives from the crux of overall research.

Chapter 5

Data Analysis and Interpretation

DATA ANALYSIS AND INTERPRETATION

5.1 Introduction:

A lot of prior research shows that Microfinance is an essential tool of social change and can be monitored on non-financial parameters. Recent studies show that MFIs have to increasingly work upon each and every aspect affecting financial performance of the same. All performance aspects have to be compared on a long-term basis to keep the yardstick a consistent one. Research also suggests that there are many indicators depicting financial performance but still indicators depicting social performance are not many and their research is still not developed. Yet, the social indicators add to the existing research and only contribute to the existing study where by the financial performance is still being discussed.

In last few years, the area of research for financial performance of the MFIs has seen a lot of interest and a number of methodologies have come up trying to measure up the level of financial performance and we find that still there is no such one indicator which can fully show the level of consistency in financial outputs of MFIs.

In this section, the objectives defining financial and social performance of the Microfinance firms are explained.

Objective 1: To measure the levels of Financial Performance of Microfinance Institutions.

5.2 Financial Performance of MFIs in India**Descriptive Statistics**

This section explains the major indicators of financial performance which also indicate the level of financial success and consistency of the firms with which they are able to maintain such statistics. Initially, we define the variables indicating the financial performance followed by listing of such statistics depicting the financial performance of such Microfinance Institutions. These indicators depict long-term and short-term growth over a period of time and each of these have a unique utility.

Indicators underlining Financial Performance of MFIs are:

- Return on Equity
- Return on Assets
- Debt Equity Ratio
- Operational Self-Sufficiency
- Gross Loan Portfolio
- Yield on Gross Loan Portfolio
- Average Growth rate

5.2.1 Return on Equity (ROE)

ROE is an important measure underlining performance on the financial frontier for the firm. It depicts the rate of return on the invested equity. The average return for the selected Microfinance firms is shown in the table 5.1. The averages along with other descriptive statistics such as Mean, Standard Deviation and Range are calculated.

Table 5.1: Descriptive Statistics - Return on Equity

Return on Equity	
N	50
Minimum	-65.28%
Maximum	25.89%
Mean	9.36%
Std. Error	2.86%
Std. Deviation	15.68%
Variance	245.763

The results from the table 5.1 show that most firms on an average had a positive ROE, while some of the firms also had a negative ROE but the average inclined on the positive note. Across the given MFIs, Bhartiya Micro (25.89%) is seen to have a higher ROE followed by the SV Creditline (21.79%). Also, Spandan (-65.28%) is seen to have the lowest ROE followed by the MFI Sonata (0.74%).

However, some of the new firms did not exhibit sound ROE figures indicating unhealthy picture of the MFIs. It shows that returns provided to the shareholders are not good and adequate enough and hence the objective of wealth maximisation is not satisfied.

ROE is solely dependent on the efficiency and effectiveness of operations and is indicative of operations and expense ratios for its major operations. Higher the level

of operations, better are the ROE figures for most of the Microfinance Institutions. The moderate or lower level of operations accounts for ROE at lower levels.

Out of a sample Size of 50 firms, it is found that 12 per cent of the sample Size had a negative ROE while the rest 88 per cent had a positive ROE. Out of the 88 per cent, half of the MFIs had a return on equity greater than the benchmark of 15 per cent, while the rest scaled between 0 to 15 per cent (see table 5.2)

Table 5.2: Breakdown of the MFIs - ROE

Range	Number of Firms	Percentage
Less than 0 per cent	06	12.00%
0 to 15 per cent	22	44.00%
15 and above	22	44.00%
Total	50	100.00%

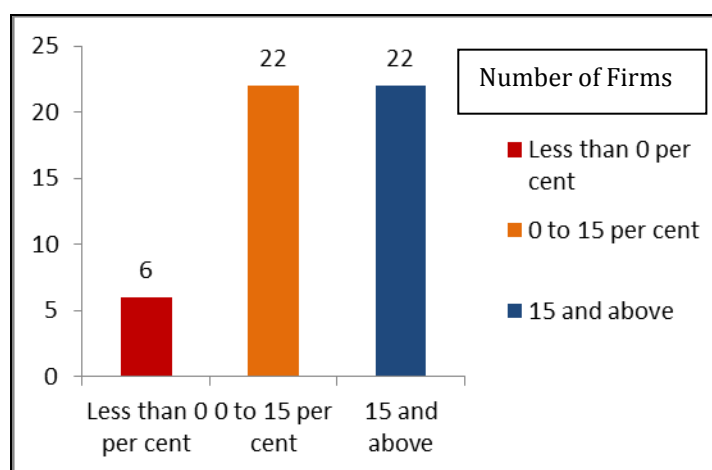


Figure 5.1: Graphical representation of Breakdown of the MFIs – ROE

It is seen that MFIs are growing and their evolution is historical since they are able to perform better over last few years giving consistently over 10 per cent year after year. Several reasons can be attributed to the above phenomenon. One of this could be ever rising scope of its operations and relaxations in regulatory norms from the end of Indian financial system and Indian governments' ever increasing emphasis on shifting the focus to Microfinance Institutions.

In the present research, we analyse the ROE of all the individual firms to find whether there is a pattern to the ROE over a period of time. It was also found that the MFIs did have a long-term pattern in their ROE figures indicating a consistent regularity in their performance levels and their returns to the shareholders. There can be a significant reason for the above performance and that could be greater growth and absorption of high operating expenses creating way for the distributable earnings.

Table 5.3: Trend in MFIs - ROE

Growth	Number of firms	Percentage
Negative	16	32.00%
Positive	34	68.00%
Total	50	100.00%

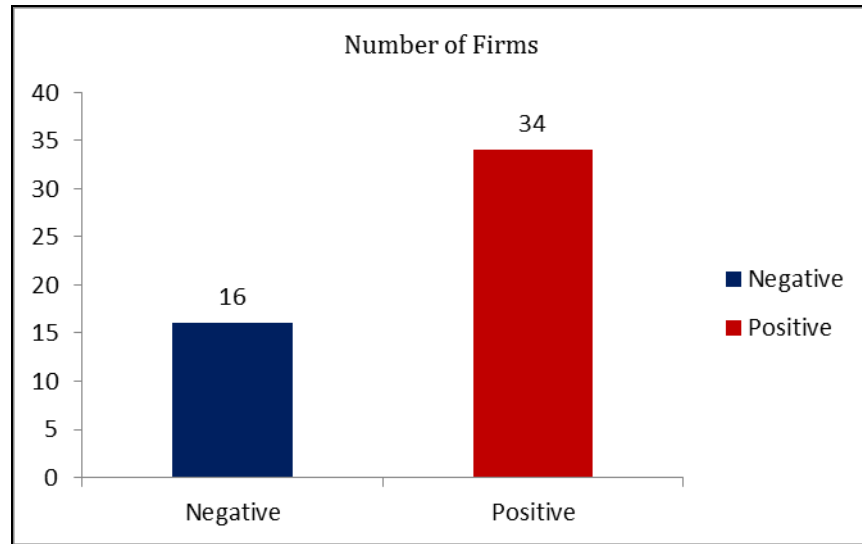


Figure 5.2: Trend in ROE

The above table 5.3 indicates that around one third of the sample size shows a negative trend in their ROE figures. The measure such as ROE indicates the ability to give returns to its shareholders via retained earnings and also shows the ability to provide for additional equity. For a non-profit MFI, the same measure gives an indication of its prowess to build upon equity reserves so that it can leverage its finance for growing its portfolio. Most MFIs are however able to give long-term results for their financial sustenance and performance.

5.2.2 Return on Assets (ROA)

ROA is another significant dimension emphasizing financial performance of the Microfinance Institutions. In fact, it is one of the first measures to be calculated while finding out the net return on the investments made in long and short-term assets. Higher the ratio, better are the financial fortunes of the firm. Further, higher financial ROE also indicates the financial viability of the firm. When compared among two Microfinance Institutions, the one with a higher ROA will always gain a greater weightage as compared to the one with a lower weightage. The averages for the ROA

measure can be seen in the following table 5.4 where descriptive statistics such as Mean, Standard Deviation, Range, and others are shown.

Table 5.4: Descriptive Statistics - Return on Assets

Return on Assets	
N	50
Minimum	0.11%
Maximum	4.70%
Mean	2.22%
Std. Error	0.22%
Std. Deviation	1.20%
Variance	1.435

The data from the above table 5.4 depicts a crystal clear picture where most of the firms have a sound ROA where the firms are aggregating positive returns which are similar to the first discussed indicator - ROE although on a lower level. Some of the firms also have amassed losses, thereby indicating and coming up with negative returns and profit figures pushing the overall mean figures to a low. It is also found that Sanghamithra across the given sample size secures the highest ROE followed by RGVN. Also, Fusion Scores the least ROA among the given list of Microfinance firms.

Table 5.5: Breakdown of the MFIs - ROA

Range	Number of Firms	Percentage
Less than 0 per cent	17	34.00%
0 to 10 per cent	33	66.00%
Total	50	100.00%

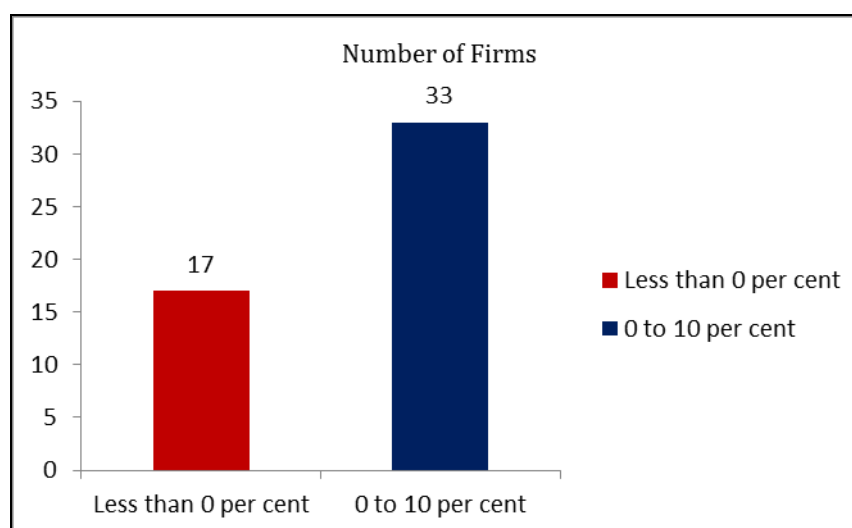


Figure 5.3: Graphical Representation of Breakdown of the MFIs - ROA

Out of a sample size of 50 firms, it is found in table 5.5 that 34 per cent of the sample size had a negative ROA i.e. less than 0% while the rest 66 per cent had a positive ROA. The entire 66 per cent had a return on assets lesser than the benchmark of 10 per cent.

Taking into account the average figures, it is noticeable that overall figures of ROA are not on a benchmark stating that a lot needs to be done in order to ensure that the losses for the budding firms are kept to a minimum. The promoters and the creditors who have invested in placing and putting up the Microfinance venture do not have an ample breathing space to do what is necessary in order to drive up the profit figure to the originality level.

ROA just as ROE is totally dependent upon the level of operations and its scalability. Both rely on scale of operations and inversely upon the expenses whether operating or non-operating. The results as evident are endorsed by the leading and the last firm on the list.

Table 5.6: Trend in MFIs - ROA

Growth	Number of firms	Percentage
Negative	25	50.00%
Positive	25	50.00%
Total	50	100.00%

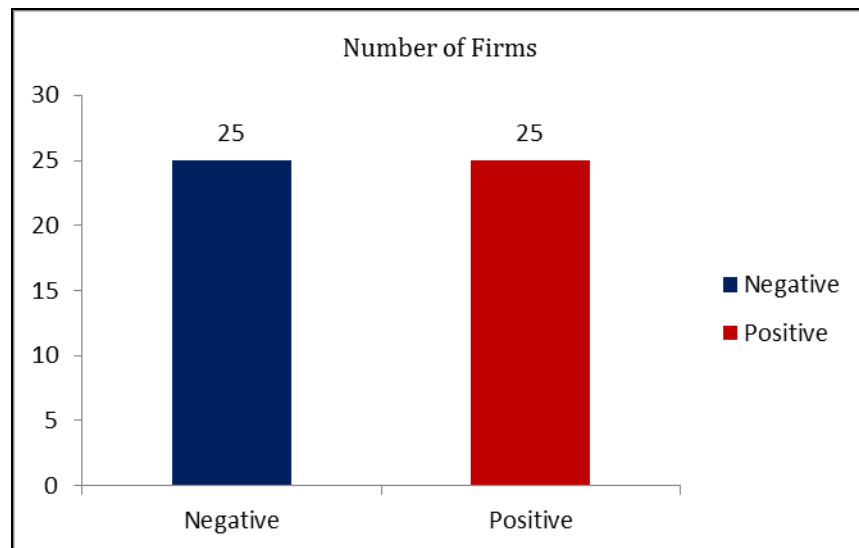


Figure 5.4: Trend in ROA

In the table 5.6 above, the results indicate that out of 50 selected MFIs 25 are found to have negative ROA and 25 are found to have a positive long term ROA. Out of the 25

having positive trend, 2 firms have a trend more than 2 per cent. As ROA includes the return on the loan portfolio of the MFI as well as other revenue generated from investments and other operating activities. This again, like the Return on Equity explains that the MFIs are not able to earn enough return on overall assets and move towards the long term sustainability of MFIs in India.

Most firms have declining ROA and it indicates that the return on assets to its owners and other lenders is not available. This can be attributed to lack of a significant growth and hence there is less proportion of equity and also ever rising presence of other Microfinance Institutions.

The measure of ROA also includes the net return obtained on the portfolio of its loan as well the return generated from other investments made and other operating events. Hence, the long-term sustainability is impaired since the firm is never in a position to make return sufficient enough to cover expenses which are ever rising on its loan management activities.

5.2.3 Debt Equity Ratio (D/E RATIO)

Debt Equity ratio is a major indicator underlining financial soundness of the Microfinance Institutions. A firm while starting new or beginning a fresh project needs money and that come in various forms. One of the forms is equity and the other is by using outside creditors. While creditors have their interest to be repaid, they also provide interest tax shield adding to the net profits.

However, a higher ratio also indicates a risky proposition for the firm. Usually the ratio rallies around unity or less than unity. A ratio greater than equity means that the firm has employed more proportion of debt as compared to equity. Also, greater ratios make the shareholders demand a lot more return expectation.

When compared and contrasted among two Microfinance Institutions, the firm with a lower to unity ratio shall be more attractive as compared to another firm. The debt-equity average is shown in the given table 5.7 highlighting important figures such as Mean, Range and Standard Deviation etc.

Table 5.7: Descriptive Statistics - Debt to Equity Ratio

Debt to Equity Ratio	
N	50
Minimum	1.26%
Maximum	8.05%
Mean	4.56%
Std. Error	0.43%
Std. Deviation	0.90%
Variance	0.81

The above table 5.7 indicates that a number of the firms are a borderline case defaulting on the marginal lines. More than half of the companies have a Debt Equity ratio in and around more than one.

Also, a major portion of the Microfinance firms have higher ratio indicating high interest and principal payments as a burden with a high gearing. It also indicates that these firms have a higher onus on themselves to come up with better profit figures to cover their interest expenses.

It is also found that Agora in the given representation has lowest Debt Equity ratio followed by Disha Microfinance while Cashpor has the highest debt equity ratio followed by Annapurna.

Debt Equity Ratio is the most simple and traditional measure underlining capital adequacy providing for the overall picture of the leverage of the company. Also, it shows the protection which the creditors have when the firm decides to go external. Conventionally, MFIs have marginal debt to equity ratios as NGOs have a much narrowed finance sense when they take loans from commercial loan providers and hence they resort to other loan providers creating a different mix with higher lending charges.

The Life cycle theory is a substantive proof of the fact that most sourcing of financial structure is paved and directed by the stages of the development of Microfinance Institutions. Further, the leverage of any micro financial firm is influenced by a mix of factors such as the size of the loan, the age of the firm, the profile of the promoter, their business model, their recognition and also the legal form of the business.

In the given research, the long-term pattern of the solvency ratio is considered and analysed. It is again observed that only few of the Microfinance firms have a consistent trend with respect to the solvency ratio like debt equity ratio. In fact they

have a negative trend indicating that the interest and principal payments are rising over last few years.

Table 5.8: Breakdown of the MFIs – D/E Ratio

Range	Number of Firms	Percentage
Zero	Nil	0.00%
Between 0 to 1	07	14.00%
Between 1 and 3	20	40.00%
Greater than 3	23	46.00%
Total	50	100.00%

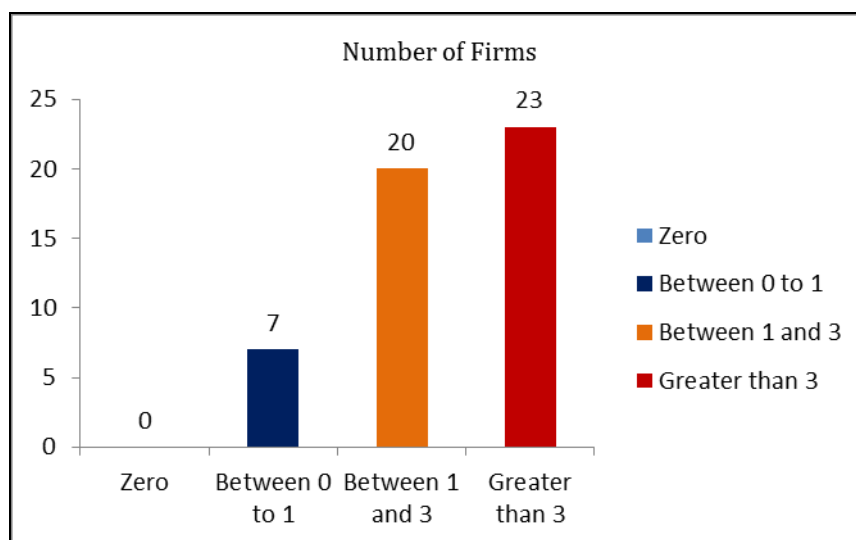


Figure 5.5: Graphical Representation of Breakdown of the MFIs – D/E Ratio

Table 5.9: Trend in MFIs – D/E Ratio

Growth	Number of firms	Percentage
Negative	38	76.00%
Positive	12	24.00%
Total	50	100.00%

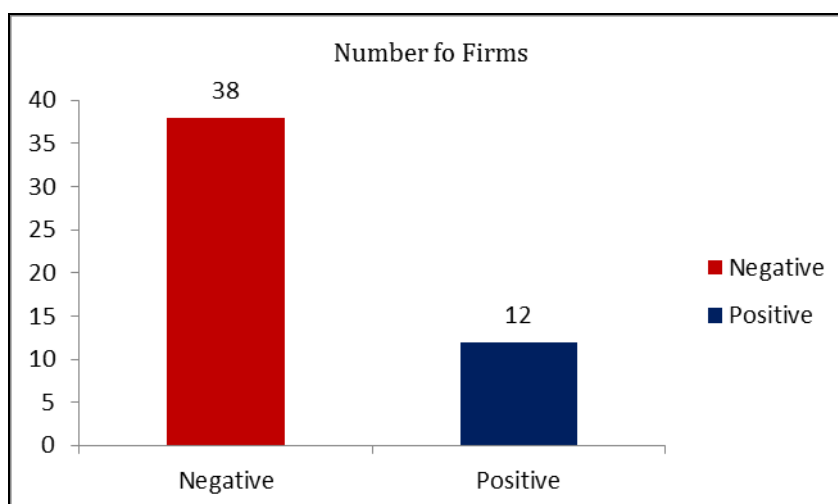


Figure 5.6: Trend in D/E Ratio

The analysis in above table 5.9 indicates that among the selected firms, most of the firms almost greater than three fourth of the firms have a negative growth rate while the rest have shown a steady increase in their solvency ratio. The above indicates that there are lesser firms taking Microfinance deposits and hence sustaining them has been an issue over last few years.

5.2.4 Operational Self-Sufficiency (OSS)

Operational self-sufficiency is one of the major parameters indicating the efficiency of the Microfinance operations. It measures the effectiveness with which it sustains itself and covers its operational expenses. Also, it is able to create provisions and covers its financial and operational costs.

The most pivotal indicator is the OSS as it defines a basic measurement level for sustainability providing a major cover for revenues and its operations and allied expenses. It gives a major thrust to the expenses and core businesses. It gives an indication of a MFI with reference to whether it is in a position to cover its expenses without any subsidies. In the following table 5.10, the data with reference to the average figure such as Mean, Standard Deviation and Range etc.

Table 5.10: Descriptive Statistics - Operating Self-Sufficiency

Operating Self Sufficiency	
N	50
Minimum	8.98%
Maximum	14.09%
Mean	11.17%
Std. Error	1.96%
Std. Deviation	10.71%
Variance	114.671

The level of sustainability should be greater than ten percent and is a healthy figure underlining the viability of the firms. Some of the firms do not have a reasonable sustainability level which is less than ten per cent and hence are not operationally sustainable. Among the sample size of 50 firms, there is a direct relationship between OSS and firms profit positions as is evident.

The results indicate that there is a direct link between Return on Assets and OSS. From the above table 5.10, we find that the most firms have an average OSS. The reason which can be explicitly marked is that they are dependent on the expenses and

allied operating expenses ratio. Lower expense ratio would also imply higher OSS and Return on Assets.

Table 5.11: Breakdown of the MFIs - OSS

Range	Number of Firms	Percentage
Greater than 10 per cent	36	72.00%
Less than 10 per cent	14	28.00%
Total	50	100.00%

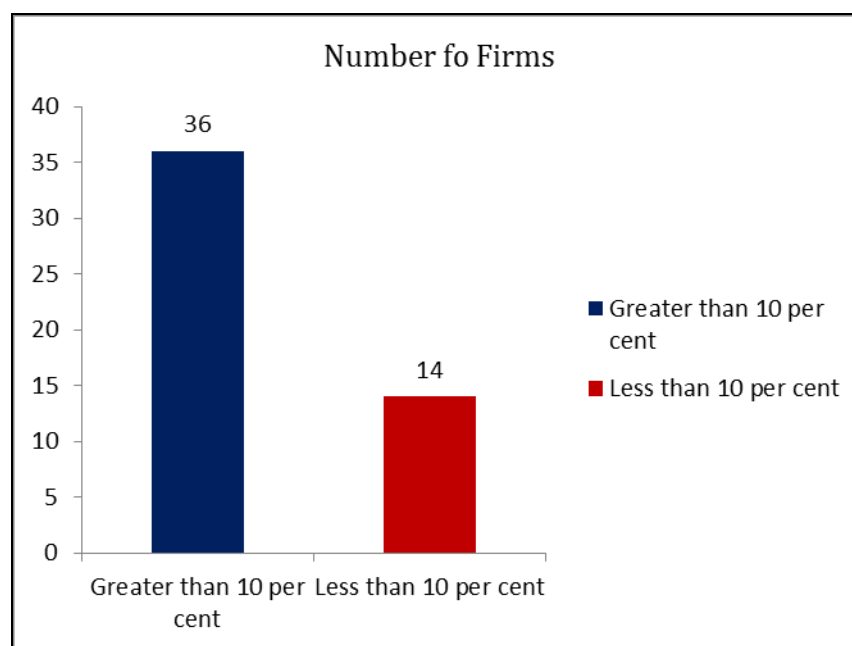


Figure 5.7: Graphical Representation of Breakdown of the MFIs - OSS

The table 5.11 shows nearly three fourth of the sampling frame have an average OSS greater than 10 per cent. Long-term indicates that the Microfinance firms have become more stable and sound as they are able to sustain their operations covering for their operating expenses. It is a positive indicator as it indicates the viability of the firms and the future growth of the operations.

There is not a significant trend in the behavioural pattern of operational self-sufficiency. Many firms have breached the level of OSS figures and have not been able to retain the average figures required for the sustenance. Most of the firms do have a long-term trend of Operational self-sufficiency this indicates that OSS is available for most of the Microfinance Institutions.

Table 5.12: Trend in MFIs - OSS

Growth	Number of Firms	Percentage
Declining OSS	20	40.00%
Increasing OSS	20	40.00%
Increasing OSS (Average of 5 % or more)	10	20.00%
Total	50	100.00%

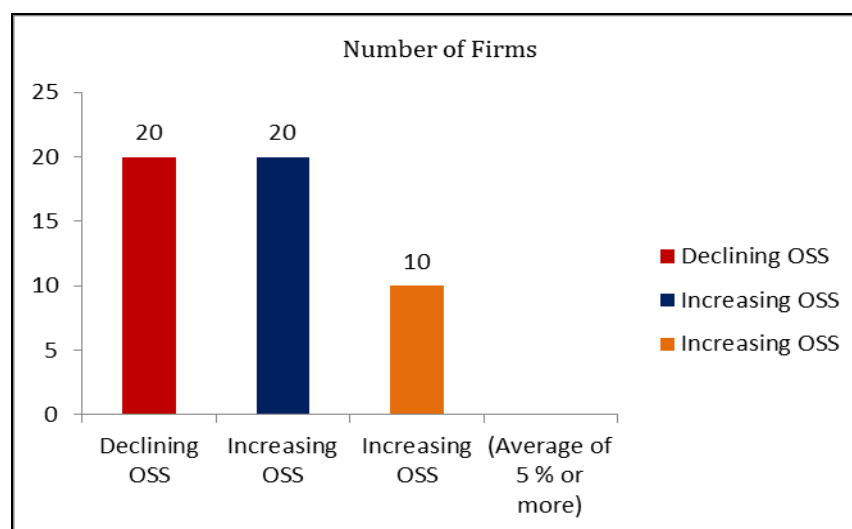


Figure 5.8: Trend in OSS

The data in table 5.12 shows that out of 50 MFIs, 30 have a positive increasing long-term trend and the left over 20 are having a declining OSS. Out of the 30, 10 are having an OSS increasing on an average of 5 per cent over last three years. Though a static low growth trend, OSS is one of the active variables which influence long-term financial sustainability of the MFIs. As long-term growth and development begins from operational sustainability which enables MFIs can help to finance their daily operations which can be further used to develop long-term growth.

Operational self-sufficiency therefore provides a barometer to see whether the firm is in a position to continue its viability track and pattern covering direct costs while not providing for the current cost of capital but financial costs are included. If however, the OSS figures are not achieved, it would have to meet expenses via capital either by credit or equity which will only taper off in the long-term. Hence, there will be lesser funds available for the firms to expand.

5.2.5 Gross Loan Portfolio (GLP)

Gross Loan portfolio is a total of the outstanding loans for a Microfinance firm. It also includes principal for the clients which may vary from current loans, delinquent and

restructured loans which do not include interest payments. The greater ratio implies a greater outreach of the Microfinance Institutions. The following table 5.13 shows average figures in the form of Standard Deviation, Range, and Mean for the given firms in the case of portfolio of gross loans.

Table 5.13: Descriptive Statistics - Gross Loan Portfolio

Gross Loan Portfolio	
N	50
Minimum	3643964
Maximum	61069700000
Mean	631449887
Std. Error	0.34%
Std. Deviation	4.62%

For the Microfinance Institutions, the loan portfolio is the primary avenue for generating assets. It also gives a picture of the health of the Microfinance firms, performance of the firms, and their relevant contribution to the financial inclusion. It also is an indication of how good the outreach has been for the firms and the very scale of the Microfinance firms. Gross Loan Portfolio also shows the scale of operations and measures outreach.

Table 5.14: Breakdown of the MFIs - GLP

Range	Number of Firms	Percentage
Gross Loan Portfolio below INR 250 Crores	30	60.00%
Average Gross Loan Portfolio exceeding INR 250 Crores	12	24.00%
Average Gross Loan Portfolio exceeding INR 500 Crores	8	16.00%
Total	50	100.00%

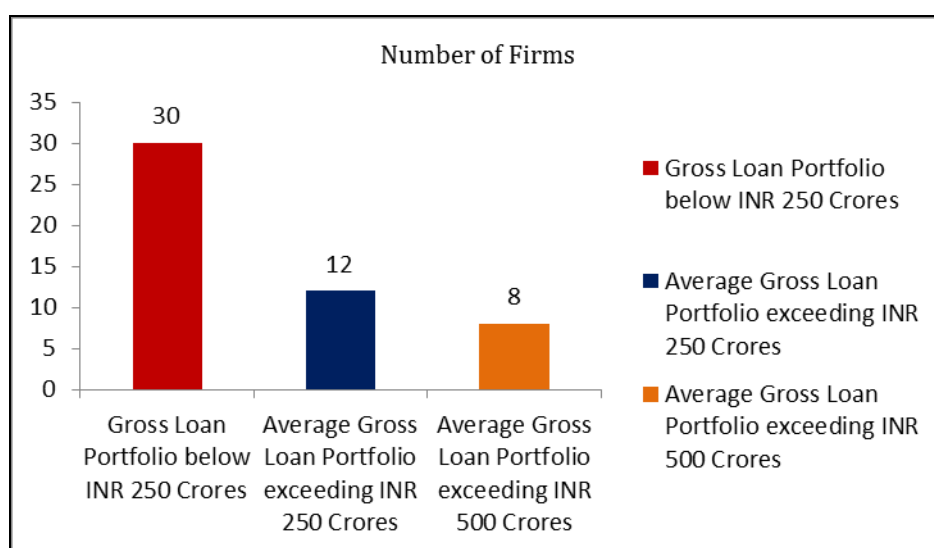


Figure 5.9: Graphical Representation of Breakdown of the MFIs – GLP

The table 5.14 shows 60 per cent of the selected MFIs have an average Gross Loan Portfolio below INR 250 Crores and left out 40 per cent have an average Gross Loan Portfolio exceeding INR 250 Crores. Out of these 40 per cent, 8 MFIs have an average Gross Loan Portfolio higher than INR 500 Crores.

The long-term Gross Loan Portfolio of the Microfinance firms is understood with the help of analysis. The result highlights that most of the firms have a long-term trend in case of their GLP figures and most of the firms have a higher GLP over a period of time. The firms also have a significant increasing trend and are on a positive side.

Table 5.15: Trend in MFIs - GLP

Growth	Number of Firms	Percentage
Growth less than INR 50 Crores per annum	28	56.00%
Growth more than INR 50 Crores per annum	22	44.00%
Total	50	100.00%

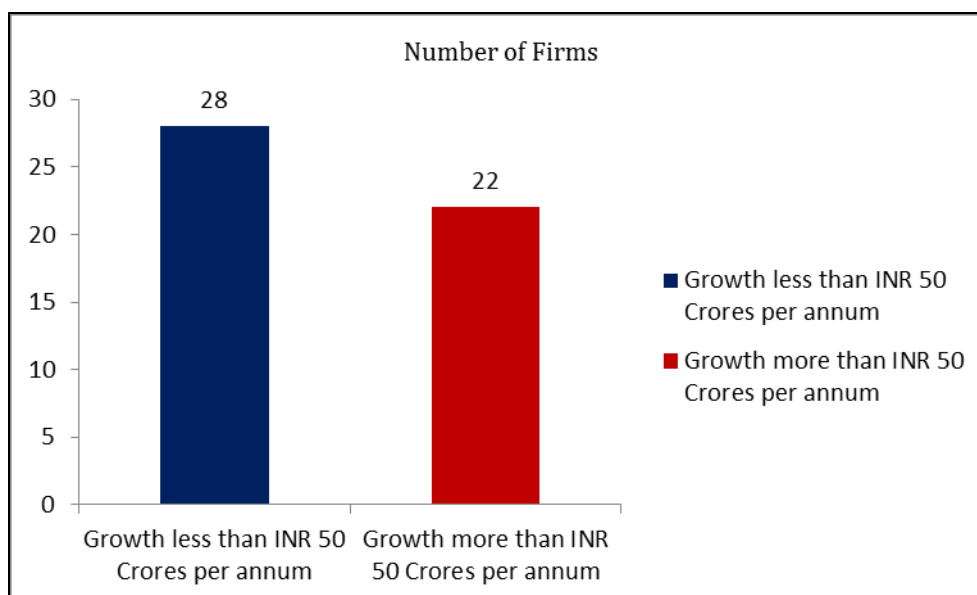


Figure 5.10: Trend in GLP

The above table 5.15 shows that among the sampling units, 28 firms have a growth less than INR 50 Crores per annum and 22 have a growth of more than INR 50 Crores per annum. The increase in GLP trends show that the MFIs are on a long-term growth which also mean higher outreach achieving economies of scale and greater profitability.

5.2.6 Yield on Gross Loan Portfolio (YGLP)

It is a return on the overall portfolio which a firm generally achieves on the overall portfolio. The returns could be Gross or Net. So as to speak, it also shows the firm's ability to create and sustain revenues for covering its expenses. It gauges the Microfinance firm's safeguard ability system which it has received in the form of interest payments. It also gives an overview of the quality of the portfolio. Further, for the quality to be powerful and meaningful, it is necessary that the framework of the interest payments must be understood. The following table 5.16 shows the average figures for yield on portfolio in terms of Standard Deviation, Mean and Range, etc.

Table 5.16: Descriptive Statistics - Yield on Gross Loan Portfolio

Yield on Gross Loan Portfolio	
N	50
Minimum	6.55%
Maximum	30.10%
Mean	20.94%
Std. Error	2.31%
Std. Deviation	1.54%

The average as can be seen ranges from a bare minimum of 6.55 per cent to as high as 30.10 per cent. The average as it turns out to be near 21 per cent. An average figure of 20 to 30 per cent also shows a good performance of the Microfinance Institutions for the duration under study.

Table 5.17: Breakdown of the MFIs - YGLP

Range	Number of Firms	Percentage
Growth less than 20 per cent	18	36.00%
Growth more than 20 per cent	32	64.00%
Total	50	100.00%

The following table 5.17 indicates a negative pattern among the Microfinance firms having a return of less than 20 per cent. Some of the firms have also managed to trend with a percentage of more than 20 per cent on the Gross Loan Portfolio. This can be attributed to the declining interest rates which the firms were forced to charge on their loans.

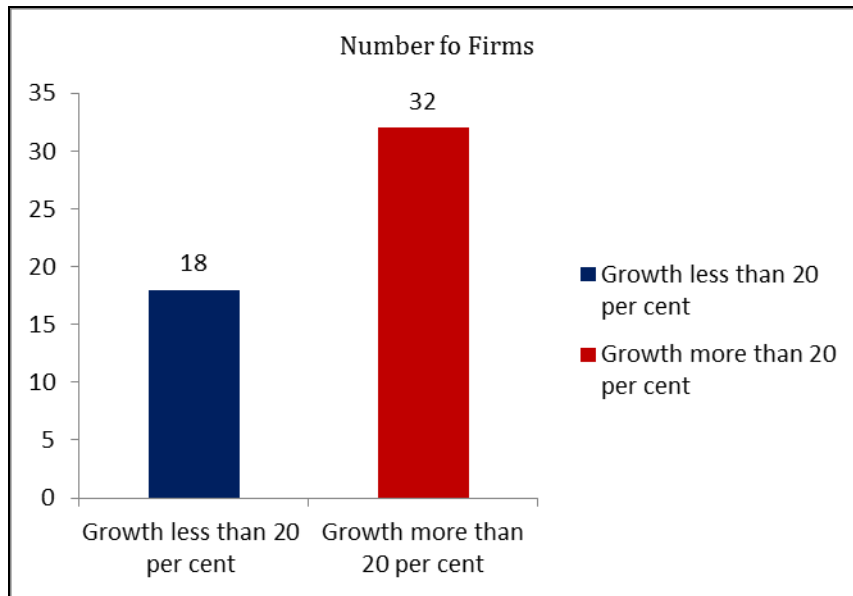


Figure 5.11: Graphical Representation of Breakdown of the MFIs – YGLP

Table 5.18: Trend in MFIs – YGLP

Range	Number of Firms	Percentage
Less than 0%	26	52.00%
0%-20%	24	48.00%
Total	50	100.00%

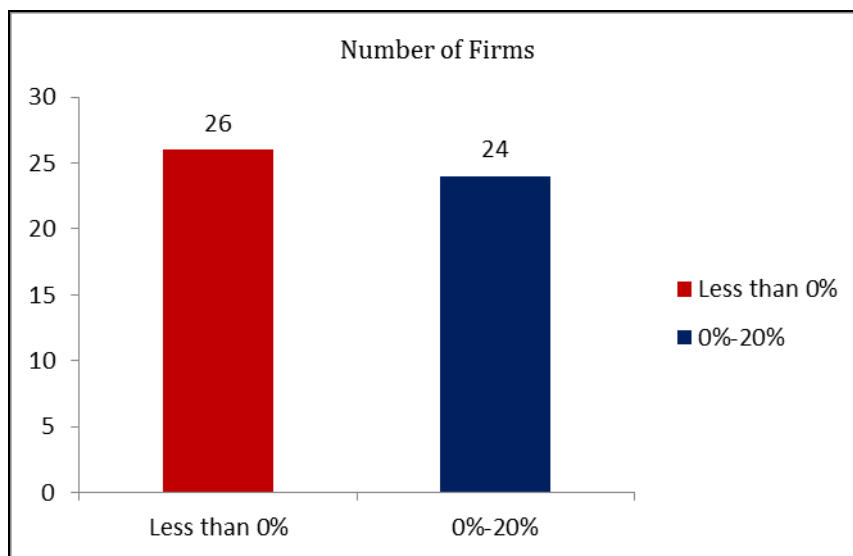


Figure 5.12: Trend in YGLP

The results in the above table 5.18 indicates that 26 out of the selected 50 MFIs show a negative trend for the period 2015-18 and the remaining 24 have a trend of earning between 0-20% return on the gross loan portfolio. The declining trend in most of the MFIs is due to RBI intervention to stream line the interest rates charged by MFIs.

5.2.7 Average Growth Rate (GR)

The growth rate is again an important factor which tries to gauge and streamline the rate of development of a firm's portfolio over a period of time. This can be calculated by finding the difference in the figures at two different points of time and then relating it to the original figure at the initial point of time.

It is the growth rate achieved annually over a specified period of time for a longer time period greater than one year.

The same index can be calculated for various dimensions such as assets, loans and other portfolio.

5.2.7.1 Growth Rate - Assets

In the given study we find that long-term analysis of the growth rate of the firms is undertaken. The study is corroborated with the help of financial performance figures. The rate of performance for the assets is seen as one of the ways to find out the performance of the firms.

Table 5.19: Descriptive Statistics - Growth Rate - Assets

Growth Rate - Assets	
N	50
Minimum	-09.65%
Maximum	83.10%
Mean	32.31
Std. Error	1.35%
Std. Deviation	3.46%

The growth rate in the given Microfinance firms is calculated annually. The growth rate in assets range from a negative minimum of 9.65 per cent to as high as 83.10 per cent on a positive side. The average as it turns out to be near 32 per cent. An average figure of 15 to 30 per cent also shows a good performance of the Microfinance Institutions for the duration under study (see table 5.19).

It can be summed up that most of the selected Institutions have a noteworthy rate of growth related to their assets from over past three years.

Table 5.20: Breakdown of the MFIs - Growth Rate - Assets

Range	Number of Firms	Percentage
Growth rate less than 15 per cent	16	32.00%
Growth rate between 15 to 30 per cent	15	30.00%
Growth rate more than 30 per cent	19	38.00%
Total	50	100.00%

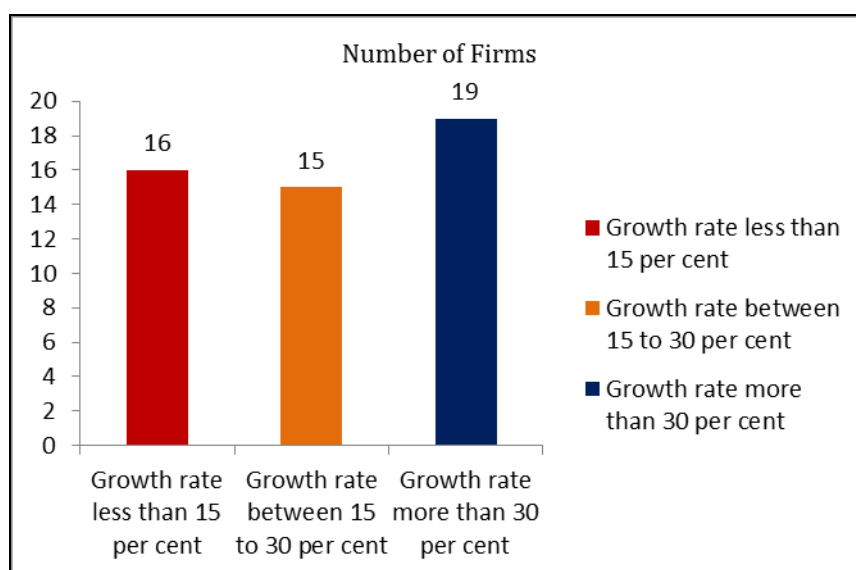


Figure 5.13: Graphical Representation of Breakdown of the MFIs - GR – Assets

The present study specifies that among a sample size of 50 firms in table 5.20; of that one third of the firms approximately have a growth rate less than 15 per cent, nearly one third of the firms also have a growth rate between 15 per cent to 30 per cent and the remaining of the firms have a growth rate of more than 30 per cent. Hence, it is determined that the firms have a positive growing trend implying a positive feature for the Microfinance sector. The average numbers for the firms near about 30 per cent which is a good indicator.

5.2.7.2 Growth Rate -Borrowings

The long-term trend is analysed in this study. Moreover, the financial sustainability of the MFIs selected is also analysed with the help of estimated annual growth rate of financial performance measures. The annual growth rate in MFIs selected is presented in the following table 5.21.

Table 5.21: Descriptive Statistics - Growth Rate - Borrowings

Growth Rate - Borrowings	
N	50
Minimum	-12.97%
Maximum	52.10%
Mean	31.34%
Std. Error	83.10%
Std. Deviation	1.92%

The growth rate in borrowings range from a negative minimum of 12.97 per cent to as high as 52.10 per cent on a positive side. The average as it turns out to be near 31 per cent. An average figure of 10 to 30 per cent also shows a good performance of the Microfinance Institutions for the duration under study.

It can be summed up that most of the selected Institutions have a noteworthy rate of growth related to their borrowings from over past three years.

Table 5.22: Breakdown of the MFIs - Growth Rate - Borrowings

Range	Number of Firms	Percentage
Growthrate between 0 to 30 per cent	33	66.00%
Growth rate more than 30 per cent	17	34.00%
Total	50	100.00%

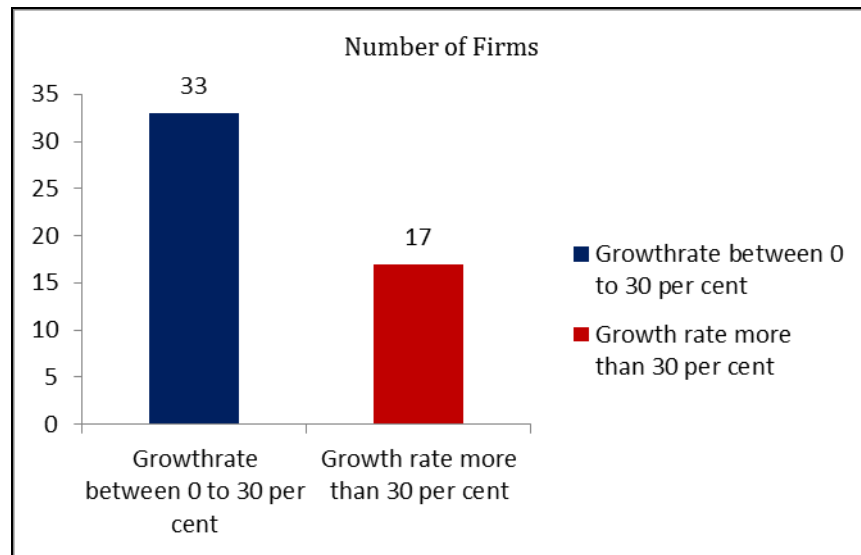


Figure 5.14: Graphical Representation of Breakdown of the MFIs - GR– Borrowings

The research says that out of a selection of the sampling units, we find that only a fraction of the sampling frame have an average growth rate in case of firms. The rest show a growing growth rate which is also positive. The study indicates that around two-third of the firms have a growth rate between 0 to 30 per cent while nearly one third of the firms have a growth rate of more than 30 per cent as seen in table 5.22.

Objective 2: To measure the levels of Social Performance of Microfinance Institutions.

5.3 Social Performance of MFIs in India

Descriptive Statistics

Social Performance Assessment (SPA) Tool was developed by Gary Woller with funding from USAID. The SPA tool includes score card with a set of indicators under six aspects of outreach, i.e. (i) Breadth, (ii) Depth, (iii) Length, (iv) Scope, (v) Cost & (vi) Worth. The social performance is measured by number of indicators which include the following:

5.3.1 Breadth of Outreach = Log of Active Borrowers

It refers to the volume of services and number of clients served by the MFI (i.e., total savings on deposit and total outstanding portfolio). It also refers to the scale of operations of a firm.

Table 5.23: Descriptive Statistics - Breadth of Outreach

Breadth (Log of Active Borrowers)	
N	50
Minimum	4.0458
Maximum	6.7700
Mean	5.537983
Std. Deviation	0.6291372

The first indicator is calculated using the log of active borrowers. The data in table 5.23 indicates that the average number of borrowers were 733411.7 (by using the actual figures). Further, minimum number of borrowers were 11408 and maximum number of borrowers were 5888750. The standard deviation indicates that the numbers are more consistent towards the average number of borrowers.

5.3.2 Depth of Outreach = Average Loan size per Borrowers

The Average loan Size by itself is a blunt measure of depth. A more useful way to use average loan Size is to divide by number of borrowers. Smaller values along each dimension generally mean smaller loans and poorer borrowers.

Table 5.24: Descriptive Statistics - Depth of Outreach

Depth (Average loan size per borrowers)	
N	50
Minimum	443.62
Maximum	197473.02
Mean	23930.5264
Std. Deviation	38722.99408

The second indicator is calculated using the average loan size per borrower. The data in table 5.24 indicates that the average loan size per borrower was INR 23930.5264 (by using the actual figures). Further, minimum loan size per borrower was INR 443 and maximum loan size per borrower was INR 197473 approximately. The standard deviation indicates that the Average Loan size per borrower is less consistent towards its average figures.

5.3.3 Length of Outreach = Portfolio at Risk > 30 Days

Portfolio at Risk (PAR) Ratio is calculated by dividing the outstanding balance of all loans with arrears over 30 days.

Table 5.25: Descriptive Statistics - Length of Outreach

Length (Portfolio at risk > 30 days)	
N	50
Minimum	0.00%
Maximum	19.70%
Mean	3.3642%
Std. Deviation	5.03568%

The above indicator is calculated using the figures of portfolio at risk greater than 30 days. The table 5.25 indicates that the minimum figures for the above indicator are nil while maximum ranges around 19.70%. The average figures range around 3.3642%. The standard deviation indicates that the numbers are very inconsistent.

5.3.4 Scope of Outreach = Number of Distinct Enterprise Loan Products

The number of different types of loan, savings, insurance and other products offered broken down by product lines or product types define the Scope of a Microfinance firm.

Table 5.26: Descriptive Statistics - Scope of Outreach

Scope (Number of products)	
N	50
Minimum	1.00
Maximum	14.00
Mean	6.3800
Std. Deviation	3.37391

The indicator is calculated using the number of distinct enterprise loan products. The data in table 5.26 indicates that average number of distinct loan products were 6.3800. The number of variants in product design were as low as 1 to as high as 14. The

standard deviation indicates that the numbers are more consistent towards the average number.

5.3.5 Cost of Outreach = Nominal Yield on Average Gross Portfolio

The interest rate charged on loans and client transaction costs. In lieu of actual interest rates, the yield on portfolio is a modest and broadly available proxy.

Table 5.27: Descriptive Statistics - Cost of Outreach

Cost (Nominal yield on average gross portfolio)	
N	50
Minimum	6.55%
Maximum	26.60%
Mean	20.9445%
Std. Deviation	5.00394%

The table 5.27 is created by using the average figures of nominal yield on gross loan portfolio. The data indicates that the average is around 20.9445%. The minimum figures are 6.55% while finding the minimum and increased to a maximum of 26.60%. The standard deviation indicates that the numbers are very inconsistent.

5.3.6 Worth of Outreach = Loan Loss Rate

The willingness of the client's to pay, which can be computed by dropout rate. Frequent or repeated purchases are the preeminent and direct way of measuring Worth.

Table 5.28: Descriptive Statistics - Worth of Outreach

Worth (Loan Loss rate)	
N	50
Minimum	0.00
Maximum	11.59
Mean	0.7810
Std. Deviation	2.33477

The above indicator is calculated using the Loan Loss rate. The data in table 5.28 indicates that the average loan loss rate is around 0.78. The figures reduced to nil while finding the minimum loan loss rate and increased to as high as 11.59. The standard deviation indicates that the numbers are very inconsistent.

Objective 3: To analyse the association between Financial and Social Performance of Microfinance Institutions with the Capital Structure of the same.

5.4 Association between Financial Performance of MFIs with the Capital Structure

Correlation Analysis

The technique of correlation analysis is employed to find out the magnitude of relationship between the variables of interest. It is usually done as a preliminary test to find out whether the relationship exists or not. The dependent variables include Return on Equity, Return on Assets, Tobin's Q, Profit Margin, Financial and Operational Sustainability as well as social indicators such as Breadth of outreach, Cost of outreach, Length of outreach, Worth of outreach, Scope of outreach and Depth of outreach. Whereas, the independent variables include Net Worth, Asset Tangibility, Firm Size, Debt Equity Ratio and Debt to Asset Ratio.

The correlation coefficient from 0 to 0.5 signifies less to moderate association while values greater than 0.5 signify stronger association. Negative values indicate negative association between variables.

Regression Analysis

Variables

The variables can be classified as independent and dependent. The dependent variables included are ROE, ROA, Tobin Q, Breadth, Depth, Length, Scope, Cost and Worth. The independent variables include Debt Equity ratio, Debt to Asset ratio, and Firm Size which represents Capital Structure. The dependent variables cover Return on Assets, Return on Equity as well as Tobin Q which are indicators of financial performance. The dependent variables cover Breadth, Depth, Length, Scope, Cost and Worth which are indicators of social performance.

Regression Model

This research uses the regression analysis to find out the impact of capital structure on financial and social performance of Microfinance firms. Data set is a mix of time series and cross section. Time series data smoothing was done by the means of averaging to overcome the effect of time fluctuation during 2015-18 i.e. the study time period. Whereas, cross section data was collected over a period of time for a

number of companies and firms. The different regression models were incorporated to find out the impact of capital structure on firm performance.

The regression models are:

Model 1:

Return on Asset (ROA)

$$ROA_i = \alpha_0 + \alpha_1 Debt\ Equity_i + \alpha_2 Debt\ Asset_i + \alpha_3 Firm\ Size_i + e_i \quad (1) \quad \alpha_1, \alpha_2, \alpha_3 > 0$$

Model 2:

Return on Equity (ROE)

$$ROE_i = \beta_0 + \beta_1 Debt\ Equity_i + \beta_2 Debt\ Asset_i + \beta_3 Firm\ Size_i + e_i \quad (1) \quad \beta_1, \beta_2, \beta_3 > 0$$

Model 3:

Tobin Q

$$Tobin\ Q_i = Y_0 + Y_1 Debt\ Equity_i + Y_2 Debt\ Asset_i + Y_3 Firm\ Size_i + e_i \quad (1) \quad Y_1, Y_2, Y_3 > 0$$

Model 4:

Breadth of Outreach

$$Breadth_i = \delta_0 + \delta_1 Debt\ Equity_i + \delta_2 Debt\ Asset_i + \delta_3 Firm\ Size_i + e_i \quad (1) \quad \delta_1, \delta_2, \delta_3 > 0$$

Model 5:

Depth of Outreach

$$Depth_i = \theta_0 + \theta_1 Debt\ Equity_i + \theta_2 Debt\ Asset_i + \theta_3 Firm\ Size_i + e_i \quad (1) \quad \theta_1, \theta_2, \theta_3 > 0$$

Model 6:

Length of Outreach

$$Length_i = \iota_0 + \iota_1 Debt\ Equity_i + \iota_2 Debt\ Asset_i + \iota_3 Firm\ Size_i + e_i \quad (1) \quad \iota_1, \iota_2, \iota_3 > 0$$

Model 7:

Scope of Outreach

$$Scope_i = \kappa_0 + \kappa_1 Debt\ Equity_i + \kappa_2 Debt\ Asset_i + \kappa_3 Firm\ Size_i + e_i \quad (1) \quad \kappa_1, \kappa_2, \kappa_3 > 0$$

Model 8:

Cost of Outreach

$$Cost_i = \lambda_0 + \lambda_1 Debt\ Equity_i + \lambda_2 Debt\ Asset_i + \lambda_3 Firm\ Size_i + e_i \quad (1) \quad \lambda_1, \lambda_2, \lambda_3 > 0$$

Model 9:

Worth of Outreach

$$Worth_i = \mu_0 + \mu_1 Debt\ Equity_i + \mu_2 Debt\ Asset_i + \mu_3 Firm\ Size_i + e_i \quad (1) \quad \mu_1, \mu_2, \mu_3 > 0$$

Where:

ROA = Dependent Variable

ROE = Dependent Variable

Tobin Q = Dependent Variable

Breadth = Dependent Variable

Depth = Dependent Variable

Length = Dependent Variable

Scope = Dependent Variable

Cost = Dependent Variable

Worth = Dependent Variable

Debt Equity Ratio = Independent Variable

Debt Asset Ratio = Independent Variable

Firm Size = Independent Variable

The Effect of Capital Structure on Firm Performance

The results of regression are analysed to find out the impact of capital structure on financial and social performance. Regression analysis would be conducted to all the selected firms from the sampling frame.

5.4.1 Relationship between Return on Assets and Capital Structure

Table 5.29: Correlation - ROA and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt to Asset Ratio
ROA	Pearson Correlation	0.523	0.621	-0.19	-0.089	-0.259
	Sig. (2-tailed)	0.001	0.000	0.323	0.648	0.174
	N	50	50	50	50	50

In the above table 5.29, we try to establish nature of relationship and its strength between variables under consideration. The dependent variable is ROA and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is seen that the Return on Assets have a positive relationship with Net Worth (0.523) and Asset Tangibility (0.621) at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

However, the relationship is a weak one and it is in similar direction. ROA is negatively correlated with Firm Size (-0.19), Debt Equity ratio (-0.089) and Debt to Asset ratio (-0.259) in table 5.27 respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated. Implying that the greater size of the firms have not been able to capitalise upon giving an impact to the Return on Assets.

Table 5.30: Model Summary - Impact on ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.550 ^a	.302	.257	1.054221%	1.994
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.30 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.550 in table 5.30 indicates a sound level of relationship between indicators of Capital structure and ROA. The 'Adjusted R Square' shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable ROA by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.257 in table 5.29, 25.7% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.994 which is

very close to 2 and is unacceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.31: ANOVA^a - ROA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.133	3	7.378	6.638	.001 ^b
	Residual	51.124	46	1.111		
	Total	73.257	49			
a. Dependent Variable: ROA						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.30 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 6.638, $p < 0.05$ (see table 5.31).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{01} (Capital Structure has no significant relationship with the Return on Assets) is rejected and it can be said that the independent variables have had an impact on dependent variable ROA.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.32: Coefficients^a - Regression Model - ROA

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.401	.846		5.202	.000		
	Debt Equity Ratio	-.149	.118	-.199	-1.259	.214	.846	1.182
	Debt to Asset Ratio	-.229	.058	-.601	-3.951	.000	.992	1.008
	Firm Size	.112	.059	.247	1.905	.063	.852	1.174
a. Dependent Variable: ROA								

The generalized Regression equation based on table 5.32 is as follows:

$$\text{Predicted ROA} = 4.401 - (0.149 \times \text{Debt equity ratio}) - (0.229 \times \text{Debt to asset ratio}) + (0.112 \times \text{Firm Size}) \dots \dots \dots \text{Equation 1}$$

Unstandardized coefficients show how much the dependent variable ROA varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 0.149 (D/E ratio) and 0.229 (D/A ratio) and increase by a multiple of 0.112 (FS) plus constant of 4.401 in Return on Assets (see equation 1).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.182 and tolerance is .846, the obtained VIF value for Debt to Asset Ratio is 1.008 and tolerance is .992 and for Firm Size VIF value is 1.174 and tolerance is .852. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.32, p value for Debt Equity ratio is 0.214 and Firm Size is 0.063 which is not significant at 5% level of significance for Debt to Asset ratio p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and Firm Size do not play significant role in explaining ROA (dependent variable) and D/A ratio play significant role in explaining the dependent variable. Since, the Beta value of Debt to Asset Ratio (-.601) is the largest hence; it has the strongest impact on ROA (dependent variable).

5.4.2 Relationship between Return on Equity and Capital Structure

Table 5.33: Correlation - ROE and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
ROE	Pearson Correlation	0.114	0.092	0.129	0.743	0.632
	Sig. (2-tailed)	0.557	0.641	0.503	0.000	0.023
	N	50	50	50	50	50

In the above table 5.33, the dependent variable is ROE and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that ROE is mildly correlated with Net Worth (0.114), Firm Size (0.092) and Asset Tangibility (0.129) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

ROE is positively correlated with Debt to Asset (0.632) and Debt to Equity ratio (0.743) in table 5.33 respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

Table 5.34: Model Summary - Impact on ROE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.618 ^a	.382	.342	16.1422091%	1.889
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.34 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.618 in table 5.34 indicates a sound level of relationship between indicators of Capital structure and ROE. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable ROE by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.342 in table 5.34, 34.2% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.889 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.35: ANOVA^a - ROE

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7411.346	3	2470.449	9.481	.000 ^b
	Residual	11986.262	46	260.571		
	Total	19397.608	49			
a. Dependent Variable: ROE						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.35 shows that the independent

variables statistically and significantly predict the dependent variable, F-Value = 9.481, $p < 0.05$ (see table 5.35).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{02} (Capital Structure has no significant relationship with the Return on Equity) is rejected and it can be said that the independent variables have had an impact on dependent variable ROE.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.36: Coefficients - Regression Model - ROE

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	23.112	12.953		1.784	.081		
	Debt Equity Ratio	-1.434	.903	-.194	-1.587	.119	.822	1.216
	Debt to Asset Ratio	.906	1.810	.074	.500	.619	.921	1.085
	Firm Size	4.072	.888	.656	4.584	.000	.898	1.113

a. Dependent Variable: ROE

The generalized Regression equation based on table 5.36 is as follows:

$$\text{Predicted ROE} = 23.112 - (1.434 \times \text{Debt Equity Ratio}) + (0.906 \times \text{Debt to Asset ratio}) + (4.072 \times \text{Firm Size}) \dots\dots\dots \text{Equation 2}$$

Unstandardized coefficients show how much the dependent variable ROE varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 1.434 (D/E ratio) and increase by a multiple of 0.906 (D/A ratio) and 4.072 (FS) plus constant of 23.112 in Return on equity (see equation 2).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.216 and tolerance is .822, the obtained VIF value for Debt to Asset Ratio is 1.085 and tolerance is .921 and for Firm Size VIF value is 1.113 and tolerance is .898. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.36, p value for Debt Equity ratio is 0.119, Debt to Asset ratio is 0.619 which is not significant at 5% level of significance for Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and D/A ratio do not play significant role in explaining ROE (dependent variable) and FS play significant role in explaining the dependent variable. Since, the Beta value of Firm Size (.656) is the largest hence; it has the strongest impact on ROE (dependent variable).

5.4.3 Relationship between Tobin's Q and Capital Structure

Table 5.37: Correlation - Tobin's Q and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt to Asset Ratio
TOBIN's Q	Pearson Correlation	0.569	-0.006	-0.191	0.025	0.212
	Sig. (2-tailed)	0.000	0.976	0.325	0.897	0.273
	N	50	50	50	50	50

In the above table 5.37, we try deduce the extent of relationship between variables under consideration. The dependent variable is Tobin's Q and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Tobin's Q is mildly correlated with Debt Equity ratio (0.025) and Debt Asset ratio (0.212) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated.

Tobin's Q is negatively correlated with Asset Tangibility (-0.006) and Firm Size (-0.191) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Tobin's Q is positively correlated with Net worth (0.569) in table 5.37 at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variable is linearly correlated.

Table 5.38: Model Summary - Impact on Tobin's Q

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.637 ^a	.405	.367	.0581748%	2.185
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.38 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as in table 5.38 is 0.637 which indicates a sound level of relationship between indicators of Capital structure and Tobin's Q. The 'Adjusted R Square' shows the measure of R^2 value which is also called as the coefficient of determination that explains the proportion of variance in dependent variable Tobin's Q by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R^2 is 0.367 in table 5.38, 36.7% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 2.185 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.39: ANOVA^a - Tobin's Q

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.106	3	.035	10.452	.000 ^b
	Residual	.156	46	.003		
	Total	.262	49			
a. Dependent Variable: TOBIN's Q						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.39 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 10.452, $p < 0.05$ (see table 5.39).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{03} (Capital Structure has no significant relationship with the Tobin's Q) is rejected and it can be said that the independent variables have had an impact on dependent variable Tobin's Q.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.40: Coefficients - Regression Model - Tobin's Q

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.401	.047		8.584	.000		
	Debt Equity Ratio	-.001	.003	-.042	-.351	.727	.908	1.005
	Debt to Asset Ratio	-.010	.007	-.231	-1.586	.120	.938	1.064
	Firm Size	-.017	.003	-.739	-5.264	.000	.841	1.189

a. Dependent Variable: TOBIN's Q

The generalized Regression equation based on table 5.40 is as follows:

$$\text{Predicted Tobin's Q} = 0.401 - (0.001 \times \text{Debt Equity ratio}) - (0.010 \times \text{Debt to asset ratio}) - (0.017 \times \text{Firm Size}) \dots \dots \dots \text{Equation 3}$$

Unstandardized coefficients show how much the dependent variable Tobin's Q varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt equity ratio, Debt to asset ratio and Firm Size; Tobin's Q would decrease by a multiple of 0.001 (D/E ratio), 0.010 (D/A ratio) and 0.017 (FS) plus constant of 0.401 in Tobin's Q (see equation 3).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.005 and tolerance is .908, the obtained VIF value for Debt to Asset Ratio is 1.064 and tolerance is .938 and for Firm Size VIF value is 1.189 and tolerance is .841. All the VIF values are less than 2 and are unacceptable range and all the tolerance values are near .9 which is also unacceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.40, p value for Debt Equity ratio is 0.727 and Debt to Asset ratio is 0.120 which is not significant at 5% level of significance for Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and D/A ratio do not play significant role in explaining Tobin's Q (dependent variable) and FS play significant role in explaining

the dependent variable. Since, the Beta value of Firm Size (-.739) is the largest hence; it has the strongest impact on Tobin's Q (dependent variable).

5.4.4 Relationship between Profit Margin and Capital Structure

Table 5.41: Correlation - Profit Margin and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
Profit Margin	Pearson Correlation	-0.088	0.005	-0.064	0.614	0.566
	Sig. (2-tailed)	0.649	0.982	0.741	0.001	0.001
	N	50	50	50	50	50

In the above table 5.41, we try deduce the extent of relationship between variables under consideration. The dependent variable is profit margin and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity and Debt to Assets ratio.

It is found that Profit Margin is mildly correlated with Asset Tangibility (0.005) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated.

Profit Margin is negatively correlated with Net Worth (-0.088) and Firm Size (-0.064) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Profit Margin is positively correlated with Debt Equity ratio (0.614) and Debt to asset ratio (0.566) in table 5.41 at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variable is linearly correlated.

Sustainability of Microfinance Institutions:

The sustainability can be factored in using two indicators:

- Operational sustainability
- Financial sustainability

Microfinance Institutions attain sustainability when its operating income from loans is enough to cover up all the operating cost (Sharma, 1997)

In this study sustainability is measured by two proxies namely operational self-sufficiency (OSS) and financial self-sufficiency (FSS).

Operational sustainability = Financial Revenue / (Financial Expense + Impairment Losses on Loans + Operating Expense)

Financial sustainability = Adjusted Financial Revenue / Adjusted (Financial Expense + Impairment Losses on Loans + Operating Expense)

5.4.5 Relationship between Operational Self-Sufficiency and Capital Structure

Table 5.42: Correlation - Operational Self-Sufficiency and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
OSS	Pearson Correlation	-0.101	-0.03	-0.059	0.392	0.457
	Sig. (2-tailed)	0.601	0.879	0.762	0.043	0.031
	N	50	50	50	50	50

In the above table 5.42, we try deduce the extent of relationship between variables under consideration. The dependent variable is Operating Self-Sufficiency and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It can be seen that Operating self-sufficiency is positively correlated with Debt Equity ratio (0.392) and Debt to Asset ratio (0.457) at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated. However, the relationship is a weak one and it is in similar direction.

OSS is negatively correlated with Net Worth (-0.101), Asset Tangibility (-0.03) and Firm Size (-0.059) respectively in table 5.42 at 5% confidence level the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.43: Model Summary - Impact on Operational Self-Sufficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.448 ^a	.201	.148	12.7448488%	2.521
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.43 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.448 in table 5.43 indicates a sound level of relationship between indicators of Capital structure and OSS. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable OSS by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.148 in table 5.43, 14.8% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 2.521 which is very close to 2 and is unacceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.44: ANOVA^a - Operational Self-Sufficiency

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	1874.552	3	624.851	.384	.115 ^b
	Residual	7471.834	46	162.431		
	Total	9346.386	49			
a. Dependent Variable: OPERATING SUFFICIENCY						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.44 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 0.384, $p > 0.05$ (see table 5.44).

Since the p value is greater than 0.05 it can be said that the independent variables doesn't have had an impact on dependent variable OSS.

Therefore, it is found that the regression model is a poor fit of the data.

Table 5.45: Coefficients - Regression Model - Operational Self-Sufficiency

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	139.681	10.227		13.659	.000		
	Debt Equity Ratio	1.111	.713	.217	1.558	.126	.862	1.159
	Debt to Asset Ratio	-2.947	1.429	-.349	-2.062	.045	.899	1.112
	Firm Size	-1.929	.701	-.448	-2.751	.008	.928	1.077

a. Dependent Variable: OPERATING SUFFICIENCY

The generalized Regression equation based on table 5.45 is as follows:

$$\text{Predicted OSS} = 139.681 + (1.111 \times \text{Debt equity}) - (2.947 \times \text{Debt to asset ratio}) - (1.929 \times \text{Firm Size})$$

Unstandardized coefficients show how much the dependent variable OSS varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 1.111 (D/E ratio) and decrease by a multiple of 2.947 (D/A ratio) and 1.929 (FS) plus constant of 139.681 in Operating Self-Sufficiency.

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.159 and tolerance is .862, the obtained VIF value for Debt to Asset Ratio is 1.112 and tolerance is .899 and for Firm Size VIF value is 1.077 and tolerance is .928. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.45, p value for Debt Equity ratio is 0.126 which is not significant at 5% level of significance for Debt to Asset ratio is 0.045 and Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio do not play significant role in explaining OSS (dependent variable) whereas, D/A ratio and FS play significant role in explaining the dependent variable. Since, the Beta value of Firm Size (-.448) is the largest hence; it has the strongest impact on OSS.

5.4.6 Relationship between Financial Self-Sufficiency and Capital structure

Table 5.46: Correlation - Financial Self-Sufficiency and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
FSS	Pearson Correlation	-0.101	-0.113	-0.058	0.050	0.195
	Sig. (2-tailed)	0.601	0.559	0.763	0.798	0.311
	N	50	50	50	50	50

In the above table 5.46, the dependent variable is Financial Self-Sufficiency and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that FSS is mildly correlated with Debt Equity ratio (0.050) and Debt Asset ratio (0.195) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated. Therefore, the relationship is a weak one and it is in similar direction.

FSS is negatively correlated with Net Worth (-0.101), Asset Tangibility (-0.113) and Firm Size (-0.058) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.47: Model Summary - Impact on Financial Self-Sufficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.670 ^a	.449	.413	2.1649223%	1.812
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.47 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.670 in table 5.47 indicates a sound level of relationship between indicators of Capital structure and FSS. The 'Adjusted R Square' shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable FSS by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R^2 is 0.413 in table 5.47, 41.3% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.812 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.48: ANOVA^a - Financial Self-Sufficiency

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	175.824	3	58.608	12.505	.000 ^b
	Residual	215.597	46	4.687		
	Total	391.421	49			
a. Dependent Variable: FINANCIAL SUFFICIENCY						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.48 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 12.505, $p < 0.05$ (see table 5.48).

Since the p value is less than 0.05, it can be said that the independent variables have had an impact on dependent variable FSS.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.49: Coefficients - Regression Model - Financial Self-Sufficiency

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.187	1.085		2.937	.005		
	Debt Equity Ratio	-.422	.154	-.480	-2.743	.009	.966	1.035
	Debt to Asset Ratio	.464	.114	.641	4.081	.000	.892	1.121
	Firm Size	.641	.131	.627	4.900	.000	.826	1.210
a. Dependent Variable: FINANCIAL SUFFICIENCY								

The generalized Regression equation based on table 5.49 is as follows:

$$\text{Predicted FSS} = 3.187 - (0.422 \times \text{Debt equity ratio}) + (0.464 \times \text{Debt to asset ratio}) + (0.641 \times \text{Firm Size})$$

Unstandardized coefficients show how much the dependent variable FSS varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of -0.422 (D/E ratio) and increase by a multiple of 0.464 (D/A ratio) and 0.641 (FS) plus constant of 3.187 in Financial Self-Sufficiency.

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.035 and tolerance is .966, the obtained VIF value for Debt to Asset Ratio is 1.121 and tolerance is .892 and for Firm Size VIF value is 1.210 and tolerance is .826. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.49, p value for Debt Equity ratio is 0.009, Debt to Asset ratio is 0.000 and Firm Size is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS play significant role in explaining FSS (dependent variable). Since, the Beta value of Debt to Asset Ratio (.641) is the largest hence; it has the strongest impact on FSS.

5.5 Association between Social Performance of MFIs with the Capital Structure

5.5.1 Relationship between Breadth of Outreach and Capital Structure

Table 5.50: Correlation - Breadth of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
BREADTH	Pearson Correlation	-0.048	-0.102	-0.044	0.442	0.521
	Sig. (2-tailed)	0.805	0.599	0.822	0.025	0.034
	N	50	50	50	50	50

In the above table 5.50, the dependent variable is Breadth of outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

Breadth of outreach is positively correlated with Debt Equity ratio (0.442) and Debt to Asset ratio (0.521) in table 5.50 respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

It is found that Breadth of outreach is negatively correlated with Net Worth (-0.048), Firm Size (-0.044) and Asset Tangibility (-0.102) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.51: Model Summary - Impact on Breadth of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.514 ^a	.264	.232	.9199885%	2.137
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.51 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.514 in table 5.51 indicates a sound level of relationship between indicators of Capital structure and Breadth of outreach. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Breadth of outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.232 in table 5.51, 23.2% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 2.137 which is very close to 2 and is unacceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.52: ANOVA^a - Breadth of Outreach

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26478.594	3	132393665.297	8.420	.001 ^b
	Residual	73900.270	46	157234755.814		
	Total	100379078128050.860	49			
a. Dependent Variable: BREADTH						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.52 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 8.420, $p < 0.05$ (see table 5.52).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{04} (Capital Structure has no significant relationship with the Breadth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Breadth of Outreach.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.53: Coefficients - Regression Model - Breadth of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	408166.21	625341.31		.653	.517		
	Debt Equity Ratio	.734	.179	.519	4.104	.000	.909	1.099
	Debt to Asset Ratio	1.239	.925	.041	1.285	.001	.996	1.004
	Firm Size	.341	.531	.119	2.312	.031	.854	1.170

a. Dependent Variable: BREADTH

The generalized Regression equation based on table 5.53 is as follows:

$$\text{Predicted Breadth} = 408166.21 + (0.734 \times \text{Debt equity ratio}) + (1.239 \times \text{Debt to asset ratio}) + (0.341 \times \text{Firm Size}) \dots \dots \dots \text{Equation 4}$$

Unstandardized coefficients show how much the dependent variable Breadth of Outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a increase by a multiple of 0.734 (D/E ratio), 1.239 (D/A ratio) and 0.341(FS) plus constant of 408166.21 in Breadth of outreach (see equation 4).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.099 and tolerance is .909, the obtained VIF value for Debt to Asset Ratio is 1.004 and tolerance is .996 and for Firm

Size VIF value is 1.170 and tolerance is .854. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.53, p value for Debt Equity ratio is 0.000, Debt to Asset ratio is 0.001 and Firm Size is 0.031 which is significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS play significant role in explaining Breadth of outreach (dependent variable). Since, the Beta value of Debt Equity Ratio (.519) is the largest hence; it has the strongest impact on Breadth of outreach (dependent variable).

5.5.2 Relationship between Depth of Outreach and Capital Structure

Table 5.54: Correlation - Depth of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
DEPTH	Pearson Correlation	0.023	0.234	0.312	0.411	0.423
	Sig. (2-tailed)	0.234	0.345	0.231	0.012	0.014
	N	50	50	50	50	50

In the above table 5.54, the dependent variable is Depth of outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Depth of outreach is mildly correlated with Net Worth (0.023), Firm Size (0.312) and Asset Tangibility (0.234) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Depth of outreach is positively correlated with Debt to Asset (0.423) and Debt to Equity ratio (0.411) in table 5.54 respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

Table 5.55: Model Summary - Impact on Depth of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.320 ^a	.102	.186	21.74165%	1.972
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.55 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.320 in table 5.55 indicates a sound level of relationship between indicators of Capital structure and Depth of Outreach. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Depth of outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.186 in table 5.55, 18.6% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.972 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.56: ANOVA^a - Depth of Outreach

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1343.961	3	447.987	.948	.032 ^b
	Residual	11817.487	46	472.699		
	Total	13161.448	49			
a. Dependent Variable: DEPTH						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.56 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 9.481, $p < 0.05$ (see table 5.56).

Since the p value is less than 0.05, therefore the hypothesis i.e. H₀₅ (Capital Structure has no significant relationship with the Depth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Depth of Outreach.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.57: Coefficients - Regression Model - Depth of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	75.419	49.544		1.522	.140		
	Debt Equity Ratio	2.380	2.351	.208	1.012	.321	.829	1.205
	Debt to Asset Ratio	66.366	161.096	.085	.412	.684	.825	1.211
	Firm Size	-5.428	5.943	-.174	-.913	.370	.834	1.198

a. Dependent Variable: DEPTH

The generalized Regression equation based on table 5.57 is as follows:

$$\text{Predicted Depth} = 75.419 + (2.380 \times \text{Debt equity ratio}) + (66.366 \times \text{Debt to asset ratio}) - (5.428 \times \text{Firm Size}) \dots \dots \dots \text{Equation 5}$$

Unstandardized coefficients show how much the dependent variable Depth of outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 2.380 (D/E ratio) and 66.366 (D/A ratio) and decrease by a multiple of 5.428 (FS) plus constant of 75.419 in Depth of outreach (see equation 5).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.205 and tolerance is .829, the obtained VIF value for Debt to Asset Ratio is 1.211 and tolerance is .825 and for Firm Size VIF value is 1.198 and tolerance is .834. All the VIF values are less than 2 and are unacceptable range and all the tolerance values are near .9 which is also unacceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.57, p value for Debt Equity ratio is 0.321, Debt to Asset ratio is 0.684 and FS is 0.370 which is not significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS do not play significant role in explaining Depth of outreach (dependent variable). Since, the Beta value of Debt Equity Ratio (.208) is the largest hence; it has the strongest impact on Depth of outreach (dependent variable).

5.5.3 Relationship between Length of Outreach and Capital Structure

Table 5.58: Correlation - Length of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
LENGTH	Pearson Correlation	-0.011	-0.112	-0.044	0.112	0.238
	Sig. (2-tailed)	0.115	0.523	0.822	0.563	0.213
	N	50	50	50	50	50

In the above table 5.58, the dependent variable is Length of outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Length of outreach is negatively correlated with Net Worth (-0.011), Firm Size (-0.044) and Asset Tangibility (-0.112) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Length of outreach is positively correlated with Debt to Asset (0.112) and Debt to Equity ratio (0.238) in table 5.58 respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.59: Model Summary - Impact on Length of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.629 ^a	.396	.391	.09926%	1.908
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.59 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.629 in table 5.59 indicates a sound level of relationship between indicators of Capital structure and Length of Outreach. The 'Adjusted R Square' shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Length of outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R^2 is 0.391 in table 5.59, 39.1% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.908 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.60: ANOVA^a - Length of Outreach

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.594	3	132.297	3.420	.001 ^b
	Residual	73.270	46	157.814		
	Total	99.864	49			
a. Dependent Variable: Length						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.60 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 3.420, $p < 0.05$ (see table 5.60).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{06} (Capital Structure has no significant relationship with the Length of outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Length of outreach.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.61: Coefficients - Regression Model - Length of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.012	.983		.371	.023		
	Debt Equity Ratio	.009	.043	-.223	3.243	.001	.910	1.099
	Debt To Asset Ratio	-.031	.532	-.229	3.211	.000	.988	1.012
	Firm Size	1.231	.315	.040	-0.215	.439	.862	1.159
a. Dependent Variable: Length								

The generalized Regression equation based on table 5.61 is as follows:

$$\text{Predicted Length} = 0.012 + (0.009 \times \text{Debt equity ratio}) - (0.031 \times \text{Debt to asset ratio}) + (1.231 \times \text{Firm Size}) \dots \dots \dots \text{Equation 6}$$

Unstandardized coefficients show how much the dependent variable Length of outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 0.031 (D/A ratio) and increase by a multiple of 0.009 (D/E ratio) and 1.231 (FS) plus constant of 0.12 in Length of outreach (see equation 6).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.099 and tolerance is .910, the obtained VIF value for Debt to Asset Ratio is 1.012 and tolerance is .988 and for Firm Size VIF value is 1.159 and tolerance is .862. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.61, p value for Debt Equity ratio is 0.001 and Debt to Asset ratio is 0.000 which is significant at 5% level of significance for Firm Size p value is 0.439 which is not significant at 5% level of significance. Therefore, D/E ratio and D/A ratio play significant role in explaining Length of outreach (dependent variable) and FS do not play significant role in explaining the dependent variable. Since, the Beta value of Debt to Asset Ratio (-.229) is the largest hence; it has the strongest impact on Length of outreach (dependent variable).

5.5.4 Relationship between Scope of Outreach and Capital Structure

Table 5.62: Correlation - Scope of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
SCOPE	Pearson Correlation	-0.048	-0.102	-0.044	0.112	0.238
	Sig. (2-tailed)	0.805	0.599	0.822	0.563	0.213
	N	50	50	50	50	50

In the above table 5.62, the dependent variable is Scope of outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Scope of outreach is negatively correlated with Net Worth (-0.048), Asset Tangibility (-0.102) and Firm Size (-0.044) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Scope of outreach is positively correlated with Debt to Asset (0.238) and Debt to Equity ratio (0.112) in table 5.62 respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.63: Model Summary - Impact on Scope of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.420 ^a	.176	.171	130.68689	2.859
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.63 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.420 in table 5.63 indicates a sound level of relationship between indicators of Capital structure and Scope of Outreach. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Scope of Outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.171 in table 5.63, 17.1% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 2.859 which is close to 2 and is inacceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.64 ANOVA^a - Scope of Outreach

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91399.883	3	30466.628	1.784	.176 ^b
	Residual	426976.586	46	17079.063		
	Total	518376.469	49			
a. Dependent Variable: Scope						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.64 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 1.784, $p > 0.05$ (see table 5.64).

Since the p value is greater than 0.05, therefore the hypothesis i.e. H₀₇ (Capital Structure has no significant relationship with the Scope of Outreach) is accepted and it can be said that the independent variables doesn't have had an impact on dependent variable Scope of outreach.

Therefore, it is found that the regression model is a poor fit of the data.

Table 5.65: Coefficients - Regression Model - Scope of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	313.899	297.801		1.054	.302		
	Debt Equity Ratio	-18.499	14.129	-.258	-1.309	.202	.660	1.514
	Debt to Asset Ratio	-122.902	968.329	-.249	-1.266	.217	.710	1.408
	Firm Size	-8.797	35.723	-.045	-.246	.807	.504	1.984
a. Dependent Variable: Scope								

The generalized Regression equation based on table 5.65 is as follows:

$$\text{Predicted Scope} = 313.899 - (18.499 \times \text{Debt equity ratio}) - (122.902 \times \text{Debt to asset ratio}) - (8.797 \times \text{Firm Size}) \dots \dots \dots \text{Equation 7}$$

Unstandardized coefficients show how much the dependent variable Scope of outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 18.499 (D/E ratio), 122.909 (D/A ratio) and 8.797 (FS) plus constant of 313.899 in Scope of outreach (see equation 7).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.514 and tolerance is .660, the obtained VIF value for Debt to Asset Ratio is 1.408 and tolerance is .710 and for Firm Size VIF value is 1.984 and tolerance is .504. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are between .8-1 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.65, p value for Debt Equity ratio is 0.202, Debt to Asset ratio is 0.217 and Firm Size is 0.807 which is not significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS do not play a significant role in explaining Scope of outreach (dependent variable). Since, the Beta value of Debt Equity Ratio (-.258) is the largest hence; it has the strongest impact on Scope of outreach (dependent variable).

5.5.5 Relationship between Cost of outreach and Capital Structure

Table 5.66: Correlation - Cost of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
COST	Pearson Correlation	0.044	-0.159	0.107	-0.163	-0.023
	Sig. (2-tailed)	0.822	0.409	0.580	0.397	0.906
	N	50	50	50	50	50

In the above table 5.66, the dependent variable is Cost of Outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Cost of outreach is positively correlated with Net Worth (0.044), and Firm Size (0.107) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Cost of outreach is negatively correlated with Asset Tangibility (-0.159), Debt to Asset (-0.023) and Debt to Equity ratio (-0.163) in table 5.66 respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.67: Model Summary - Impact on Cost of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.411 ^a	.169	.161	.043532997	1.784
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.67 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.411 in table 5.67 indicates a sound level of relationship between indicators of Capital structure and Cost of outreach. The ‘Adjusted R Square’ shows the measure of R² value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Cost of outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R² is 0.161 in table 5.67, 16.1% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.784 which is very close to 2 and is unacceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.68: ANOVA^a - Cost of Outreach

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.018	3	.006	3.120	.035 ^b
	Residual	.087	46	.002		
	Total	.105	49			
a. Dependent Variable: Cost						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.68 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 3.120, $p < 0.05$ (see table 5.68).

Since the p value is less than 0.05, therefore the hypothesis i.e. H₀₈ (Capital Structure has no significant relationship with the Cost of Outreach) is rejected and it can be said

that the independent variables have had an impact on dependent variable Cost of Outreach.

Therefore, it is found that the regression model is an average fit of the data.

Table 5.69: Coefficients - Regression Model - Cost of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.062	.076		.823	.415		
	Debt Equity Ratio	.011	.004	.438	2.837	.007	.819	1.221
	Debt to Asset Ratio	-.612	.259	-.365	-2.363	.022	.768	1.301
	Firm Size	.001	.009	.016	.119	.906	.552	1.810

a. Dependent Variable: Cost

The generalized Regression equation based on table 5.69 is as follows:

$$\text{Predicted Cost} = 0.062 + (0.011 \times \text{Debt equity ratio}) - (0.612 \times \text{Debt to asset ratio}) + (0.001 \times \text{Firm Size}) \dots \dots \dots \text{Equation 8}$$

Unstandardized coefficients show how much the dependent variable Cost of Outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 0.011 (D/E ratio) and 0.001 (FS) and decrease by a multiple of 0.612 (D/A ratio) plus constant of 0.062 in Cost of outreach (see equation 8).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.221 and tolerance is .819, the obtained VIF value for Debt to Asset Ratio is 1.301 and tolerance is .768 and for Firm Size VIF value is 1.810 and tolerance is .550. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are somewhat close .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.69, p value for Debt Equity ratio is 0.007 and Debt to Asset ratio is 0.022 which is significant at 5% level of significance for Firm Size p value is 0.906 which is not significant at 5% level of

significance. Therefore, D/E ratio and D/A ratio do play significant role in explaining Cost of outreach (dependent variable) and FS do not play significant role in explaining the dependent variable. Since, the Beta value of Debt Equity Ratio (.438) is the largest hence; it has the strongest impact on Cost of outreach (dependent variable).

5.5.6 Relationship between Worth of outreach and Capital Structure

Table 5.70: Correlation - Worth of Outreach and Capital Structure

		Net Worth	Asset Tangibility	Firm Size	Debt Equity Ratio	Debt To Asset Ratio
WORTH	Pearson Correlation	-0.048	-0.102	-0.044	0.112	0.238
	Sig. (2-tailed)	0.805	0.599	0.822	0.563	0.213
	N	50	50	50	50	50

In the above table 5.70, the dependent variable is Worth of Outreach and the other variables of consideration include Net Worth, Asset Tangibility, Firm Size, Debt Equity ratio and Debt to Asset ratio.

It is found that Worth of Outreach is negatively correlated with Net Worth (-0.048), Asset Tangibility (-0.102) and Firm Size (-0.044) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Worth of outreach is positively correlated with Debt to Asset (0.238) and Debt to Equity ratio (0.112) in table 5.70 respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

Table 5.71: Model Summary - Impact on Worth of Outreach

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.631 ^a	.399	.386	1000319.05169%	1.927
a. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO					

In the above table 5.71 the values of R, R square, adjusted R square and standard error is expressed. The R value indicates the coefficient of correlation which measures the strength and the direction of a linear relationship between two variables. A value of R as 0.631 in table 5.71 indicates a sound level of relationship between indicators of

Capital structure and Worth of outreach. The ‘Adjusted R Square’ shows the measure of R^2 value which is also called as coefficient of determination that explains the proportion of variance in the dependent variable Worth of outreach by predictor variables Debt Equity ratio, Firm Size and Debt to Asset ratio.

Since the value of Adjusted R^2 is 0.386 in table 5.71, 38.6% of the variance in the dependent variable is accounted by independent variables in the regression model. However, Autocorrelation among predictors (independent variables) is assessed through Durbin-Watson statistics. The most appropriate value for Durbin-Watson is 2 which show no correlation among the residuals. The obtained value is 1.927 which is very close to 2 and is in acceptable range. Therefore, the predictors satisfy the assumption of no correlation among residuals or no auto correlation.

Table 5.72: ANOVA^a - Worth of Outreach

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31829783683.453	1	31829790783.453	31.809	.000 ^b
	Residual	48030648495.440	48	10006382176.988		
	Total	79860432178.890	49			
a. Dependent Variable: Worth						
b. Predictors: (Constant), DEBT TO ASSET RATIO, FIRM SIZE, DEBT EQUITY RATIO						

The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.72 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 31.809, $p < 0.05$ (see table 5.72).

Since the p value is less than 0.05, therefore the hypothesis i.e. H_{09} (Capital Structure has no significant relationship with the Worth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Worth of Outreach.

Therefore, it is found that the regression model is a good fit of the data.

Table 5.73: Coefficients - Regression Model - Worth of Outreach

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	542280.243	155154.060		3.495	.001		
	Debt Equity Ratio	76096.543	.328	.290	2.074	.044	.981	1.019
	Debt to Asset Ratio	18108.237	.413	.096	.664	.510	.874	1.144
	Firm Size	.797	.141	.631	5.640	.000	.993	1.007

a. Dependent Variable: Worth

The generalized Regression equation based on table 5.73 is as follows:

$$\text{Predicted Worth} = 542280.2 + (76096.5 \times \text{Debt equity ratio}) + (18108.2 \times \text{Debt to asset ratio}) + (0.797 \times \text{Firm Size}) \dots \dots \dots \text{Equation 9}$$

Unstandardized coefficients show how much the dependent variable Worth of outreach varies with an independent variable Debt Equity ratio, Debt to Asset ratio and Firm Size. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 76096.543 (D/E ratio), 18108.237 (D/A ratio) and 0.797 (FS) plus constant 542280.243 in Worth of outreach (see equation 9).

However, Multicollinearity among predictors (independent variables) is assessed through collinearity statistics i.e. VIF (Variance Inflation Factor) and Tolerance. The obtained VIF value for predictor Debt Equity Ratio is 1.019 and tolerance is .981, the obtained VIF value for Debt to Asset Ratio is 1.144 and tolerance is .874 and for Firm Size VIF value is 1.007 and tolerance is .993. All the VIF values are less than 2 and are in acceptable range and all the tolerance values are near .9 which is also in acceptable range. Therefore, we can assume that there is no multicollinearity among predictors (independent variables).

Based on the Coefficients-Regression Model table 5.73, p value for Debt to Asset ratio is 0.510 which is not significant at 5% level of significance for Debt Equity ratio p value is 0.044 and Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/A ratio do not play significant role in explaining Worth of outreach (dependent variable) and D/E ratio and FS play significant role in explaining the dependent variable. Since, the Beta value of Firm Size (.631) is the largest hence; it has the strongest impact on Worth of outreach (dependent variable).

Objective 4: To establish a framework for understanding of financial and social performance of microfinance institutions.

5.6 Framework for Financial and Social Performance of Microfinance Institutions.

Factor Analysis

The main idea to use factor analysis in the context of MFIs' performance is to use the fact that there may be several factors or components of performance, each of which translates into many observable variables. From these many variables, factor analysis will help to extract factors or dimensions composed of combination of observed variables.

The first step in factor analysis is to decide how many factors are relevant to the model. As we see in the empirical part, this choice is guided by some simple rules. In general, one requires the first factor to have maximal contribution to the common variance of the observed variables, the second to have maximal contribution to this variance subject to being uncorrelated with the first, and so on. However, it is possible that a more interpretable solution can be achieved using a transformed model, obtained by a process known as factor rotation. Various methods for the rotation of factors are available and we will make use of an oblique one (promax with power 3), which allows the factors to be correlated, rather than independent. In our case, this is indeed what we want, as we expect the different dimensions of performance to be linked: MFIs can be performant on both dimensions at the same time, even if it is likely that MFIs trying to be the most socially performant will encounter some difficulty to be financially effective.

One method which has been put forth is to exclude factors with eigenvalues smaller than one, since the factors retained in this way account for more variance than the average for the variables. Another method is to keep just enough factors so that the cumulated variance explained is no less than 70%.

Eventually, an examination of the plot of the eigenvalues against the corresponding factor numbers, the so-called Scree Diagram can help the choice. The rate of decline tends to be fast for the first few factors but then levels off. The "elbow", or the point at which the curve bends, is considered to indicate the maximum number of factors to extract. Another way to use the Scree plot is to draw a straight line connecting the

lowest eigenvalues, the threshold being where this line separates from the eigenvalues' line.

Next, we apply a rotation of the factors to provide a more meaningful and easily interpretable solution loading matrix. As previously stated, it makes sense to allow the different dimensions of performance to be correlated. We therefore apply an oblique rotation that involves the introduction of correlations between factors. The resulting loadings are then presented in table.

To initiate factor analysis, the 12 variables were entered into SPSS 26 and the analysis was run. Various tables and results were obtained. The first result that was analyzed was Keiser-Meyer-Olkin (KMO) Test and Bartlett's Test of Sphericity as shown in table 5.74 below. The KMO test is observed to establish the adequacy of sample size, the value of this statistic lies between 0 and 1. Keiser (1974) recommends that a value greater than 0.5 is merely acceptable, a value of 0.5 to 0.7 is mediocre, the value 0.7 to 0.8 as good where as the values between 0.8 - 0.9 are great and value greater than 0.9 as superb. The KMO value obtained for the current variables is 0.742 that can be considered as good, thereby confirming the adequacy of sample size to conduct the factor analysis. Further, the test is significant at 5% level of significance.

Table 5.74: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.742
Bartlett's Test of Sphericity	Approx. Chi-Square	947.812
	Df	66
	Sig.	.000

For latent factors to exist there should be sufficient amount of correlation between the measured variables. Bartlett's Test of Sphericity examines whether there is sufficient correlation among the variables in the population. For sufficient amount of correlation to be present in the variables the Bartlett's Test of Sphericity should be significant. The obtained Chi Square statistic of Bartlett's test was high with a value of 947.812 in table 5.74, with the p-value significant 0.000 level. Therefore it may be concluded that there is sufficient amount of correlation is present between variables to move forward and analyse the results of factor analysis.

Table 5.75: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.718	39.314	39.314	4.718	39.314	39.314	4.680
2	1.494	12.452	51.765	1.494	12.452	51.765	1.521
3	1.261	10.510	62.275	1.261	10.510	62.275	1.342
4	1.229	10.239	72.514	1.229	10.239	72.514	1.343
5	.994	8.280	80.794				
6	.667	5.555	86.349				
7	.625	5.207	91.556				
8	.544	4.533	96.089				
9	.392	3.270	99.359				
10	.072	.601	99.960				
11	.005	.040	100.000				
12	1.438E-6	1.198E-5	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

After establishing the sample adequacy and sufficient correlation among the variables the main factor analysis results were analyzed. First factor analysis was run without any rotation and it was found that 72.51% of the variance was explained by four dimensions, shown in the table 5.75 above. To understand the factors more comprehensively rotation of factors was done and oblique rotation method was employed since latent factors were thought to be interrelated with each other. The recommendation of Field (2009) was followed and Direct Oblimin method for oblique rotation was used.

Factor extraction was done using Keiser's (1960) where only those factors were extracted which have eigenvalue of more than 1. This criterion extracted four dimensions with 72.51% of the variance explained in variables. Since this solution explained a good amount of variance (72.51%) therefore four factor solutions were accepted for the considered variables. The first dimension explained 39% variance and the subsequent three dimensions explained approximately 12%, 10%, and 10% of the variance respectively. As shown in the below table, the communalities extracted in this solution were also were close to 0.7 whereas the average communality was found to be .725 indicating a substantial amount of variance explained in each observed variable.

Table 5.76: Communalities

	Initial	Extraction
ROA	1.000	.858
ROE	1.000	.569
OSS	1.000	.973
PROFIT MARGIN	1.000	.966
OPERATING EFFICIENCY	1.000	.632
FSS	1.000	.973
BREADTH	1.000	.592
DEPTH	1.000	.581
LENGTH	1.000	.681
SCOPE	1.000	.586
COST	1.000	.562
WORTH	1.000	.730
Extraction Method: Principal Component Analysis.		

First the rotated component matrix was studied to get the combination of variables with which the dimensions are made of. As shown in the table below 5.77 the loading of all the variables on all the four dimensions is shown. To comprehend the dimensions more clearly, only a loading of greater than equal to 0.4 was interpreted. Once a cut-off of 0.4 was applied a clear structure of the dimensions emerged as may be observed from the below table no. 5.77. The structure of the variables may be overlapping since this is purely an exploratory factor analysis and no priori structures of the dimensions were conceived.

Table 5.77: Component Matrix^A

	COMPONENT			
	1	2	3	4
ROA	.912	.219	-.023	.001
ROE	.242	.711	.064	.066
OSS	.984	.043	.061	.082
PROFIT MARGIN	.981	.059	.053	.054
OPERATING EFFICIENCY	-.427	.532	-.217	-.384
FSS	.984	.043	.060	.082
BREADTH	.616	.511	.005	-.050
DEPTH	.550	.314	-.303	.417
LENGTH	.132	.154	.775	-.053
SCOPE	-.085	-.206	.751	.001
COST	-.006	-.491	.154	-.534
WORTH	-.024	-.108	.020	.843
EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS.				
A. 4 COMPONENTS EXTRACTED.				

Hence we can finally reduce the variables into four dimensions which are as follows:

Dimension 1: ROA + OPERATING SELF-SUFFICIENCY + PROFIT MARGIN + FINANCIAL SELF-SUFFICIENCY + BREADTH + DEPTH

Dimension 2: ROE + OPERATING EFFICIENCY

Dimension 3: LENGTH+SCOPE

Dimension 4: COST + WORTH

The weight of each variable in the above equations is the factor loading in the above component matrix. Hence, the above framework may be employed in the context of MFIs to understand their social and financial performance.

5.7 Summary of Chapter

This chapter analyses the data exhaustively and presents the results for all the research objectives. The relationship between various components is analysed in detail. Univariate and Multivariate data analytical techniques such as Mean, Median, Correlation, Regression and Factor Analysis have been employed for data analysis to come up with appropriate answers to the set out questions. The data analysis begins with descriptive statistics followed by correlation between the variables of capital structure and indicators of financial and social performance related to performance of MFIs. The nature of correlation is found and simple regression technique was applied to find out the extent of relationship.

The factor analysis comes up with a set of variables which underline the construct and it is only these variables which can be cumulated to form an index or to measure the performance of MFIs in future studies. The construct of performance can be broken down into two aspects i.e. social performance and financial performance. The research hypotheses have also been tested and accepted or rejected based on the results of the study.

Chapter 6

Findings and Suggestions

FINDINGS AND SUGGESTIONS

6.1 Introduction

The objective of this chapter is to discuss and sketch the findings and conclusion in the perspective of the set out objectives of the research. The section presents the summary of the intact research work tailed by the suggestions and conclusions. The detailed findings of the study which form the core of this section alongwith, the direction for future research is highlighted. The section also presents the limitations of the study.

6.2 Findings of the Study

The findings are the results of the research of an extensive data analysis in the undertaken research study. Each and every finding is in related to the context with the set out research objectives.

6.2.1 Findings for Objective 1: To measure the levels of financial performance of Microfinance Institutions.

6.2.1.1 Return on Equity (ROE)

- Across the given MFIs, Bhartiya Micro (25.89%) is seen to have a higher ROE followed by the SV Creditline (21.79%). Also, Spandan (-65.28%) is seen to have the lowest ROE followed by the MFI Sonata (0.74 %).
- Some of the new firms did not exhibit sound ROE figures indicating unhealthy picture of the MFIs. It shows that returns provided to the shareholders are not good and adequate enough and hence the objective of wealth maximisation is not satisfied.
- It is found that 12 per cent of the sample size had a negative ROE while the rest 88 per cent had a positive ROE. Out of the 88 per cent, half of the MFIs had a return on equity greater than the benchmark of 15 per cent, while the rest scaled between 0 to 15 per cent.

- It was also found that the MFIs did have a long-term pattern in their ROE figures indicating a consistent regularity in their performance levels and their returns to the shareholders.
- The data shows that around one-third of the sample size show a negative trend in their ROE figures. The measure such as ROE indicates the ability to give returns to its shareholders via retained earnings and also shows the ability to provide for additional equity.

6.2.1.2 Return on Assets (ROA)

- Some of the firms have amassed losses, thereby indicating and coming up with negative returns and profit figures pushing the overall mean figures to a low.
- It is also found that Sanghamithra across the given sample size secures the highest ROA (4.70%) followed by RGVN. Also, Fusion (0.11%) scores the least ROA among the given list of Microfinance firms.
- Out of a sample size of 50 firms, it is found that still 34 per cent of the sample size had a negative ROA while the rest 66 per cent had a positive ROA. The entire 66 per cent had a Return on Assets lesser than the benchmark of 10 per cent.
- It is noticeable that overall figures of ROA are not on a benchmark stating that a lot needs to be done in order to ensure that the losses for the budding firms are kept to a minimum.
- We find that Microfinance firms do not have a long-term consistency in their Return on Assets figures.
- Most firms have declining ROA and it indicates that the Return on Assets to its owners and other lenders is not available. This can be attributed to lack of a significant growth and hence there is less proportion of equity and also ever rising presence of other Microfinance Institutions have added to the diffusion in the market share.
- The long-term sustainability is impaired since the firm is never in a position to make return sufficient enough to cover expenses which are ever rising on its loan management activities.

6.2.1.3 Debt Equity ratio

- The analysis indicates that a number of the firms are a borderline case defaulting on the marginal lines. More than half of the companies have a Debt Equity ratio in and around more than one.
- Also, a major portion of the Microfinance firms have higher ratio indicating high interest and principal payments as a burden with a high gearing. It also indicates that these firms have a higher onus on themselves to come up with better profit figures to cover their interest expenses.
- It is also found that Agora in the given representation has lowest Debt Equity ratio followed by Disha Microfinance while Cashpor has the highest Debt Equity ratio followed by Annapurna.
- It is again observed that only few of the Microfinance firms have a consistent trend with respect to the solvency ratio like Debt Equity ratio. In fact they have a negative trend indicating that the interest and principal payments are rising over last few years.
- Most of the firms almost greater than three fourth of the firms have a negative trend in their solvency ratios which indicates that there are lesser firms taking Microfinance deposits and hence sustaining them has been an issue over last few years.

6.2.1.4 Operational Self-Sufficiency (OSS)

- Among the sample size of 50 firms, there is a direct relationship between OSS and firms profit positions as is evident.
- The results indicate that there is a direct link between Return on Assets and OSS.
- The analysis depicts that the most firms have an average OSS. The reason which can be explicitly marked is that they are dependent on the expenses and allied operating expenses ratio.
- Nearly three fourth of the sampling frame have an average OSS greater than 10 per cent. Long-term sound OSS indicates that the Microfinance firms have become more stable and sound as they are able to sustain their operations

covering for their operating expenses. It is a positive indicator as it indicates the viability of the firms and the future growth of the operations.

- There is not a significant trend in the behavioural pattern of Operational self-sufficiency. Many firms have breached the level of OSS figures and have not been able to retain the average figures required for the sustenance. Most of the firms do have a long-term trend of OSS.
- The data depicts that among the 50 selected MFIs, 30 have a positive increasing long-term trend and 20 are having a declining OSS and the remaining. Out of the 30, 10 are having an OSS increasing on an average of 5 per cent over last three years. Though a static low growth trend, OSS is one of the instrumental factors which influence long-term financial sustainability.

6.2.1.5 Gross Loan Portfolio (GLP)

- 60 per cent of the samples have an average Gross Loan Portfolio below INR 250 Crores and the rest 40 per cent have an average Gross Loan Portfolio exceeding INR 250 Crores. Out of these 40 per cent, 8 have an average Gross Loan Portfolio higher than INR 500 Crores.
- The long-term Gross Loan Portfolio of the Microfinance firms is seen with the help of analysis. The result highlights that most of the firms have a long-term trend in case of their GLP figures and most of the firms have a higher GLP over a period of time. The firms also have a significant increasing trend and are on a positive side.
- The data indicates that among the sampling units, 28 firms have a growth less than INR 50 Crores per annum and 22 have a growth of more than INR 50 Crores per annum. The increase in GLP trends show that that the MFIs are on a long-term growth which also mean higher outreach achieving economies of scale and greater profitability.

6.2.1.6 Yield on Gross Loan Portfolio

- The average figures for the yield on its Gross Loan Portfolio as can be seen ranges from a bare minimum of 6.55 per cent to as high as 30.10 per cent. The mean as it turns out to be near 21 per cent. An average figure of 20 to 30 per

cent also shows a good performance of the Microfinance Institutions for the duration under study.

- Some of the firms have also managed to trend with a percentage of more than 20 per cent on the Gross Loan Portfolio. The data however indicates a negative pattern among the Microfinance firms having a return of less than 20 per cent.
- This can be attributed to the declining interest rates which the firms were forced to charge on their loans.

6.2.1.7 Growth Rate - Assets

- The growth rate in assets range from a negative minimum of 9.65 per cent to as high as 83.10 per cent on a positive side. The average as it turns out to be near 32 per cent. An average figure of 15 to 30 per cent also shows a good performance of the Microfinance Institutions for the duration under study.
- It can be summed up that most of the selected Institutions have a noteworthy rate of growth related to their assets from over past three years.
- The present study specifies that among a sample size of 50 firms; of that one third of the firms approximately have a growth rate less than 15 per cent, nearly one third of the firms also have a growth rate between 15 per cent to 30 per cent and the remaining of the firms have a growth rate of more than 30 per cent. Hence, it can be concluded that the Microfinance firms have a positive growing trend implying a positive feature for the Microfinance sector. The average numbers for the firms near about 30 per cent which is a good indicator.

6.2.1.8 Growth Rate - Borrowings

- The growth rate in borrowings range from a negative minimum of 12.97 per cent to as high as 52.10 per cent on a positive side. The average as it turns out to be near 31 per cent. An average figure of 10 to 30 per cent also shows a good performance of the Microfinance Institutions for the duration under study.
- It can be summed up that most of the selected Institutions have a noteworthy rate of growth related to their borrowings from over past three years.

- The research says that out of a selection of the sampling units, we find that only a fraction of the sampling frame have a negative growth rate in case of firms. The rest show a growing growth rate which is also positive. The study indicates that around two-third of the firms have a growth rate between 0 to 30 per cent while nearly one third of the firms have a growth rate of more than 30 per cent.

6.2.2 Findings for Objective 2: To measure the levels of social performance of Microfinance Institutions.

6.2.2.1 Breadth of Outreach

- The first indicator is calculated using the log of active borrowers. The data indicates that the average number of borrowers were 733411.7 (by using the actual figures). Further, minimum number of borrowers were 11408 and maximum number of borrowers were 5888750. The standard deviation indicates that the numbers are more consistent towards the average number of borrowers.
- The data indicated that the Microfinance firms are performing when it comes to adding up the number of active borrowers in their balance sheet. Greater the number of active borrowers, better would be the attainment of social objectives of a Microfinance firm. In this context as well, the firms are doing good as the number of borrowers have increased over a period of time.

6.2.2.2 Depth of Outreach

- The data indicates that the average loan size per borrower. The data indicates that the average Loan Size per Borrower was INR 23930.5264 (by using the actual figures). Further, minimum Loan size per borrower was INR 443 and maximum Loan Size per Borrower was INR 197473 approximately. The standard deviation indicates that the Average Loan size per borrower is less consistent towards its average figures.
- The data indicated that the microfinance firms are doing significantly well when it comes to doing business by adding up the volumes of loan added in the existing portfolio. The figures indicate that the loan size has been a tangible figure and further the number of borrowers have also been added up.

Such numbers, indicate higher level of attainment of social objectives of a microfinance firm.

6.2.2.3 Length of Outreach

- The table indicates that the minimum figures for the above indicator are nil while maximum ranges around 19.70%. The average figures range around 3.3642%. The standard deviation indicates that the numbers are very inconsistent.
- The data indicates that the levels of sustainability on social fronts and objectives are not very sound and numbers are dismal and inconsistent.

6.2.2.4 Scope of Outreach

- The data indicates that average number of distinct loan products were 6.3800. The number of variants in product design were as low as 1 to as high as 14. The standard deviation indicates that the numbers are more consistent towards the average number.
- The analysis suggests that the numbers of products offered by Microfinance firms are various and are different from each other on various counts. Each of the products offered fulfils a specific utility and has a demarcation from the other. The Scope of the Microfinance firms is however greater since the products to offer have a customised offering.

6.2.2.5 Cost of Outreach

- The table is created by using the average figures of nominal yield on gross loan portfolio. The data indicates that the average is around 20.9445%. The minimum figures are 6.55% while finding the minimum and increased to a maximum of 26.60%. The standard deviation indicates that the numbers are very inconsistent.
- The cost is the yield or interest offered by the Microfinance firms and the study reveals that the data is inconsistent and is insignificant. The interest or yield figures are nominal and lack a tangible or a constructive inference to account. It also indicates that it is one of the most less effective indicators accounting for social performance of the Microfinance firms.

6.2.2.6 Worth of Outreach

- The above indicator is calculated using the Loan Loss rate. The data indicates that the average loan loss rate is around 0.78. The figures reduced to nil while finding the minimum loan loss rate and increased to as high as 11.59. The standard deviation indicates that the numbers are very inconsistent.
- The data indicates that the Worth of outreach figures are very consistent and we can safely say that most of the loans tendered are good and the chances of them getting bad are less.

6.2.3 Findings for Objective 3: To analyse the association between financial and social performance of Microfinance Institutions with the Capital Structure of the same.

6.2.3.1 Financial Performance

6.2.3.1.1 Return on Assets

6.2.3.1.1.1 Relationship between Return on Assets and Capital Structure

- It is seen that the Return on Assets have a positive relationship with Net Worth (0.523) and Asset Tangibility (0.621) at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.
- However, the relationship is a weak one and it is in similar direction. ROA is negatively correlated with Firm Size (-0.19), Debt Equity ratio (-0.089) and Debt to Asset ratio (-0.259) respectively at 5% confidence level. Implying that the greater size of the firms have not been able to capitalise upon giving an impact to the Return on Assets.
- The significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.1.1.2 Impact on Return on Assets

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The table 5.30 shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 6.638, $p < 0.05$.

- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{01} (Capital Structure has no significant relationship with the Return on Assets) is rejected and it can be said that the independent variables have had an impact on dependent variable ROA.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 0.149 (D/E ratio) and 0.229 (D/A ratio) and increase by a multiple of 0.112 (FS) plus constant of 4.401 in Return on Assets.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.214 and Firm Size is 0.063 which is not significant at 5% level of significance for Debt to Asset ratio p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and Firm Size do not play significant role in explaining ROA (dependent variable) and D/A ratio play significant role in explaining the dependent variable.

6.2.3.1.2 Return on Equity

6.2.3.1.2.1 Relationship between Return on Equity and Capital Structure

- It is found that ROE is mildly correlated with Net Worth (0.114), Firm Size (0.092) and Asset Tangibility (0.129) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- ROE is positively correlated with Debt to Asset (0.632) and Debt to Equity ratio (0.743) respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

6.2.3.1.2.2 Impact on Return on Equity

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 9.481, $p < 0.05$.

- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{02} (Capital Structure has no significant relationship with the Return on Equity) is rejected and it can be said that the independent variables have had an impact on dependent variable ROE.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 1.434 (D/E ratio) and increase by a multiple of 0.906 (D/A ratio) and 4.072 (FS) plus constant of 23.112 in Return on equity.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.119, Debt to Asset ratio is 0.619 which is not significant at 5% level of significance for Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and D/A ratio do not play significant role in explaining ROE (dependent variable) and FS play significant role in explaining the dependent variable.

6.2.3.1.3 Tobin's Q

6.2.3.1.3.1 Relationship between Tobin's Q and Capital Structure

- It is found that Tobin's Q is mildly correlated with Debt Equity ratio (0.025) and Debt Asset ratio (0.212) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated.
- Tobin's Q is negatively correlated with Asset Tangibility (-0.006) and Firm Size (-0.191) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Tobin's Q is positively correlated with Net worth (0.569) at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variable is linearly correlated.

6.2.3.1.3.2 Impact on Tobin's Q

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables

statistically and significantly predict the dependent variable, F-Value = 10.452, $p < 0.05$.

- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{03} (Capital Structure has no significant relationship with the Tobin's Q) is rejected and it can be said that the independent variables have had an impact on dependent variable Tobin's Q.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt equity ratio, Debt to asset ratio and Firm Size; Tobin's Q would decrease by a multiple of 0.001 (D/E ratio), 0.010 (D/A ratio) and 0.017 (FS) plus constant of 0.401 in Tobin's Q (see equation 3).
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.727 and Debt to Asset ratio is 0.120 which is not significant at 5% level of significance for Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio and D/A ratio do not play significant role in explaining Tobin's Q (dependent variable) and FS play significant role in explaining the dependent variable.

6.2.3.1.4 Profit Margin

6.2.3.1.4.1 Relationship between Profit Margin and Capital Structure

- It is found that Profit Margin is mildly correlated with Asset Tangibility (0.005) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated.
- Profit Margin is negatively correlated with Net Worth (-0.088) and Firm Size (-0.064) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Profit Margin is positively correlated with Debt Equity ratio (0.614) and Debt to asset ratio (0.566) at 5% confidence level and the significance value is less

than 0.05. The p value is less than 0.05 and hence the variable is linearly correlated.

6.2.3.1.5 Operating Self-Sufficiency

6.2.3.1.5.1 Relationship between OSS and Capital Structure

- It can be seen that Operating self-sufficiency is positively correlated with Debt Equity ratio (0.392) and Debt to Asset ratio (0.457) at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated. However, the relationship is a weak one and it is in similar direction.
- OSS is negatively correlated with Net Worth (-0.101), Asset Tangibility (-0.03) and Firm Size (-0.059) respectively in table 5.43 at 5% confidence level the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.1.5.2 Impact on Operating Self-Sufficiency

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 0.384, $p > 0.05$.
- Since the p value is greater than 0.05 it can be said that the independent variables doesn't have had an impact on dependent variable OSS.
- Therefore, it is found that the regression model is a poor fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 1.111 (D/E ratio) and decrease by a multiple of 2.947 (D/A ratio) and 1.929 (FS) plus constant of 139.681 in Operating Self-Sufficiency.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.126 which is not significant at 5% level of significance for Debt to Asset ratio is 0.045 and Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio do not play significant role in explaining

OSS (dependent variable) whereas, D/A ratio and FS play significant role in explaining the dependent variable.

6.2.3.1.6 Financial Self-Sufficiency

6.2.3.1.6.1 Relationship between Financial Self-Sufficiency and Capital structure

- It is found that FSS is mildly correlated with Debt Equity ratio (0.050) and Debt Asset ratio (0.195) at 5% confidence level and the significance value is more than 0.05. The p value is greater than 0.05 and hence the variables are not linearly correlated. Therefore, the relationship is a weak one and it is in similar direction.
- FSS is negatively correlated with Net Worth (-0.101), Asset Tangibility (-0.113) and Firm Size (-0.058) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.1.6.2 Impact on Financial Self-Sufficiency

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 12.505, $p < 0.05$.
- Since the p value is less than 0.05, it can be said that the independent variables have had an impact on dependent variable FSS.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of -0.422 (D/E ratio) and increase by a multiple of 0.464 (D/A ratio) and 0.641 (FS) plus constant of 3.187 in Financial Self-Sufficiency.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.009, Debt to Asset ratio is 0.000 and Firm Size is 0.000 which is significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS play significant role in explaining FSS (dependent variable).

6.2.3.2 Social Performance

6.2.3.2.1 Breadth of Outreach

6.2.3.2.1.1 Relationship between Breadth of outreach and Capital Structure

- Breadth of outreach is positively correlated with Debt Equity ratio (0.442) and Debt to Asset ratio (0.521) respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.
- It is found that Breadth of outreach is negatively correlated with Net Worth (-0.048), Firm Size (-0.044) and Asset Tangibility (-0.102) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.2.1.2 Impact on Breadth of Outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 8.420, $p < 0.05$.
- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{04} (Capital Structure has no significant relationship with the Breadth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Breadth of Outreach.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 0.734 (D/E ratio), 1.239 (D/A ratio) and 0.341(FS) plus constant of 408166.21 in Breadth of outreach.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.000, Debt to Asset ratio is 0.001 and Firm Size is 0.031 which is significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS play significant role in explaining Breadth of outreach (dependent variable).

6.2.3.2.2 Depth of Outreach

6.2.3.2.2.1 Relationship between Depth of outreach and Capital Structure

- It is found that Depth of outreach is mildly correlated with Net Worth (0.023), Firm Size (0.312) and Asset Tangibility (0.234) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Depth of outreach is positively correlated with Debt to Asset (0.423) and Debt to Equity ratio (0.411) respectively at 5% confidence level and the significance value is less than 0.05. The p value is less than 0.05 and hence the variables are linearly correlated.

6.2.3.2.2.2 Impact on Depth of outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. It shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 9.481, $p < 0.05$.
- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{05} (Capital Structure has no significant relationship with the Depth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Depth of Outreach.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 2.380 (D/E ratio) and 66.366 (D/A ratio) and decrease by a multiple of 5.428 (FS) plus constant of 75.419 in Depth of outreach.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.321, Debt to Asset ratio is 0.684 and FS is 0.370 which is not significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS do not play significant role in explaining Depth of outreach (dependent variable).

6.2.3.2.3 Length of Outreach

6.2.3.2.3.1 Relationship between Length of outreach and Capital Structure

- It is found that Length of outreach is negatively correlated with Net Worth (-0.011), Firm Size (-0.044) and Asset Tangibility (-0.112) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Length of outreach is positively correlated with Debt to Asset (0.112) and Debt to Equity ratio (0.238) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.2.3.2 Impact on Length of outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 3.420, $p < 0.05$.
- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{06} (Capital Structure has no significant relationship with the Length of outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Length of outreach.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 0.031 (D/A ratio) and increase by a multiple of 0.009 (D/E ratio) and 1.231 (FS) plus constant of 0.12 in Length of outreach.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.001 and Debt to Asset ratio is 0.000 which is significant at 5% level of significance for Firm Size p value is 0.439 which is not significant at 5% level of significance. Therefore, D/E ratio and D/A ratio play significant role in explaining Length of outreach (dependent variable) and FS do not play significant role in explaining the dependent variable.

6.2.3.2.4 Scope of Outreach

6.2.3.2.4.1 Relationship between Scope of outreach and Capital Structure

- It is found that Scope of outreach is negatively correlated with Net Worth (-0.048), Asset Tangibility (-0.102) and Firm Size (-0.044) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Scope of outreach is positively correlated with Debt to Asset (0.238) and Debt to Equity ratio (0.112) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.2.4.2 Impact on Scope of Outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The independent variables statistically and significantly predict the dependent variable, F-Value = 1.784, $p > 0.05$.
- Since the p value is greater than 0.05, therefore the hypothesis i.e. H_{07} (Capital Structure has no significant relationship with the Scope of Outreach) is accepted and it can be said that the independent variables doesn't have had an impact on dependent variable Scope of outreach.
- Therefore, it is found that the regression model is a poor fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is a decrease by a multiple of 18.499 (D/E ratio), 122.909 (D/A ratio) and 8.797 (FS) plus constant of 313.899 in Scope of outreach.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.202, Debt to Asset ratio is 0.217 and Firm Size is 0.807 which is not significant at 5% level of significance. Therefore, D/E ratio, D/A ratio and FS do not play significant role in explaining Scope of outreach (dependent variable).

6.2.3.2.5 Cost of Outreach

6.2.3.2.5.1 Relationship between Cost of outreach and Capital Structure

- It is found that Cost of outreach is positively correlated with Net Worth (0.044) and Firm Size (0.107) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Cost of outreach is negatively correlated with Asset Tangibility (-0.159), Debt to Asset (-0.023) and Debt to Equity ratio (-0.163) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.2.5.2 Impact on Cost of Outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 3.120, $p < 0.05$.
- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{08} (Capital Structure has no significant relationship with the Cost of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Cost of Outreach.
- Therefore, it is found that the regression model is an average fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 0.011 (D/E ratio) and 0.001 (FS) and decrease by a multiple of 0.612 (D/A ratio) plus constant of 0.062 in Cost of outreach.
- Based on the Coefficients-Regression Model, p value for Debt Equity ratio is 0.007 and Debt to Asset ratio is 0.022 which is significant at 5% level of significance for Firm Size p value is 0.906 which is not significant at 5% level of significance. Therefore, D/E ratio and D/A ratio do play significant role in explaining Cost of outreach (dependent variable) and FS do not play significant role in explaining the dependent variable.

6.2.3.2.6 Worth of Outreach

6.2.3.2.6.1 Relationship between Worth of outreach and Capital Structure

- It is found that Worth of Outreach is negatively correlated with Net Worth (-0.048), Asset Tangibility (-0.102) and Firm Size (-0.044) at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.
- Worth of outreach is positively correlated with Debt to Asset (0.238) and Debt to Equity ratio (0.112) respectively at 5% confidence level and the significance value is greater than 0.05. The p value is more than 0.05 and hence the variables are not linearly correlated.

6.2.3.2.6.2 Impact on Worth of Outreach

- The F-ratio calculated through ANOVA explains whether the overall regression model is a good fit for the data or not. The shows that the independent variables statistically and significantly predict the dependent variable, F-Value = 31.809, $p < 0.05$.
- Since the p value is less than 0.05, therefore the hypothesis i.e. H_{09} (Capital Structure has no significant relationship with the Worth of Outreach) is rejected and it can be said that the independent variables have had an impact on dependent variable Worth of Outreach.
- Therefore, it is found that the regression model is a good fit of the data. This means that for every unit increase in Debt Equity ratio, Debt to Asset ratio and Firm Size; there is an increase by a multiple of 76096.543 (D/E ratio), 18108.237 (D/A ratio) and 0.797 (FS) plus constant 542280.243 in Worth of outreach.
- Based on the Coefficients-Regression Model, p value for Debt to Asset ratio is 0.510 which is not significant at 5% level of significance for Debt Equity ratio p value is 0.044 and Firm Size p value is 0.000 which is significant at 5% level of significance. Therefore, D/A ratio do not play significant role in explaining Worth of outreach (dependent variable) and D/E ratio and FS play significant role in explaining the dependent variable.

6.2.4 Findings for Objective 4: To establish a framework for understanding of financial and social performance of Microfinance Institutions.

Factor Analysis

From the above analysis, we see that the entire set of variables can be reduced to four dimensions which account for explanation to the extent of 72.514% of the total variation.

Only those components are picked up where eigenvalues are greater than 1.0 and further only those components are picked up across dimensions where factor loadings are greater than 0.5. Hence, we can finally reduce the variables into four dimensions which are as follows:

Dimension 1: ROA + OPERATING SELF-SUFFICIENCY + PROFIT MARGIN +
FINANCIAL SELF-SUFFICIENCY + BREADTH + DEPTH

Dimension 2: ROE + OPERATING EFFICIENCY

Dimension 3: LENGTH+SCOPE

Dimension 4: COST+WORTH

Each of the above dimensions could be used mutually exclusively to identify methods or ways by which we can analyse the performance of the Microfinance firms.

- The first dimension is the combination of the financial factors such as Return on Assets, Profit Margin etc. as well as social factors such as Breadth and Depth. Such a combination puts up a rigorous framework by which the performance of the firms can be analysed in detail.
- The second dimension is a skewed method to analyse the Microfinance firms since it only considers two financial fronts of the firms which are Return on equity and Operating Efficiency.
- The third dimension is a skewed method and is a counterpart to the second combination to analyse the Microfinance firms since it only considers two social fronts of the firms which are Length and Scope of Outreach.
- The fourth dimension is another similar skewed method to analyse the Microfinance firms since it only considers two social parameters Cost and Worth of Outreach.

All the above dimensions cannot be used in isolation and have to be used in combination with either of the above methods in tandem.

Hence, we come to a conclusion that a number of factors can be filtered to find out various ways by which performance of a Microfinance firm can be evaluated.

6.3 Suggestions

With regards to the other texts discussing about the tool Microfinance, this piece of research too focuses on the same. It discusses the significance of the Microfinance Institutions in eradicating poverty from India and also from various other developing countries. However, this study suggests that although Microfinance approaches towards the upliftment of the society, it must first provide benefit to itself and become financially sustainable in order to attain its long term social objectives, thereafter move towards providing assistance to the poor. The underlisted suggestions have been made with reference to this research:

- Though the Microfinance Institutions assessment in the past was always done with its impacts on the society but with the changing time the main focus of the Microfinance Industry must be on the financial and operational sustainability.
- The issues and challenges concerning Microfinance should be addressed alongwith the pending bills which require to be implemented in order to avoid any future incidents of crisis. The Microfinance Institutions must have a transparent practice of accounts keeping like other financial institutions and companies and must also keep check of the evaluation system.
- It is also suggested that the Microfinance Institutions must publish their mechanisms at their proficiency level which comprises of both the financial as well as social levels of performance, till the time the regulatory framework is combined. The main objective behind doing this is to encourage the ineffective Microfinance Institutions and also to inform the fund donors concerning the avenues of investment related to their intentions.
- After the initial stage, MFIs need to emphasise upon exploration of other sources of funds other than subsidies and grants and support from the government.

- The most significant variables such as portfolio at risk, operational self-sufficiency and return on assets which evaluate the performance of the MFIs relating to the short-term expenses must be effectively managed. Moreover, it is also suggested that the efficient management of the resources by the Microfinance Institutions and the utilization of the assets must also be significantly focussed with an objective of attaining sustainability.
- The system must be established to enhance bargaining power via. transparent pricing. One way is to charge interest across the Microfinance industry which would enable the customer to comprehend varied products and services and help them to make a better choice.
- The operational costs have been high and one could employ technology to reduce it and make an optimum use of the available services which would also make the products more attractive.
- More branches could be set up in the interiors of rural India which can reach out to the rural population.
- The financial institutions can create more literacy in financial domain to drive the need for financial products.
- A complete range of products and services which include savings, credit, remittance and other also non-financial services can be offered.
- The Microfinance industry is slated to see a major expansion with the formulation and implementation of new regulations thereby increasing transparency and systemisation. This would also help to retain the stakeholder's interests.

6.4 Summary of Chapter

This chapter is giving the snapshot of the entire research work initiated by the researcher. It summarizes the results and present an in depth discussion of major findings. In a systematic way an outline of the findings associated with each research objective is specified. It also lists the suggestions specific for the MFIs and the policy makers as well.

Chapter 7

Limitations and Future Scope

LIMITATIONS AND FUTURE SCOPE

7.1 Limitations of the Study

Even after chalking out the irrelevant objects in the study, this research study still holds few limitations:

- This research study, firstly, limits itself to be time-focussed for a period of 3 years, commencing from 2015.
- The research underwent various issues relating to the collection of data as most of the respective respondents as they were not disclosing the facts and information very freely. Therefore, the amount of relevant collection of data was restricted adding to be a limitation in this study.
- The criteria for selecting a MFI was restricted in the study to only the top rated MFIs.
- The data has been composed only for fifty MFIs based on rating given by MIX and their portfolio size.
- The exclusive focus was only on Indian Microfinance Institutions hence results cannot be generalized globally.
- Many other issues related to Microfinance such as women empowerment, human resource sustainability etc. are not taken into study.
- There may be some effect on the findings of the study due to demonetization as the study time period was 2015-18 and demonetization took place in last quarter of 2016.

7.2 Contributions of the Study

- This research study fundamentally figures out the significant relationship between the capital structure and the social and financial performance of the MFIs, substantially removing the gap of the study.
- Another significant contribution of this study is that it focuses on the factors influencing the social and financial performance with respect to the capital structure of the institution.

- The research findings of this study contribute to build a sound management system in a Microfinance Institution by facilitating the uses by the investors, financial managers, various shareholders and the financial management consultants.
- This research study contributes an opportunity to the practitioners and academicians to study and understand the function of capital structure decisions for transiting MFIs in India.
- The study reviewed the findings of the former researchers by conducting tests to study the linkage between the capital structure and financial performance of the Microfinance Institutions taken as sample. Hence, this research study adds on to the prevailing theories researched over by former authors and comes up with its own set of findings.
- With the findings and the outcomes of the study, the top level managers of a Microfinance Institution will facilitate to construct an optimal capital structure and then to improve the methodologies of micro-credit even more efficiently in the nation.
- This study majorly contributes to knowledge along with adding information to the theories formerly existing. The Microfinance Institutions require to comprehend that by improving their capital structure to framing it optimally and to governing it effectively will pull in increased chances of enhanced financial performance, financial sustainability as well as the social performance of the Institution.
- The ultimate findings of the study add on to the existing insights in the aspects concerning the capital structure and socio-financial performance and also facilitates for further academic research if conducted in future. Henceforth, this research study offers a direction on which a study may be carried on.
- This study contributes to be of great help to the policy makers with respect to the effective designing of combination of capital structure needs to be taken up and decision making authorities for endorsing capital structure decisions by assessing the present performance and to make the possible and proper changes if necessary.

7.2 Directions for Future Studies

A research no matter in whichever subject is never complete. This study is a contribution but a number of studies in this concern are a possibility. The extension of this study can be enabled keeping in view with various facets:

- The total time period of this research study is three years, commencing from 2015. With an objective of bringing more accuracy into picture, the total duration of study may be extended beyond three years. A set of more generalized conclusions can be established if other indexes comprising of Microfinance Institutions will also be involved leading to a larger sample size.
- In future researches, the incorporation of primary sources of data will be more beneficial alongwith secondary sources of data in order to attain more consistent outcomes.
- The studies to be conducted in future can also explore such impacts in Tier II and Tier III rated micro finance institutions.
- The future studies can also analyse and involve other social and financial variables to research over their influences on capital structure decisions.
- The cross country analysis of capital structure and socio-financial performance of MFIs can also be done.
- A study on the same research topic can be done considering other variables and tools of social and financial performance of MFIs.
- There is a scope to study the behavioral patterns of Microfinance clients in relation to performance of their portfolios.
- A study on social and financial performance of MFIs can be done on the post period of Demonetization to attain more accurate results.
- The regulatory framework and its effect on performance of Microfinance institution can be examined.
- A comparative analysis could be done of the MFIs who have developed from capital market versus depending on donations and grants.
- A comparative study on efficiency of MFIs and efficiency of scheduled commercial banks can be done.

Chapter 8

Conclusions

CONCLUSIONS

8.1 Conclusion

Based on the data analysis some conclusions are presented:

- This study scrutinized the pattern and trend in the Microfinance domain in India during last three years. The research studied the parameters and constructs which had an impact on financial and social performance of the constituent firms which make up the Microfinance industry.
- Some of the new firms did not exhibit sound ROE figures indicating unhealthy picture of the MFIs. It shows that returns provided to the shareholders are not good and adequate enough and hence the objective of wealth maximization is not satisfied.
- It was also found that the MFIs did have a long-term pattern in their ROE figures indicating a consistent regularity in their performance levels and their returns to the shareholders.
- It is noticeable that overall figures of ROA are not on a benchmark stating that a lot needs to be done in order to ensure that the losses for the budding firms are kept to a minimum.
- Most firms have declining ROA and it indicates that the Return on Assets to its owners and other lenders is not available. This can be attributed to lack of a significant growth and hence there is less proportion of equity and also ever rising presence of other Microfinance Institutions have added to the diffusion in the market share.
- The long-term sustainability is impaired since the firm is never in a position to make return sufficient enough to cover expenses which are ever rising on its loan management activities.
- The study concludes that a number of firms are a borderline case defaulting on the marginal lines. More than half of the companies have a Debt Equity ratio in and around more than one.

- A major portion of the Microfinance firms have higher Debt Equity ratio indicating high interest and principal payments as a burden with a high gearing.
- The study concludes that there is a direct link between Return on Assets and OSS.
- Many firms have breached the level of OSS figures and have not been able to retain the average figures required for the sustenance.
- The increase in GLP trends show that that the MFIs are on a long-term growth which also mean higher outreach achieving economies of scale and greater profitability.
- The firms were forced to decline their interest rates charged on their loans resulted in fall of YGLP.
- Microfinance firms are performing when it comes to adding up the number of active borrowers in their statements results in attaining of social objective.
- The microfinance firms are doing significantly well when it comes to doing business by adding up the volumes of loan added in the existing portfolio. Hence, achieving social objective.
- The levels of sustainability on social fronts and objectives are not very sound and numbers are dismal and inconsistent.
- The numbers of products offered by Microfinance firms are various and are different from each other on various counts; it's been greeter greeter since the products to offer have a customized offering.
- Cost is one of the most ineffective indicators accounting for social performance of the Microfinance firms.
- Worth of outreach figures are very consistent and we can safely say that most of the loans tendered are good and the chances of them getting bad are less.
- The outcomes of the study depict that the frequency of occurrence of Return on Assets was minimal in the literature, which is a significant measure of the financial performance of a Microfinance Institution, must be focussed as it is

influenced by many fundamental variables which affect the financial performance.

- It is observed that the ROE, TOBIN's Q and Financial Self-Sustainability also impact the financial performance.
- It is observed that the Breadth, Depth, Length and Worth impact the social performance of MFIs as per this study.
- In the end, the study helps to create a robust framework made up of different dimensions each of which helps to analyse the performance on financial and social parameters of relevance.
- The first dimension is the combination of the financial factors such as Return on Assets, Profit Margin etc. as well as social factors such as Breadth and Depth. Such a combination puts up a rigorous framework by which the performance of the firms can be analysed in detail.
- The second dimension is a skewed method to analyse the Microfinance firms since it only considers two financial fronts of the firms which are Return on equity and Operating Efficiency.
- The third dimension is a skewed method and is a counterpart to the second combination to analyse the Microfinance firms since it only considers two social fronts of the firms which are Length and Scope of Outreach.
- The fourth dimension is another similar skewed method to analyse the Microfinance firms since it only considers two social parameters Cost and Worth of Outreach.

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Appendices

QUESTIONNAIRE

Dear respondent,

Season's greetings to you,

I, Arpit Shailesh pursuing Ph.D. on “**Capital Structure and Socio-Financial Performance: A Study of Select Indian Microfinance Institutions**” from School for Management Studies, Babasaheb Bhimrao Ambedkar University, Lucknow (A Central University), Uttar Pradesh. Your valuable feedback will be helpful to me to accomplish my study successfully. I will be thankful to you, for your responses to the given data collection sheet and required information that best suit to your knowledge and information. I assure you that the information given by you will be used only for the study purpose and will be kept confidential.

Basic details of the MFI

- a. Name of the MFI: _____
- b. Country of operations: _____
- c. Year microfinance operations began: _____
- d. Legal form: Bank, Rural bank, NBFI, NGO, Cooperative/Credit Union
- e. Report for Year ended (day – month – year): _____
- f. Number of loan accounts: _____
- g. Number of currently active borrowers (not loan accounts):
- h. Number of savings account: _____
- i. Number of currently voluntary savers (not savings accounts):
- j. Total number of members (if applicable): _____
- k. Total number of staff: _____

Data Collection Sheet:

MFI Name	Year	Portfolio at Risk	Provision Expense Ratio	Risk Coverage Ratio	Write off Ratio	Operating Expense Ratio

Cost per Borrower	Personnel Productivity	Loan Officer Productivity	Funding Expense Ratio	Cost of Funds Ratio	Debt/Equity Ratio

Adjusted Return on Equity	Adjusted Return on Assets	Portfolio Yield	Total Assets	Growth	Liquidity

Items	Year	Details
Cash and Bank Current Account Plus Readily Marketable Investments		
Gross Outstanding Non-Restructured Portfolio w/Arrears > 30 days plus Total Gross Restructured Portfolio		
Interest and Fee Income		
Interest Receivables in Previous Year		
Interest Receivable in Current Year		
Interest and Fee Expense		
Loan Loss Provisioning Expense		
Loan Loss Reserve		
Net Income Before Donations (Adjusted)		
Number of Borrowers (Excluding consumer and Pawn Loans) in Previous Year		
Number of Borrowers (Excluding consumer and Pawn Loans) in Current Year		
Operating Expenses (Personnel Expenses + Administrative Expenses + Depreciation)		
Total Assets		
Total Equity		
Total Liabilities		
Total Outstanding Gross Portfolio		
Total Staff		
Loan Officers		
Write-Offs During the Period		
Period Average Assets		
Period Average Equity		
Period Average Funding Liabilities		
Period Average Gross Portfolio		

Any other Comments or Feedback:

-----**THANK YOU**-----

DATA SHEET

FINANCIAL PERFORMANCE										
Year	Name of MFI	ROA	ROE	TQ	OSS	FSS	D/E	D/A	FS	PM
2015-16	Agora Microfinance India Ltd.									
2016-17	Agora Microfinance India Ltd.									
2017-18	Agora Microfinance India Ltd.									
2015-16	Annapurna Finance Pvt. Ltd.									
2016-17	Annapurna Finance Pvt. Ltd.									
2017-18	Annapurna Finance Pvt. Ltd.									
2015-16	Arth MicroFinance Pvt. Ltd.									
2016-17	Arth MicroFinance Pvt. Ltd.									
2017-18	Arth MicroFinance Pvt. Ltd.									
2015-16	Adhikar Microfinance Pvt. Ltd.									
2016-17	Adhikar Microfinance Pvt. Ltd.									
2017-18	Adhikar Microfinance Pvt. Ltd.									
2015-16	Arohan Financial Services Pvt. Ltd.									
2016-17	Arohan Financial Services Pvt. Ltd.									
2017-18	Arohan Financial Services Pvt. Ltd.									
2015-16	ASA International India Microfinance Ltd.									
2016-17	ASA International India Microfinance Ltd.									
2017-18	ASA International India Microfinance Ltd.									
2015-16	Asirvad Microfinance Ltd.									
2016-17	Asirvad Microfinance Ltd.									
2017-18	Asirvad Microfinance Ltd.									
2015-16	Bandhan Financial Services Pvt. Ltd.									
2016-17	Bandhan Financial Services Pvt. Ltd.									
2017-18	Bandhan Financial Services Pvt. Ltd.									
2015-16	BSS Microfinance Limited									
2016-17	BSS Microfinance Limited									
2017-18	BSS Microfinance Limited									
2015-16	Belstar Investment and Finance Private Limited									
2016-17	Belstar Investment and Finance Private Limited									
2017-18	Belstar Investment and Finance Private Limited									
2015-16	Bharat Financial Inclusion Limited									
2016-17	Bharat Financial Inclusion Limited									
2017-18	Bharat Financial Inclusion Limited									
2015-16	Bhartiya Micro Credit									
2016-17	Bhartiya Micro Credit									
2017-18	Bhartiya Micro Credit									
2015-16	Chaitanya India Fin Credit Pvt.									

	Ltd.									
2016-17	Chaitanya India Fin Credit Pvt. Ltd.									
2017-18	Chaitanya India Fin Credit Pvt. Ltd.									
2015-16	Cashpor Micro Credit									
2016-17	Cashpor Micro Credit									
2017-18	Cashpor Micro Credit									
2015-16	Credit Access Grameen Ltd.									
2016-17	Credit Access Grameen Ltd.									
2017-18	Credit Access Grameen Ltd.									
2015-16	Disha Microfin Pvt. Ltd.									
2016-17	Disha Microfin Pvt. Ltd.									
2017-18	Disha Microfin Pvt. Ltd.									
2015-16	ESAF Microfinance and Investments Pvt. Ltd.									
2016-17	ESAF Microfinance and Investments Pvt. Ltd.									
2017-18	ESAF Microfinance and Investments Pvt. Ltd.									
2015-16	Equitas Small Finance Bank									
2016-17	Equitas Small Finance Bank									
2017-18	Equitas Small Finance Bank									
2015-16	Fino Finance Pvt. Ltd.									
2016-17	Fino Finance Pvt. Ltd.									
2017-18	Fino Finance Pvt. Ltd.									
2015-16	Fusion Microfinance Pvt. Ltd.									
2016-17	Fusion Microfinance Pvt. Ltd.									
2017-18	Fusion Microfinance Pvt. Ltd.									
2015-16	Grama Vidiyal Micro Finance									
2016-17	Grama Vidiyal Micro Finance									
2017-18	Grama Vidiyal Micro Finance									
2015-16	Hindusthan Microfinance Private Limited									
2016-17	Hindusthan Microfinance Private Limited									
2017-18	Hindusthan Microfinance Private Limited									
2015-16	IDF Financial Services Private Limited									
2016-17	IDF Financial Services Private Limited									
2017-18	IDF Financial Services Private Limited									
2015-16	Janalakshmi Financial Services Pvt. Ltd.									
2016-17	Janalakshmi Financial Services Pvt. Ltd.									
2017-18	Janalakshmi Financial Services Pvt. Ltd.									
2015-16	Jagaran Microfin Pvt. Ltd.									
2016-17	Jagaran Microfin Pvt. Ltd.									
2017-18	Jagaran Microfin Pvt. Ltd.									
2015-16	Madura Microfinance Ltd.									
2016-17	Madura Microfinance Ltd.									
2017-18	Madura Microfinance Ltd.									
2015-16	Midland Microfin Limited									
2016-17	Midland Microfin Limited									

2017-18	Midland Microfin Limited									
2015-16	Muthoot Microfin Ltd.									
2016-17	Muthoot Microfin Ltd.									
2017-18	Muthoot Microfin Ltd.									
2015-16	NABFINS Limited									
2016-17	NABFINS Limited									
2017-18	NABFINS Limited									
2015-16	Pahal Financial Services Pvt. Ltd.									
2016-17	Pahal Financial Services Pvt. Ltd.									
2017-18	Pahal Financial Services Pvt. Ltd.									
2015-16	Repco Micro Finance Ltd.									
2016-17	Repco Micro Finance Ltd.									
2017-18	Repco Micro Finance Ltd.									
2015-16	RGVN (NE) Microfinance Ltd.									
2016-17	RGVN (NE) Microfinance Ltd.									
2017-18	RGVN (NE) Microfinance Ltd.									
2015-16	Satin CreditCare Network Ltd.									
2016-17	Satin CreditCare Network Ltd.									
2017-18	Satin CreditCare Network Ltd.									
2015-16	Samasta Microfinance Ltd.									
2016-17	Samasta Microfinance Ltd.									
2017-18	Samasta Microfinance Ltd.									
2015-16	Sambandh Finserve Private Limited									
2016-17	Sambandh Finserve Private Limited									
2017-18	Sambandh Finserve Private Limited									
2015-16	Satya MicroCapital Ltd.									
2016-17	Satya MicroCapital Ltd.									
2017-18	Satya MicroCapital Ltd.									
2015-16	S.M.I.L.E. Microfinance Limited									
2016-17	S.M.I.L.E. Microfinance Limited									
2017-18	S.M.I.L.E. Microfinance Limited									
2015-16	Suryoday Small Finance Bank Limited									
2016-17	Suryoday Small Finance Bank Limited									
2017-18	Suryoday Small Finance Bank Limited									
2015-16	Sonata Finance (P) Ltd.									
2016-17	Sonata Finance (P) Ltd.									
2017-18	Sonata Finance (P) Ltd.									
2015-16	Spandana Sphoorty Financial Limited									
2016-17	Spandana Sphoorty Financial Limited									
2017-18	Spandana Sphoorty Financial Limited									
2015-16	Sanghamithra- Rural Financial Services									
2016-17	Sanghamithra- Rural Financial									

	Services									
2017-18	Sanghamithra- Rural Financial Services									
2015-16	SV Creditline Limited									
2016-17	SV Creditline Limited									
2017-18	SV Creditline Limited									
2015-16	SHARE Microfin Ltd.									
2016-17	SHARE Microfin Ltd.									
2017-18	SHARE Microfin Ltd.									
2015-16	SKDRDP									
2016-17	SKDRDP									
2017-18	SKDRDP									
2015-16	Svatntra Microfin Pvt. Ltd.									
2016-17	Svatntra Microfin Pvt. Ltd.									
2017-18	Svatntra Microfin Pvt. Ltd.									
2015-16	Utkarsh Micro Finance Ltd.									
2016-17	Utkarsh Micro Finance Ltd.									
2017-18	Utkarsh Micro Finance Ltd.									
2015-16	Ujjivan Fiancnial Services Ltd.									
2016-17	Ujjivan Fiancnial Services Ltd.									
2017-18	Ujjivan Fiancnial Services Ltd.									
2015-16	Vedika Credit Capital Ltd.									
2016-17	Vedika Credit Capital Ltd.									
2017-18	Vedika Credit Capital Ltd.									
2015-16	VAYA FinServ Pvt. Ltd.									
2016-17	VAYA FinServ Pvt. Ltd.									
2017-18	VAYA FinServ Pvt. Ltd.									
2015-16	Village Financial Services Limited									
2016-17	Village Financial Services Limited									
2017-18	Village Financial Services Limited									

ROA= Return on Assets

ROE= Return on Equity

TQ = Tobin's Q

OSS = Operating Self Sufficiency

FSS = Financial Self Sufficiency

D/E = Debt Equity Ratio

DA = Debt to Asset Ratio

FS = Firm Size

PM = Profit Margin

SOCIAL PERFORMANCE							
Year	Name of MFI	Breadth	Depth	Length	Scope	Cost	Worth
2015-16	Agora Microfinance India Ltd.						
2016-17	Agora Microfinance India Ltd.						
2017-18	Agora Microfinance India Ltd.						
2015-16	Annapurna Finance Pvt. Ltd.						
2016-17	Annapurna Finance Pvt. Ltd.						
2017-18	Annapurna Finance Pvt. Ltd.						
2015-16	Arth MicroFinance Pvt. Ltd.						
2016-17	Arth MicroFinance Pvt. Ltd.						
2017-18	Arth MicroFinance Pvt. Ltd.						
2015-16	Adhikar Microfinance Pvt. Ltd.						
2016-17	Adhikar Microfinance Pvt. Ltd.						
2017-18	Adhikar Microfinance Pvt. Ltd.						
2015-16	Arohan Financial Services Pvt. Ltd.						
2016-17	Arohan Financial Services Pvt. Ltd.						
2017-18	Arohan Financial Services Pvt. Ltd.						
2015-16	ASA International India Microfinance Ltd.						
2016-17	ASA International India Microfinance Ltd.						
2017-18	ASA International India Microfinance Ltd.						
2015-16	Asirvad Microfinance Ltd.						
2016-17	Asirvad Microfinance Ltd.						
2017-18	Asirvad Microfinance Ltd.						
2015-16	Bandhan Financial Services Pvt. Ltd.						
2016-17	Bandhan Financial Services Pvt. Ltd.						
2017-18	Bandhan Financial Services Pvt. Ltd.						
2015-16	BSS Microfinance Limited						
2016-17	BSS Microfinance Limited						
2017-18	BSS Microfinance Limited						
2015-16	Belstar Investment and Finance Private Limited						
2016-17	Belstar Investment and Finance Private Limited						
2017-18	Belstar Investment and Finance Private Limited						
2015-16	Bharat Financial Inclusion Limited						
2016-17	Bharat Financial Inclusion Limited						
2017-18	Bharat Financial Inclusion Limited						
2015-16	Bhartiya Micro Credit						
2016-17	Bhartiya Micro Credit						
2017-18	Bhartiya Micro Credit						
2015-16	Chaitanya India Fin Credit Pvt. Ltd.						
2016-17	Chaitanya India Fin Credit Pvt. Ltd.						
2017-18	Chaitanya India Fin Credit Pvt. Ltd.						

	Ltd.						
2015-16	Cashpor Micro Credit						
2016-17	Cashpor Micro Credit						
2017-18	Cashpor Micro Credit						
2015-16	Credit Access Grameen Ltd.						
2016-17	Credit Access Grameen Ltd.						
2017-18	Credit Access Grameen Ltd.						
2015-16	Disha Microfin Pvt. Ltd.						
2016-17	Disha Microfin Pvt. Ltd.						
2017-18	Disha Microfin Pvt. Ltd.						
2015-16	ESAF Microfinance and Investments Pvt. Ltd.						
2016-17	ESAF Microfinance and Investments Pvt. Ltd.						
2017-18	ESAF Microfinance and Investments Pvt. Ltd.						
2015-16	Equitas Small Finance Bank						
2016-17	Equitas Small Finance Bank						
2017-18	Equitas Small Finance Bank						
2015-16	Fino Finance Pvt. Ltd.						
2016-17	Fino Finance Pvt. Ltd.						
2017-18	Fino Finance Pvt. Ltd.						
2015-16	Fusion Microfinance Pvt. Ltd.						
2016-17	Fusion Microfinance Pvt. Ltd.						
2017-18	Fusion Microfinance Pvt. Ltd.						
2015-16	Grama Vidiyal Micro Finance						
2016-17	Grama Vidiyal Micro Finance						
2017-18	Grama Vidiyal Micro Finance						
2015-16	Hindusthan Microfinance Private Limited						
2016-17	Hindusthan Microfinance Private Limited						
2017-18	Hindusthan Microfinance Private Limited						
2015-16	IDF Financial Services Private Limited						
2016-17	IDF Financial Services Private Limited						
2017-18	IDF Financial Services Private Limited						
2015-16	Janalakshmi Financial Services Pvt. Ltd.						
2016-17	Janalakshmi Financial Services Pvt. Ltd.						
2017-18	Janalakshmi Financial Services Pvt. Ltd.						
2015-16	Jagaran Microfin Pvt. Ltd.						
2016-17	Jagaran Microfin Pvt. Ltd.						
2017-18	Jagaran Microfin Pvt. Ltd.						
2015-16	Madura Microfinance Ltd.						
2016-17	Madura Microfinance Ltd.						
2017-18	Madura Microfinance Ltd.						
2015-16	Midland Microfin Limited						
2016-17	Midland Microfin Limited						
2017-18	Midland Microfin Limited						
2015-16	Muthoot Microfin Ltd.						
2016-17	Muthoot Microfin Ltd.						
2017-18	Muthoot Microfin Ltd.						

2015-16	NABFINS Limited						
2016-17	NABFINS Limited						
2017-18	NABFINS Limited						
2015-16	Pahal Financial Services Pvt. Ltd.						
2016-17	Pahal Financial Services Pvt. Ltd.						
2017-18	Pahal Financial Services Pvt. Ltd.						
2015-16	Repco Micro Finance Ltd.						
2016-17	Repco Micro Finance Ltd.						
2017-18	Repco Micro Finance Ltd.						
2015-16	RGVN (NE) Microfinance Ltd.						
2016-17	RGVN (NE) Microfinance Ltd.						
2017-18	RGVN (NE) Microfinance Ltd.						
2015-16	Satin CreditCare Network Ltd.						
2016-17	Satin CreditCare Network Ltd.						
2017-18	Satin CreditCare Network Ltd.						
2015-16	Samasta Microfinance Ltd.						
2016-17	Samasta Microfinance Ltd.						
2017-18	Samasta Microfinance Ltd.						
2015-16	Sambandh Finserve Private Limited						
2016-17	Sambandh Finserve Private Limited						
2017-18	Sambandh Finserve Private Limited						
2015-16	Satya MicroCapital Ltd.						
2016-17	Satya MicroCapital Ltd.						
2017-18	Satya MicroCapital Ltd.						
2015-16	S.M.I.L.E. Microfinance Limited						
2016-17	S.M.I.L.E. Microfinance Limited						
2017-18	S.M.I.L.E. Microfinance Limited						
2015-16	Suryoday Small Finance Bank Limited						
2016-17	Suryoday Small Finance Bank Limited						
2017-18	Suryoday Small Finance Bank Limited						
2015-16	Sonata Finance (P) Ltd.						
2016-17	Sonata Finance (P) Ltd.						
2017-18	Sonata Finance (P) Ltd.						
2015-16	Spandana Sphoorty Financial Limited						
2016-17	Spandana Sphoorty Financial Limited						
2017-18	Spandana Sphoorty Financial Limited						
2015-16	Sanghamithra- Rural Financial Services						
2016-17	Sanghamithra- Rural Financial Services						
2017-18	Sanghamithra- Rural Financial Services						
2015-16	SV Creditline Limited						

2016-17	SV Creditline Limited						
2017-18	SV Creditline Limited						
2015-16	SHARE Microfin Ltd.						
2016-17	SHARE Microfin Ltd.						
2017-18	SHARE Microfin Ltd.						
2015-16	SKDRDP						
2016-17	SKDRDP						
2017-18	SKDRDP						
2015-16	Svatntra Microfin Pvt. Ltd.						
2016-17	Svatntra Microfin Pvt. Ltd.						
2017-18	Svatntra Microfin Pvt. Ltd.						
2015-16	Utkarsh Micro Finance Ltd.						
2016-17	Utkarsh Micro Finance Ltd.						
2017-18	Utkarsh Micro Finance Ltd.						
2015-16	Ujjivan Fiancnial Services Ltd.						
2016-17	Ujjivan Fiancnial Services Ltd.						
2017-18	Ujjivan Fiancnial Services Ltd.						
2015-16	Vedika Credit Capital Ltd.						
2016-17	Vedika Credit Capital Ltd.						
2017-18	Vedika Credit Capital Ltd.						
2015-16	VAYA FinServ Pvt. Ltd.						
2016-17	VAYA FinServ Pvt. Ltd.						
2017-18	VAYA FinServ Pvt. Ltd.						
2015-16	Village Financial Services Limited						
2016-17	Village Financial Services Limited						
2017-18	Village Financial Services Limited						

Breadth = Breadth of outreach
Depth = Depth of outreach
Length = Length of outreach
Scope = Scope of outreach
Cost = Cost of outreach
Worth = Worth of outreach

Annexures

LIST OF MICROFINANCE INSTITUTIONS TAKEN INTO STUDY

Sr. No.	Name of MFI	Website
1.	Agora Microfinance India Ltd.	https://www.amil.co.in
2.	Annapurna Finance Pvt. Ltd.	https://annapurnafinance.in
3.	Arth MicroFinance Pvt. Ltd.	https://www.arthfinance.com
4.	Adhikar Microfinance Pvt. Ltd.	https://adhikarindia.in
5.	Arohan Financial Services Pvt. Ltd.	https://www.arohan.in
6.	ASA International India Microfinance Ltd.	https://www.asaindia.in
7.	Asirvad Microfinance Ltd.	https://www.asirvadmicrofinance.co.in
8.	Bandhan Financial Services Pvt. Ltd.	https://www.bandhanmf.com
9.	BSS Microfinance Limited	https://www.bssmfi.com
10.	Belstar Investment and Finance Private Limited	https://www.belstar.in
11.	Bharat Financial Inclusion Limited	https://www.bfil.co.in
12.	Bhartiya Micro Credit	https://bmcindia.co
13.	Chaitanya India Fin Credit Pvt. Ltd.	https://www.chaitanyaindia.in
14.	Cashpor Micro Credit	https://www.cashpor.in
15.	Credit Access Grameen Ltd.	https://www.grameenkoota.org
16.	Disha Microfin Pvt. Ltd.	https://www.dishamicrofin.com
17.	ESAF Microfinance and Investments Pvt. Ltd.	https://emfil.org
18.	Equitas Small Finance Bank	https://www.equitasbank.com
19.	Fino Finance Pvt. Ltd.	https://www.intrepid.in
20.	Fusion Microfinance Pvt. Ltd.	https://www.fusionmicrofinance.com
21.	Grama Vidiyal Micro Finance	https://www.gvmfl.com
22.	Hindusthan Microfinance Private Limited	https://www.hindusthanmfi.com
23.	IDF Financial Services Private Limited	https://www.idf-finance.in
24.	Janalakshmi Financial Services Pvt. Ltd.	https://www.janabank.com
25.	Jagaran Microfin Pvt. Ltd.	https://www.jagaranmf.com
26.	Madura Microfinance Ltd.	https://maduramicrofinance.com
27.	Midland Microfin Limited	https://www.oikocredit.coop
28.	Muthoot Microfin Ltd.	https://www.muthootmicrofin.com
29.	NABFINS Limited	https://www.nabfins.org
30.	Pahal Financial Services Pvt. Ltd.	https://www.pahalfinance.com
31.	Repc Micro Finance Ltd.	https://www.repcomicrofin.co.in
32.	RGVN (NE) Microfinance Ltd.	https://www.rgvnemfl.com
33.	Satin CreditCare Network Ltd.	https://www.satincreditcare.com
34.	Samasta Microfinance Ltd.	https://www.samasta.co.in
35.	Sambandh Finserve Private Limited	https://www.sambandhfin.com
36.	Satya MicroCapital Ltd.	https://www.satyamicrocapital.com
37.	S.M.I.L.E. Microfinance Limited	https://www.smileltd.in

38.	Suryoday Small Finance Bank Limited	https://www.suryodaybank.com
39.	Sonata Finance (P) Ltd.	https://www.sonataindia.com
40.	Spandana Sphoorty Financial Limited	https://www.spandanaindia.com
41.	Sanghamithra- Rural Financial Services	https://www.sanghamithra.in
42.	SV Creditline Limited	https://www.svcl.in
43.	SHARE Microfin Ltd.	https://www.sharemicrofin.com
44.	SKDRDP	https://www.skdrdpindia.org
45.	Svatntra Microfin Pvt. Ltd.	https://www.svatantramicrofin.com
46.	Utkarsh Micro Finance Ltd.	https://www.utkarsh.bank
47.	Ujjivan Fiancnial Services Ltd.	https://https://www.ujjivan.com
48.	Vedika Credit Capital Ltd.	https://www.teamvedika.com
49.	VAYA FinServ Pvt. Ltd.	https://www.vayaindia.com
50.	Village Financial Services Limited	https://www.village.net.in

Arpit Shailesh

Address: 561-A, Azad Nagar, Kanpur Road,

Lucknow-226023

Email: arpit.shailesh@rediffmail.com

Contact No.: 09453029113

➤ **Career Aspirations:**

Delivering the best of my potential as a faculty of Management in a progressive environment where knowledge, spirit and personal skills are recognized and rewarded.

➤ **Current Status:**

Pursuing Ph.D. in Management since August 2015 from Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow.

UGC-NET in Management

➤ **Educational Qualifications:**

Sr. No	Examination Passed	Stream	Year of Passing	Affiliation	Division
1.	M.Phil.	Management	2015	Babasaheb Bhimrao Ambedkar University (A Central University)	I
2.	MBA	Rural Management	2014	Babasaheb Bhimrao Ambedkar University (A Central University)	I
3.	BBA	International Business	2012	University of Lucknow	I
4.	Intermediate	Commerce	2009	ISC Board	I
5.	High School	Science	2007	ICSE Board	I

➤ **Academic Publications and Participations:**

Research Papers	Chapters in Book	Conference/Seminars/Symposiums	FDPs/Workshops	Training Programmes
12	02	26	11	08

➤ **Academic Memberships:**

1. Life Member of All India Commerce Association

2. Life Member of All India Accounting Association

➤ **Other Achievements:**

1. Awarded with University Gold Medal by Padmashree Prof. R.C.Sobti, Hon'ble Vice Chancellor, BBAU, Lucknow on 22 January 2016 for being a topper in Maters in Philosophy (M.Phil.) for the Session 2014-2015.

2. Awarded with University Gold Medal by Hon'ble Rajnath Singh, Union Minister, Government of India on 13 January 2015 for being a topper in Maters in Business Administration (RM) for the Session 2012-2014.

3. Awarded with President Medal & 2500/- Cash Prize instituted by V.N. Mishra, Retd. IAS, President Sri JNPG College, for being a topper & outstanding performer in extra co-curricular activities throughout the graduation on January 8, 2013.

4. Member of Student Council of the University for the Session 2017-2018 representing the School for Management Studies of BBAU.

5. Secured III position in Seminar on Economic Development of India in Present Scenario organized by Department of Commerce, Sri JNPG College on 16 September 2016.

6. Participated in "Quiz Contest" Organized by "Prasar Bharti Broadcasting Corporation of India, All India Radio, Lucknow" on Constitution of India on 26 January, 2012 and secured 1st Position.

7. Participated in "PARWAAZ" and secured runner up position in Business Plan organized by ICCMRT on 29 February 2012.

8. Achieved Best Paper Presentation Award in National Seminar on the topic "The Role of Young Managers in Development of Corporate India" on 13 March 2011.

9. Awarded as "Sri Sushil Kumar Sharma Medal" instituted by Sri Anshumali Sharma & 1000/- cash prize by Avneesh Awasthi, Chief Secretary, Ministry of Education, Govt. of India for my outstanding performance in the college on January 8, 2012.

10. Participated in "Mental ability Recognition Test" Graduation Level in Mega Round of School of Management and Sciences & obtained Second position & 15000/- cash prize all over Uttar Pradesh.

11. Awarded by “Dr. Khalid Hamid, Member of Parliament, London” for my best performance in academics on 27th of March 2011 in “ABHYUDAYA-2011” an annual function of department of BBA(IB), Sri JNPG College, Lucknow.

12. Participated in the art competition on the theme “Social Issues in our environment” organized by department of BBA (IB) Sri JNPG College, Lucknow & won second prize.

➤ **Other Participations:**

1. Organized eight events at BBAU, IIM Lucknow and Sri JNPG College.
2. Participated as Student Representative in editorial board of college Magazine committee for JYOTI KIRAN.
3. Participated in the Entrepreneurship Awareness Drive 2016 organized by Entrepreneurship Cell, IIT Kharagpur.
4. Participated in many events of IIM Lucknow.

Date:

Place: Lucknow

(Arpit Shailesh)