

Risk management practices of select microfinance institutions in Telangana State, India

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Abstract:- The micro finance sector in India today is on a path of steady growth and is undergoing substantial change building on regulatory support and the common shared industry infrastructure. In the year 2014/2015 NBFC-MFIs had a branch network of 9894 branches, and employee base of 75, 085 provided credit to over 2.85 crore clients with loan outstanding of Rs. 37,988 crores and Par 30 under 1 % (Microscope, FY 2014-15) The main challenge of microfinance is to create social benefits and promote low income households by providing financial services without any suitable guarantees. It is in this context that the issue of risk management in microfinance institutions becomes increasingly relevant. This study used a descriptive research design with the main objective to study the risk management practices of microfinance institutions(MFIs) in India, especially of those that are headquartered in Telangana state. This study investigates the relationship between risk management practices and risk variables. Further an effort is made to associate number of years of operation of the MFIs and active borrowers and Gross loan portfolio. Six MFIs headquartered in Telangana state were used as a sample. Cronbach's alpha was calculated to establish reliability of the scale, Pearsons correlation, Regression analysis and Chi square measure was used to test the hypothesis. It is observed that there is a positive relationship between risk management practices and risk variables and further it is concluded that there is no association between the number of years in operation and active borrowers and gross loan portfolio of the microfinance institution.

Key words : Risk management, Risk management practices, Micro finance gross loan portfolio

A. Introduction

The concept of micro credit – extension of small loans without collateral, based on Joint liability was pioneered by Dr. Muhammed Yunus in 1976 in Bangladesh. Ever since nations look towards microfinance as a means to alleviate poverty. The main challenge of microfinance is to create social benefits and promote low income households by providing financial services without any suitable guarantees. It is in this context that the

issue of risk management in microfinance institutions becomes increasingly relevant.

The micro finance sector in India today is on a path of steady growth and is undergoing substantial change building on regulatory support and the common shared industry infrastructure (such as credit information system, publicly available industry information/ data analysis and self regulatory among others). During financial year 2014/2015, the NBFC-MFI industry has shown

strong growth and strengthened its position to provide much needed credit to the under/ unbanked population in the country. In the year 2014/2015 NBFC-MFIs with a branch network of 9894 branches, and employee base of 75, 085 provided credit to over 2.85 crore clients with loan outstanding of Rs. 37,988 crores and Par 30 under 1 % (Microscape, FY 2014-15)

The microfinance market currently faces a trend towards “commercialization” which is a broad term used to refer to the application of market-based business principles to microfinance. This is usually associated with a MFI’s development away from donor or subsidized funding towards commercial borrowing of debt and equity (Frank, 2008).

MFIs are moving towards commercialization. Commercialization of MFIs refers to the movement of MFIs from ‘donor –dependency’ to ‘self – sufficiency’ and become part of a formal financial system Exposing them to various types of risk.

According to **Guntz, (2010)** Sustainability in simple terms refers to the long-term continuation of the Microfinance programme. It entails that appropriate systems and processes have been put in place that will enable the Microfinance services to be available on a continuous basis and the clients continue to benefit from these services in a routine manner or in the day to day activities. This also would mean that the programme would meet the needs of the members through resources raised on their own strength, either from among themselves or from external sources. Sustainability is possible only in the presence of appropriate risk management practices.

Along with risk management practices it is imperative to stress on credit risk management. A study in United Kingdom concluded that where sound credit management practices are in place and training is carried out, portfolio quality is improved (Wilson 2008).When a microfinance institution’s growth is too rapid, staff were concerned with meeting targets for growth as set by management. This relaxes lending discipline which results in increase in risk, especially credit risk.

B. Indian Microfinance sector

The number of households facing financial exclusion in India is around 129 million. Micro finance institutions are uniquely positioned to facilitate financial inclusion and provide financial services to a clientele poorer and more vulnerable than the traditional bank clientele. Microcredit being the most common product offering (CRISIL,

2008). Most MFIs in India are solely engaged in extending micro credit; a few also extend savings, thrift, insurance, pension and remittance facilities.

Micro credit in India is synonymous with microcredit . This is because savings, thrift and micro insurance constitute a miniscule segment of microfinance space. In India most microfinance loans are in the range of Rs. 5000 and Rs. 20,000 (the development and regulation bill, 2007, defines micro finance loans as loans with amounts not exceeding Rs. 50,000 in aggregate per individual/ small enterprise). MFIs usually adopt the group based lending model which are of two types, the Self help group (SHG) and the Joint liability group (JLG)

The Microfinance institutions can be classified with restrict to the legal structure as:

Not for profit MFIs – Societies, public trusts, Non profit companies

Mutual benefit MFIs – Co-operatives registered under state or national acts, mutually aided co-operative societies

For profit MFIs – Non banking finance companies, producer companies, local area banks.

Further, Crisil estimates that around 120 million households in India continue to face financial exclusion translation into a credit demand around Rs. 1.2 billion.

Once the world’s leader, India’s microfinance industry went through a severe crisis, when the state of Andhra Pradesh witnessed a mass default of microfinance borrowers in 2010. Combined with allegations of over-indebtedness and coercive recovery practices, this reflected poorly on microfinance institutions (MFIs) and the industry at large, undermining investor and consumer trust in the sector(IFC world bank group, 2013)

As a result of the AP crisis and reluctance of banks to sanction fresh loans to MFIs, the sector’s outreach has come down to 20 million clients and portfolio has dipped to Rs14,700 crore (< \$3 billion) from a high of Rs22,500 crore (\$4.5 billion) in October 2010. This crisis has led to the loss of financial inclusion for nearly 7 million clients (Memorandum: Third Annual Seminar on Risk in Indian Microfinance at the College of Agricultural Banking, Reserve Bank of India campus, Pune 18 February 2013)

An analysis of six international and three domestic microfinance crises in the last 15 years suggests that rapid growth and high return expectations were

precursors to almost every crisis. Indian microfinance institutions (MFI) have clocked a 50% AUM CAGR over FY13-FY15 and interactions with a cross-section of MFIs operating across the country suggested that they have ambitious expansion plans in newer, unknown markets. At the same time, massive PE/VC investments in the sector have led to unduly high return expectations from investors. (India micro finance sector report, 2015).

According to Sa-Dhan report (2015) 80% of MFIs have PAR (portfolio at Risk) < 1 for 30days and only about 8% of MFIs have a PAR of more than 5%. Approximately 12% of MFIs have PAR in the range of 1 -3%. Another important indication of portfolio quality is overdue installments beyond 180 days. The pending installment amount is Rs. 2860 crore as of march 2015 which is higher compared to march 2014 (1424 crores).

C. Brief review of Literature

i. Meaning of Micro Finance-

According to Robinson (2001), microfinance refers to small scale financial services for both credits and deposits that are provided to people who farm or fish or herd; operate small or microenterprise where goods are produced, recycled, repaired, or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and local groups in developing countries in both rural and urban areas.

According to Otero (1999) Micro finance is 'the provision of financial services to low income poor and very poor self employed people. Since microfinance is a system that distributes small loans to poor people in order for them to generate income and start their own small businesses, it has the ability to lessen poverty as well as promote entrepreneurship, social and economic development in poor communities (Lazar 2008).

The Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) define microfinance as Provision of thrift*, credit and other financial services and products of very small amounts to the poor in rural, semi-urban or urban areas for enabling them to raise their income levels and in improving living standards. Further RBI defines an NBFC MFI as "a non-deposit taking NBFC (other than a company licensed under Section 25 of the Indian Companies Act, 1956) with Minimum Net Owned Funds of Rs.5 crore (for NBFC-MFIs registered in the North

Eastern Region of the country, it will be Rs. 2 crore) and having not less than 85% of its net assets as "qualifying assets".

ii. Types of Micro finance

There are different categories of microfinance institutions as numerated by different authors. Lafourcade et al.(2005) has identified three categories of that is regulated (banks, regulated non – bank financial intermediaries, and regulated NGOs), cooperatives (financial cooperatives and credit unions)and unregulated (NGOs, Non bank intermediaries, MFI projects and others).

Udeaja and Ibe (2006) used the consideration of formality to classify microfinance institutions. They identified three categories of MFIs, a. Formal MFIs are institutions such as development banks, savings and loans, and Non – bank institutions that are governed by general company laws, regulations and guidelines, b. Semi- formal MFIs are those MFIs that are subject to commercial and general company laws but which are not subject to banking regulations such as NGOs and cooperatives (thrift and credit societies)c. Informal MFIs are those that are non – registered groups

Ayayi (2008) has conducted a study on MFIs of Vietnam and categorized MFIs into three main categories, formal , semi formal and informal based on the type of institution, regulations and strategies involved.

Crisil (2008) discusses the grouping of microfinance institutions with respect to the legal structure into Not for profit MFIs, Mutual benefit MFIs and For profit MFIs.

Yvonne Mawuko(2013) introduced five key structures or categories of microfinance institutions identified: these are Rotating Savings and Credit Associations (ROSCAs); the Grameen Solidarity Group Model; the Village Banking Structure; Microfinance Integrated with Social Services (MFISS) and Credit with Education.

The Micro finance Institutions (Development and regulation) Bill, 2012 of India, defines Micro finance Institution as

- a society registered under the Societies Registration Act, 1860; or
- a company registered under section 3 of the Companies Act, 1956; or
- a trust established under any law for the time being in force; or
- a body corporate; or

- any other organization, as may be specified by the Reserve Bank,

The object of which is to provide micro finance services in such manner as may be specified by regulations.

As per the Directory of Microfinance institutions (MFIs) in India (2014), incorporation of MFIs under different acts of the country determines the legal form. The common legal forms include Society, trust, Cooperative, section 25 company, Non banking finance company (NBFC).

Once the world's leader, India's microfinance industry went through a severe crisis, when the state of Andhra Pradesh witnessed a mass default of microfinance borrowers in 2010. Combined with allegations of over-indebtedness and coercive recovery practices, this reflected poorly on microfinance institutions (MFIs) and the industry at large, undermining investor and consumer trust in the sector (IFC world bank group, 2013)

Andhra Pradesh was the most penetrated state for microfinance loans during FY 95 – FY 10. Even under SHG – Bank linkage model, AP had over 50% share in a number of credit SHGs. In 2010, MFIs exposure to AP was 29% (INR 52.1 bn on 31st March 2010). A poor household in AP in FY10 held about INR87,728 as debt, out of which about INR27,000 was borrowed from MFIs. Considering the average outstanding of INR8,270 (Bharat Microfinance Reports, FY10, FY11 –Sa-Dhan), each average poor household borrowed from at least three MFIs at a time.

As a result of the AP crisis and reluctance of banks to sanction fresh loans to MFIs, the sector's outreach has come down to 20 million clients and portfolio has dipped to Rs14,700 crore (< \$3 billion) from a high of Rs22,500 crore (\$4.5 billion) in October 2010. This crisis has led to the loss of financial inclusion for nearly 7 million clients (Memorandum: Third Annual Seminar on Risk in Indian Micro finance at the College of Agricultural Banking, Reserve Bank of India campus, Pune 18 February 2013)

After AP crisis the Reserve Bank of India (RBI) set up a committee called the Malegam committee to investigate the various activities and impact of MFIs across the country and to make relevant recommendations on improving their performance. After Malegam committee report, RBI issued a set of guidelines to cover the operations of NBFCs functioning as MFIs in 2012. As a result of these new guidelines a new category NBFC-MFI was

created. Further it was specified that all NBFCs undertaking microfinance business and having a capitalization of 5 crores and having 85% or more of their exposure in microfinance portfolio should immediately apply for NBFC – MFI (<http://rbidocs.rbi.org.in/rdocs/notification/PDFs/49010713MFIFL.pdf>)

iii. Empirical literature on risk management practice of microfinance institutions

In the study titled "An Appraisal of Risk Management Practices of Microfinance Institutions in Ghana" conducted by Akwasi A. Boateng & Gilbert O. Boateng (2014), It was discovered that the barriers to microfinance institutions success includes numerous and varied obstacles. Studies conducted confirmed microfinance institutions managements are ignorant pertaining to the risks their organizations face with risk management techniques deployed reactively and ineffectively. By embedding a structured approach to enterprise risk management within MFIs, potential benefits such as reducing the over-management of risks and organizational alignment towards the microfinance institution's mission can be realized. This study used secondary data sources for drawing these conclusions.

Rosman (2009) has proposed a research framework on RMPs and the aspects of risk management processes. This framework observes the relationship between RMPs and the four aspects of risk management process i.e.: (1) Understanding risk and risk management (URM). (2) Risk identification (RI). (3) Risk analysis and assessment (RAA) (4) Risk monitoring (RM). This framework has been extensively used in several studies.

The study titled "Banks risk management : A comparison of UAE national and foreign banks" by 'Hussein A. Hassan Al-Tamimi & Faris Mohammed Al-Mazrooei (2007) tried to examine the degree to which UAE banks use risk management practices and techniques in dealing with different types of risk. This study has used Cronbach's alpha, descriptive statistics, regression analysis and one-way ANOVA

A close analysis of literature reveals that there are several studies conducted in banking and other financial areas in risk management practices (Akwasi et.al (2014), Seyram Pearl et.al,(2014), Hussien & Faris (2007), Hassan (2007), and very few on risk management in microfinance sector. **Similarly** there are several studies conducted relating to microfinance institutions, however most

of these studies are concentrated around outreach, sustainability and profitability (Berhanu (2007), Alemayehu (2008) Gashaw Tsegaye Ayele (2014) Borchgrevink and et. al (2005)). These studies examined performance of MFIs with little or no indication of risk involved and strategies adopted, There are several other studies such as Yonas(2012), Sima (2013), Melkamu (2012) all examining outreach and financial performance but none about risk management practices of microfinance institutions. Moreover most of these studies are masters thesis with limited scope.

Thus, to surmise there are several studies focused on the risk management practices of commercial banks and other financial institutions Similarly a number of studies have been conducted on outreach, sustainability and financial performance of microfinance institutions. Waweru and Spraakman(2012) carried out a case study on the use of performance measures in three Microfinance institutions and found that the commercial or bank like nature of microfinance institutions suggests that techniques used in banking can also apply to microfinance sector

There is no empirical study conducted on the risk management practices of microfinance institutions in Telangana state to the best of the researcher's knowledge. Having identified this major gap in research and realized the importance of identifying and assessing risk management practices, this study attempts to explore and assess the various risk management practices that are adopted by select microfinance institutions in India

D. Research Methodology followed in this study

“Research is a cyclical process of steps that typically begins with identifying the problem or issue of the study. It then consists of reviewing the literature, specifying a purpose for the study, and forming an interpretation of the information. This process culminates in a report disseminated to the audience that is evaluated and used ” (Creswell, 2007).

i. Research design :

This study used a descriptive research design as it attempted to determine the risk management practices of select micro finance institutions in India. Descriptive research design utilizes elements of both quantitative and qualitative research methodologies to offer description of the state of affairs as it exists at present (Creswell, 2007).

The main objective of this study is to focus on the risk management practices of microfinance institutions in India, especially of those that are headquartered in Telangana state.

The study has the following specific research objectives

ii. Research Objectives & Hypothesis

1. To identify the various types of risk categories facing the microfinance institutions
2. To examine the use of risk management practices and techniques in dealing with different types of risks by select microfinance institutions in India
3. To investigate into the relationship between risk management practices and various techniques used to manage risk.

Based on empirical literature and a close scrutiny of research objectives the following hypothesis is developed.

H1₀: There is a positive relationship between risk management practices and Risk variables across select microfinance institutions(MFIs)in Telangana

H1₁: There is no positive relationship between risk management practices and Risk variables across select microfinance institutions(MFIs)in Telangana

This Hypothesis attempts to assess the impact of risk variables on risk management practices across select micro finance institutions (MFIs). The identified risk variables are Understanding risk and risk management, Risk Identification, Risk assessment and analysis and Risk monitoring and control. For the purpose of the stated Hypothesis, a comprehensive questionnaire (from Hussein and Faris, 2007) is modified, pilot tested and adopted.

Model specification

This study uses Ordinary least squares(OLS) regression model specified below –

For Hypothesis H₁:

$$Rmp_i = \beta_0 + \beta_1(RAA)_i + \beta_2(RI)_i + \beta_3(URRM)_i + \beta_4(RMC)_i + \epsilon_i$$

i=1 . . . n

where *Rmp_i* - Risk management practices

RAA = Risk assessment and analysis

RI = Risk identification

URRM = Understanding risk and risk management

RMC = Risk monitoring and control

subscript i denote the cross sectional dimension and n represents the number of respondents

iii. Variables used in the study:

This study is focused on the risk management practices of select microfinance institutions therefore, Risk management practices and credit risk management is the dependent variable. The measurement and description of the dependent and independent variable is presented as follows:

Table 1: Showing variable description

Dependent Variables	Independent Variable	Variable Description
Risk Management Practices	Risk assessment and analysis (RAA)	<ul style="list-style-type: none"> • Use of qualitative and quantitative methods • Assessment of costs and benefits of addressing risks • Prioritization of risks
	Risk Identification (RI)	<ul style="list-style-type: none"> • Comprehensive and systematic identification of risks • Identification of changes in risk and MFI's roles and responsibilities. • Strengths and weaknesses of the risk management systems of other MFIs • Systematic identification of invt opportunities
	Understanding risk and risk management (URRM)	<ul style="list-style-type: none"> • Understanding of risk management across the MFI • Awareness of risk and risk categories • Responsibility and accountability of risk management • Importance of managing risk • Continuous use of risk evaluation technique
	Risk monitoring and control (RMC).	<ul style="list-style-type: none"> • Reporting and communication processes • Action plans • Costs and benefits of addressing risks

Source: Researchers own computation from literature

Further it is also hypothesized that there is no association between number of years in operation of respective Microfinance Institutions and active borrower number, Gross Loan Portfolio and Disbursements.

$H2_0$: There is no association between number of years in operation and Active borrower number

$H2_1$: There is an association between number of years in operation and Active borrower number

$H3_0$: There is no association between number of years in operation and Gross Loan Portfolio

$H3_1$: There is an association between number of years in operation and Gross Loan Portfolio

In order to test Hypothesis H2, & H3 Chi square is used where in association between 'Number of years in operation' of MFIs and Active borrower number and Gross Loan Portfolio is tested.

iv. Population of the study

The population of the study includes all microfinance institutions existing in India and there are 268 MFI as per the **directory of microfinance institutions (2014)**.

Table 2: Showing No. of MFIs across states

Andhra Pradesh	10	Assam	18
Bihar	11	Delhi	7
Haryana	1	Gujarat	7
Jharkhand	8	Karnataka	18
Kerala	13	Madhya Pradesh	10
Maharashtra	13	Manipur	8
Odisha	29	Punjab	1
Rajasthan	9	Tamil Nadu	33
Telangana	11	Uttar Pradesh	14
Uttrakhand	2	West Bengal	45
Total	268		

(Source : Directory of Microfinance Institutions (MFIs) in India, available at <http://www.sa-dhan.net>).

v. Sample of the study :

This study intended to use all the microfinance institutions that are located in the state of

Telangana. Accordingly there were 11 microfinance institutions headquartered in the state of Telangana.

The respondents of the study were expected to be drawn from

1. Asmitha Microfin Ltd.(NBFC)
2. Aware Macs Ltd.(Cooperative)
3. Bhartiya Samruddhi Finance Ltd(Basix) (NBFC)
4. Development Organization for Village Environment (DOVE)(Society)
5. Indur Intideepam Macs Federation Ltd.(Cooperative)
6. Pragathi Seva Samithi Macs Federation(Cooperative)
7. Share Microfin Ltd.(NBFC)
8. SKS Microfinance Ltd.(NBFC)
9. Spandana Sphoorty Financial Ltd.(NBFC)
10. Swaws Credit Corporation India Pvt. Ltd.(NBFC)
11. Trident Microfin Pvt. Ltd.(NBFC)

An initial study of the microfinance sector in telangana has revealed that post 'Andhra Pradesh microfinance crisis of 2011' most MFIs have either reduced their microfinance business or else have completely moved to other lines of finance. Only Asmitha Microfin Ltd.(NBFC) Bhartiya Samruddhi Finance Ltd(Basix) (NBFC), Pragathi Seva Samithi Macs Federation(Cooperative), Share Microfin Ltd.(NBFC), SKS Microfinance Ltd.(NBFC), Spandana Sphoorty Financial Ltd.(NBFC) are currently into microfinance business.

Further the researcher included two managers, two credit/loan manager/officers and two executives from all the sample MFIs. The manager, credit officer and executives were randomly selected to become a part of the study. This study used purposive random sampling and Purposive random sampling involves taking a random of a small number of units from a much larger target population (Kemper et al, 2003).

vi. Date sources:

The study used both primary and secondary data sources. Primary data was collected from managers, risk management officers and some selected senior officers of the designated microfinance institutions. For the purpose of collecting primary data a comprehensive modified questionnaire (from Hussein and Faris, 2007) was used for testing the extent of risk management practices. The secondary data sources include Financial statements and

reports of designated micro finance institutions, Directory of Microfinance institutions (MFIs) in India, Reserve bank of India reports, Crisil agency reports and other documents.

vii. Instruments:

This study used Questionnaire, interview and documentary analysis as instruments. For the purpose of collecting primary data a comprehensive modified questionnaire (from Hussein and Faris, 2007) is adopted and interview questions were framed to cover those aspects that are not dealt in the questionnaire. The questionnaire is pilot tested and modified from earlier studies.

Questionnaire consisted of questions to cover Risk assessment and analysis (RAA), Risk identification(RI) , Understanding risk and risk management (URRM) and Risk monitoring and control (RMC). This questionnaire consisted of close ended questions based on both interval scale and ordinal scale. A likert style scale of 1 to 5 was used to address closed ended questions on risk management practices. Further certain questions such as those dealing with the methods of risk identification and types of risks facing the institution were addressed using ordinal scale. Cronbach's alpha was used to test the reliability of the scale.

E. Data Analysis

The data obtained was analyzed using descriptive and quantitative analysis. Reliability of the scales used was tested using Cronbach's alpha and a multiple linear regression model was used to estimate the impact of risk variables of Risk Assessment and Analysis(RAA). Risk Identification(RI), Understanding Risk and Risk Management(URRM) and Risk Monitoring and Control (RMC) on Risk Management Practices(RMP).

Testing of reliability of scales used

Cronbach's alpha was used to test the reliability of the scale that was used for the purpose of testing Hypothesis 1. Cronbach's alpha is a measure used to assess the reliability, or internal consistency, of a set of scale or test items. Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability (Cronbach, 1970). A commonly accepted rule for describing internal consistency using Cronbach's alpha of 0.7 is considered acceptable and anything more than 0.7 is considered a good indication of reliability of

constructs. The calculated Cronbach's alpha was 0.72 which is a good indication of constructs reliability.

Descriptive analysis

Table 3 :Showing descriptive statistics

	URRM	RI	RAA	RMC	RMP
Mean	4.16	3.93	4.01	4.29	4.19
Median	4.08	4.00	4.07	4.33	4.25
Std. Dev	0.36	0.35	0.37	0.43	0.38
Minimum	3.42	3.17	3.29	3.17	3.57
Maximum	5.00	4.50	4.57	5.00	4.64
Sum	149.86	141.35	144.40	154.31	150.83

Source: Researchers own computation from Questionnaire

Table 3 provides descriptives to explain the extent to which risk variables are understood across micro finance institutions. It provides a summary of various variables with respect to the respondents such as mean, median, standard deviation and minimum and maximum scores. As such it is observed that Understanding risk and risk management has a mean score of 4.16 which implies that the respondents have a clear understanding of risk and risk management across micro finance institutions in Telangana state.

Similarly the 'risk identification variable has a mean score of 3.93 and median of 4.00 revealing that the microfinance institutions are able to identify risk that are faced by their institution. The variable of risk assessment and analysis has a mean score of 4.01, median of 4.07 indicating that microfinance institutions across Telangana state are assessing risk through quantitative and qualitative methods. Risk monitoring and control is a part of controlling system in any institution and a mean score of 4.29 indicates that the risk monitoring and control system across microfinance institutions is well in place. A mean score of 4.19 regarding risk management practices indicates that there are several conducive practices in place for effective risk management across the microfinance institutions.

Testing of Hypothesis

Hypothesis 1: The first hypothesis states that there is a positive relationship between risk management practices and risk variables across select micro finance institutions in Telangana state.

H1₀: There is a positive relationship between risk management practices and Risk variables

across select microfinance institutions(MFIs)in Telangana

H1₁: There is no positive relationship between risk management practices and Risk variables across select microfinance institutions(MFIs)in Telangana

This study uses ordinary least squares(OLS) method to test this hypothesis. Prior to using the OLS method, it is essential to check if multicollinearity exists between explanatory variables. A correlation coefficient of more than 0.70 implies that there exists collinearity between variables.

Table 4: Showing Pearsons Correlation analysis

Variables	URRM	RI	RAA	RMC	RMP
URRM	1				
RI	.150	1			
RAA	.045	.415	1		
RMC	.514	.138	.092	1	
RMP	.069	.365	.604	.474	1

Source: Researchers own computation from Questionnaire

Table 4 reveals that there is no potential multicollinearity between the variables as the correlation coefficients do not exceed 0.07 and as such the problem of multicollinearity between the variables is excluded. Having concluded that there is no multicollinearity between variables, the next step is to evaluate the regression results.

Table 5 shows the regression results. It can be seen from the table that adjusted R square is 0.540. This indicates that the four independent variables explain about 54 % of variations in risk management practices.

Table 5 : Showing Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770	.593	.540	.256157

Source: Researchers own computation from Questionnaire

(Predictors: (Constant), Risk assessment and analysis, Understanding risk and risk management, Risk Identification, Risk Monitoring and Control
Dependent Variable: Risk Management Practices)

The estimated coefficients of URRM and RI were positive and statistically significant at 5 % level of significance and the variables of RAA and RMC had positive but insignificant impact of risk management practices. Thus hypothesis 1 ;that there is a positive relationship between risk

variables and risk management practices is confirmed. Further it is found that URRM and RI are the most important variables or the most significant variable that have an impact on risk management practices.

Hypothesis 2

The second hypothesis states that there is no association between number of years in operation of the Microfinance institution and active borrower number

H2₀: There is no association between number of years in operation and Active borrower number

H2₁: There is an association between number of years in operation and Active borrower number

In order to test this hypothesis Chi square test is used.

A cross tabulation of Number of years in operation by an MFI and the active borrowers number reveals that 16.7% were in operation between 5 to 10 years, 50% were in operation between 10 to 15 years and 33.33 % were in operation between 15 to 20 years. Further it is observed that 33.3 % of the institutions had less than 500,000 borrowers. In order to investigate if there is any association between number of years in operation and number of active borrowers, a chi square test was conducted.

$\chi^2 = 5.00$, $df = 6$, since $p = 0.544$, which is more than 0.05, Alternative hypothesis $H2_1$ is rejected and Null hypothesis is accepted. Thus it is concluded that at 5% level of significance there is no association between number of years in operation by an MFI and the number of active borrowers.

Hypothesis 3

The third hypothesis states that there is no association between number of years in operation of the Microfinance institution and Gross loan portfolio of the institution

H3₀:. There is no association between number of years in operation and Gross Loan Portfolio

H3₁:. There is an association between number of years in operation and Gross Loan Portfolio

In order to test this hypothesis Chi square test is used.

A cross tabulation of Number of years in operation by an MFI and the Gross Loan Portfolio reveals that 33.3% of the institutions which are in operation between 10 to 15 yrs have a gross loan portfolio between 2000(lakhs) to 3000 (lakhs). Further. In

order to investigate if there is any association between number of years in operation and Gross loan portfolio a chi square test was conducted.

$\chi^2 = 6.125$, $df = 6$, since $p = 0.409$, which is more than 0.05, Alternative hypothesis $H3_1$ is rejected and Null hypothesis is accepted. Thus it is concluded that at 5% level of significance there is no association between number of years in operation by an MFI and Gross loan portfolio.

F. Conclusions

The main conclusions of this study are the microfinance institutions in Telangana state are in the process of establishing sound risk management practices. This study concludes that there is a positive relationship between risk management practices of micro finance institutions and risk variables such as understanding risk and risk management, Risk Identification, Risk assessment and analysis and risk monitoring and control. Further it is also concluded that there is no association between number of years in operation of a micro finance institution in telangana state and number of active borrowers and gross loan portfolio. The primary reason attributed to the current state of affairs is the Andhra Pradesh micro finance crisis of 2011 and these institutions are still in a state of retrospection and adjustments thus opening doors for further research in this area.

G. References

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