

## Profitability Evaluation for Sustainable Growth – An Analytical Study of MFIs in Gujarat

**Hemendra Shah**

Assistant Professor,  
Gujarat Arts and Commerce College,  
Ahmedabad, Gujarat

### INTRODUCTION

Microfinance is considered to be the most powerful tool for poverty eradication. Any institute carrying economic activity with a financial or social objective can carry on its activity uninterrupted for longer period only if its financial results are Profitable with respect to Income over expenditure and return to capital invested in the business. Looking at the role of MFIs in the economy it is very important that MFIs should be Profitable for sustainable growth. MFIs in India are facing problem of profitability and sustainability since Andhra Crisis of 2010. Government has taken many steps through legislations and RBI intervention to protect the interest of all stake holders of microfinance industry. It creates positive as well as negative impact on MFI operations. Since than many NGO based MFIs have been closing down or are converted to some other form of MFIs.

Though Gujarat is considered to be the most developed state and growth model for India but still 16.63 per cent people in Gujarat live below poverty line<sup>37</sup>. Microfinance being the most effective tool for poverty eradication, MFIs financial sustainability is important. The history of microfinance and MFIs in Gujarat goes way back to 1970s. However, there are very few prominent MFIs operating in Gujarat. Many MFIs have been closed down or taken over by the other MFIs due to financial unsustainability in recent past. According to Mr. Maheshbhai Vara<sup>38</sup>, due to new legislations and government policy and operating characteristics, after 2010, NGO based MFIs face severe problem of sustainability, compelling them to shut down their business.

### INDICATORS OF PROFITABILITY AND SUSTAINABILITY

#### Operational Profitability

Most of the literature considers operational approach for Profitability . As stated by Thapa et al, 1992 in literature of Bayeh Asnakew Kinde, “Financial sustainability of microfinance institutions is probably the key dimension of microfinance sustainability. It refers to the ability of MFIs to cover all its costs from its own generated income from operations” (Kinde, Financial Sustainability of Microfinance Institutions in Ethiopia, 2012).It emphasises on institutional internal capacity to cover all its cost. Shahidur Khandker not only consider the expenditure incurred or paid for but it also consider opportunity cost of fund to nullify the effect of donations and subsidized or soft loans and surviving ability of an organization without low cost subsidized funds(Shahidur Khandker, 1995).

According to Meyer explains two dimensions of profitability, one operational self-sufficiency that shows ability of the MFI to cover its operational costs from its operating income. And financially self-sufficient when it is able to cover not only operating cost but also financial costs.It is expected that microfinance institutions that have attained operating sustainability is organically in a position to achieve financial self-sufficiency to cover its cost of funding, operating costs and cost of provisions for losses, without relying on subsidies(Meyer, 2002). Bogan V. and many researchers have adopted the definition given by Mix Market which is based on the line of Mayer. According to Sa-

<sup>37</sup>[https://en.wikipedia.org/wiki/Poverty\\_in\\_India](https://en.wikipedia.org/wiki/Poverty_in_India)

<sup>38</sup>Mr.Maheshbhai Vara is one of the founder member of SrivardanSociodevelopment Foundation and NGO providing microfinance services, which was discontinued in 2012.

Dhanall present costs and the costs incurred in growth, if it expands operationsthe costs included under this are operationalcosts, financial costs adjusted for inflation and growth required. According to it long term sustainability, cost reduction and interest rate covering all cost is important for profitability and sustainability(Sa-Dhan, 2005).

Microfinance Information Exchange (MIX)<sup>39</sup> explain Operational Sustainability (OS) as an indicator for profitability and sustainability. It shows the proportion of total financial revenue to its operating expense, financial expense and loan loss provision(mixmarket.org, 2012).The current study consider the definition adopted by Bogan, which is defined by the Mix Market (Bogan, Johnson, & Mhlanga, 2007). The same is given as follow,

$$OS = \frac{\text{Total Financial Revenue} \times 100}{\text{Financial Expense} + \text{Operating Expense} + \text{Loan Loss \& provision}}$$

Whereas,

- i. Total financial revenue is total revenue in form of interest or charges received on client loan portfolio of an MFI.
- ii. Financial expense includes interest paid or accrued on loan taken and other financial expense paid or incurred.
- iii. Operating expense includes employee’s expense, depreciation and other administrative or office expense.
- iv. Loan loss provision include loan write off i.e. bad debts and loan loss provision debited to profit and loss account.

**Return on Fund Invested as linked Profitability**

As per the report of Rosenberg published by CGAP as technical guide, profitability for sustainable growth can be reflected as Return on Assets (ROA) or Return on equity (ROE), after adujsting subsidise cost of fund, in-kind subsidy and inflation to accouting profit. Its shows company’s financial strength to earn profit on funds applied (Rosenberg, 2009). Accoding to Marakkath, ROA is one of the base to assess financialsustainability. However, he found lack of literature support to fix the level of ROA, at which an MFI can be assumed to be profitable for sustainablegrowth. (Marakkath, 2014). According to Mistry return on equity reflects financial sustainability of an organization(Mistry, 2015).

The fianancial risks assosicated to business are broadly divided into two types: systematic risk and unsystematic risk. Risk associated with Market, Interest rate, Inflation and Trade Cycle are considered as systematic risk. Accoroding to Capital Assets Pricing Model (CAPM); risk and return are directly correlated. Higher the risk, higher the return expectation (Avdhani, 2011). CAPM highlight on return on risk free security and risk premium associated on risky security. The risk premium for the systematic risk of a company or a group of companies can be calculated by comaparing it with market risk. The current study consider the definition according to the lien of Rosenberg in the technical guide to mesure the preformance of mcirofinance instituion published by CGAP (Rosenberg, 2009). The same is given as follow,

$$\text{Return on Equity} = \frac{\text{Profit After Tax And Provisions} \times 100}{\text{Average Owners Capital Including All Reserves And Surplus}^{40}}$$

To calculate Return on Equity, donations and subsidy received by MFIs are considered as owner equity and firm should earn required return on such fund for financial sustainability. It is also assumed that soft loan received by the firm is debt fund and firm will enjoy the same benefit in future, so no interest adjustment for such soft loan is required.

<sup>39</sup> MIX Market (www.mixmarket.org) is a public data hub where microfinance institutions (MFIs) and supporting organizations share institutional data to create transparency and market insight.

<sup>40</sup> Donations and subsidies are included as a part of reserves and surplus.

**RESEARCH METHODOLOGY**

**Profitability Indicators for Sustainable Growth**

For the current study, a firm is said to be Profitability for Sustainable Growth when its Operating Sustainability (OS) and Return on Equity (ROE) is above the desired level.

**Desired level of Operating Sustainability**

According to MIX Market a firm is financially sustainable if it has operational sustainability level of 110% or more (mixmarket.org, 2012). Most of the researchers have adopted the same rate as parameter for financial sustainability. Current study considers the same level as desired level of operating sustainability described by Mix Market which is 110%. (Bogan, 2009), (Anand Rai, 2012) & (Mixmarket, 2014).

**Desired level of Return on Equity**

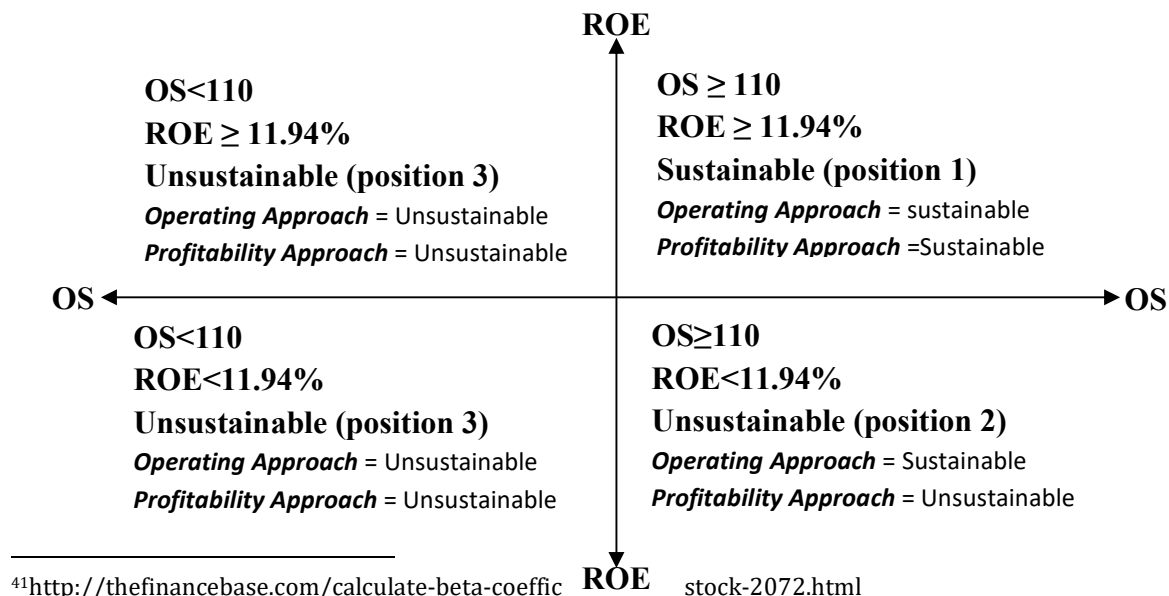
As per Rosenberg Return on Equity (ROE) and Return on Assets (ROA) are the most common measure of FS (Rosenberg, 2009). Mistry has considered return on equity as key parameter for performance evaluation (Mistry, 2015). For the current study return on equity is considered as another profitability parameter. For the current study, desired return on equity is a combined rate of return on risk free security ( $R_f$ ) and associated risk premium ( $R_p$ ) as described CAPM. The risk premium of a particular investment is the product of equity risk premium on the market (i.e. difference between the market rate of return and the rate of return on a risk free investment) and the beta coefficient of particular investment<sup>41</sup>. According to Mistry and Shah Business operations of banks and microfinance institutions are similar. They considered ROE of banking industry as market rate of ROE. The weighted average rate of interest on SBI fixed deposits for a period of one to two years during the study period of five years ending on 2015 is considered as a return on risk free security, the same is derived at 8.47%. Further, the return of 107 private banks and 30 nationalized banks during the study period is taken as market rate to calculate risk premium beta of MIFs, the same is calculated at 3.47%. Taking the rate derived by the Mistry and Shah, the desired level of ROE ( $R_f + R_p$ ) is 11.94% (8.47%+3.47%) (Mistry & Shah, 2016).

As desired level of OS at 110% are studied, tested and accepted by various researchers and rating agencies like MIX market, for the present study the same is accepted and no statistical test are required. Further CAPM for risk premium is an accepted model and the desired level of ROE derived by Mistry and Shah for the same study period, is applied and tested, no statistical test is required to be conducted for desired level of ROE. According to the desired value derived for OS and ROE, MFI is said to be financially sustainable when,

3. Operating sustainability is 110% or more and ( $OS \geq 110$ )
4. Sustainable Rate of Return on equity is 11.94 %. ( $ROE \geq 11.94$ )

**Sustainability Position**

**Figure 3 Sustainability Position**



<sup>41</sup><http://thefinancebase.com/calculate-beta-coefficient-stock-2072.html>

The above Figure 3 Sustainability Position, indicates four different positions of profitability and sustainability these are summarised as below:

1. If an MFI fulfils both the criteria, then it is said to be sustainable.
2. If an MFI fulfils only first criteria, then it will be considered as operationally sustainable but unsustainable from return on equity point of view. And overall it will be considered as unsustainable.
3. If an MFI fulfils only second criteria then it will be considered as sustainable from return on equity point of view<sup>42</sup> but operationally unsustainable. This is mainly because of highly levered capital structure, and/or high rate of nonfinancial income. However overall it will be considered as unsustainable.
4. If it does not fulfil both the conditions, then it will be considered as unsustainable MFI.

## RESEARCH HYPOTHESIS

The objective of the study is to study profitability driven sustainability of MFIs. There are two parameters for profitability. To study both the parameter, the Hypothesis is sub divided into two sub hypothesis

**H0** MFIs operating in Gujarat are Sustainable. i.e.  $OS \geq 110\%$  &  $ROE \geq 11.94\%$

**H0<sub>A</sub>** There is no Significant Difference in OS among the MFIs operating in Gujarat.

**H0<sub>B</sub>** There is no Significant Difference in ROE among the MFIs operating in Gujarat.

## Sample and Data

Non-random purposive and convenient sampling method is adopted for the study. As number of MFIs operating in Gujarat during the study period 2010-15, 9 MFIs are taken as sample for the study. These are Arman Financial Services Ltd. (AFSL), Disha Microfin Pvt Ltd.(DML), Pahal Financial Services Pvt. Ltd. (PFSL), PRAYAS Organisation for Sustainable Development (PRAYAS), Shri Mahila Sewa Sahakari Bank Ltd. (Sewa), Saath Saving And Credit Co Op Society Ltd. (SAATH), Shri Surat Mahila Sewa Nagrik Dhiran Sahkari Mandli (SMDM), Shri Swashrayi Mahila Nagrik Dhiran Sahkari Mandli (MNSM), Supath Rural Development Foundation (SUPATH)

Secondary Data in form of annual financial statement are collected from the individual microfinance institutions through personal visits, data available from official website of the microfinance institutions or various rating and research agency like, Mixmarket and MFtransparency and Sa-dhan for the research study. Looking to the Andhra crisis in 2010, subsequent legislative reforms in India and available data of the sample MFIs in the study, period from 2010-11 to 2014-15 is considered.

## Testing Technique

To study the Hypothesis, MFIs operating in Gujarat are financially sustainable, arithmetic mean average of operating sustainability ratio and return on equity is calculated for Gujarat and sample MFIs. The result is compared with desired level of Parameters required for financial sustainability. Though data are non-parametric in nature, looking to sample size which is equivalent to population parametric test is conducted. The result of parametric test is cross verified and compared with parametric test. The tests are conducted on Microsoft excel and SPSS. Parametric test of ANOVA analysis is conducted and compared with non-parametric test of Kruskal – Wallis test, to study the significance of difference in financial sustainability among the microfinance institutions operating in Gujarat.

## LIMITATIONS OF THE STUDY

The data collected for various sample MFIs are secondary in nature that has its own limitations. There are many quantitative and qualitative factors that affect the values of OS and ROE, such factors are ignored. The present study is drawn from the available data, and ignored the most recent data due to unavailability. The risk free return is based on average rate of interest available on fixed deposits of SBI. Such rate keeps on changing. The risk premium

<sup>42</sup> If the operating sustainability rate is less than 100% i.e. MFI is probably loss making MFI, in such a situation it will never fulfil both the conditions.

for the current study as consider return on equity of banking industry as market return, may not be represent market as a whole.

**DATA ANALYSIS**

To test the H0, MFIs operating in Gujarat are Sustainable, arithmetic mean of OS and ROE of all sample MFIs are calculated and compared with their desired rate respectively.

**Table 6 Average OS and ROE Gujarat**

	AFSL	DML	PFSL	SEWA	SAATH	SMDM	MNSM	PRAYAS	SUPATH	Gujarat
OS	138.73	114.28	106.77	101.12	104.82	131.88	118.74	116.80	101.65	115.34
ROE	15.79	6.96	5.55	3.43	15.38	20.89	17.56	23.33	2.76	12.79

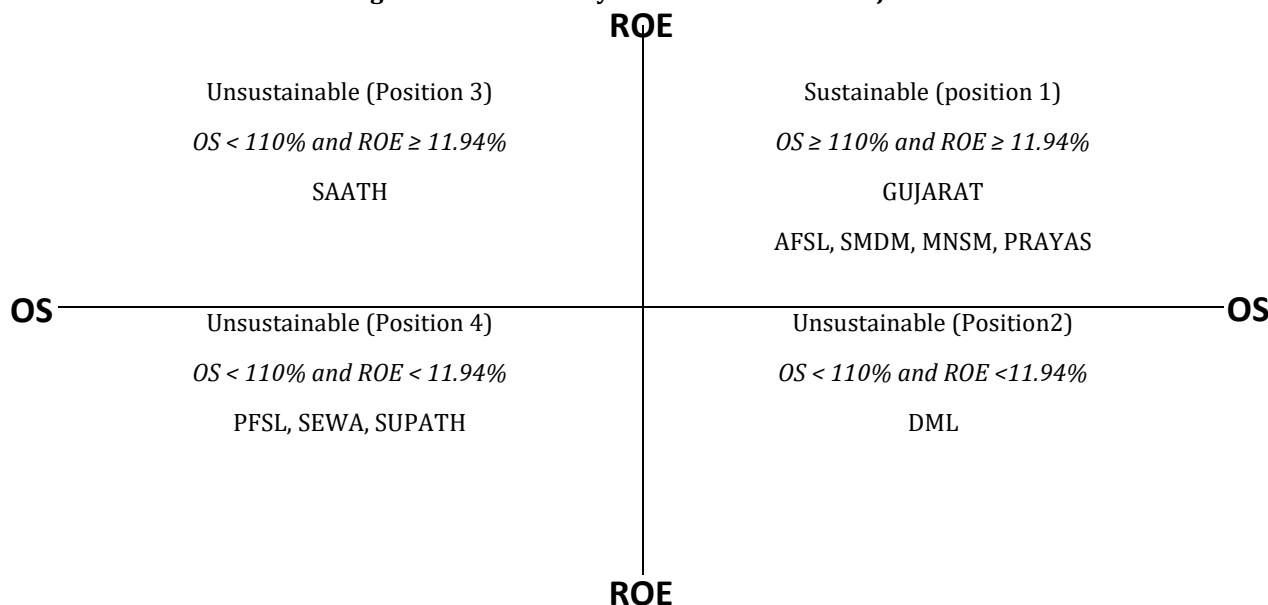
The above table, shows that the average OS rate of Gujarat (115.34%) is more than the desired rate of OS (110%). Further average ROE rate of Gujarat appearing in above table, is 12.79% which is above the desired rate of ROE (11.94%). It depicts that MFIs in Gujarat fulfil the profitability. The analysis is summarised as below,

**OS of Gujarat (115.34 %) ≥ 110 %, and ROE of Gujarat (12.79%) ≥ 11.94%**

The arithmetic mean (OS and ROE) of sample MFIs indicate that Gujarat has fulfilled both the criteria for financial sustainability. And hypothesis H0, that MFIs operating in Gujarat are Sustainable, is accepted. However, only four out of nine sample MFIs are able to fulfil both the conditions for financial sustainability. Hence it is important to study the individual position of each sample MFIs to arrive at exact sustainability position of each sample.

The minimum rate of average OS is 101.12% whereas the maximum is 138.73%. The minimum rate of average ROE is just 2.76% whereas maximum rate of ROE is 23.33%. It gives indication towards higher rate of variance for both the parameters. Out of nine sample MFIs, OS of AFSL (138.73%), DML (114.28%), SMDM (131.88%), MNSM (118.74%) and PRAYAS (116.80%) is above the desired rate of OS for sustainability. Whereas ROE of AFSL (15.79%), SAATH (15.38%), SMDM (20.89%), MNSM (17.56%) and PRAYAS (23.33%) is above the desired rate of ROE for sustainability.

**Figure 4 Sustainability Position of MFI and Gujarat**



<https://www.gapjournals.org/>

The average rate of OSof DML is above the desired rate of OS, however it's average rate of ROE(6.96%) is below the desired rate of ROE. It indicates thatDMLis operationally sustainable but unsustainable from ROE point of view and falls under the position 2 of sustainability as indicated in Figure 4 Sustainability Position of MFI and Gujarat.

Among those five MFIs having average rate of ROE is above the desired rate of ROE, the average rate of OS of SAATH (104.82%) is below the desired rate of OS. It indicates that SAATH is sustainable from ROE point of view but operationally unsustainable and falls under the position 3 of Sustainability. This may happen because of highly levered capital structure.

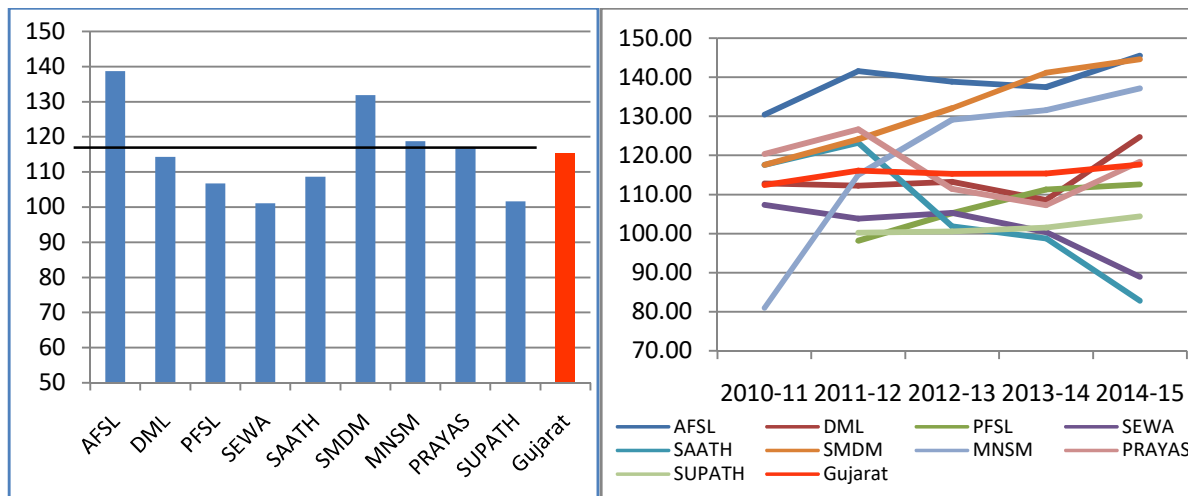
The above figure indicate that four out of the nine MFIs, (AFSL, SMDM, MNSM, PRAYAS) are able to fulfil both the criteria for sustainability hence falls under the position 1 of sustainability indicated inFigure 4. Rest of the three MFIs (PFSL, SEWA, SUPATH) are unable to fulfil any of the two criteria for financial sustainability, hence falls under the position-4 of sustainability as indicated inFigure 4.

The study on the basis of Arithmetic mean of Gujarat accepts the first hypothesis indicating that the MFIs operating in Gujarat are Financially Sustainable, however there is wide difference between the average rate of OS and ROE among the sample MFIs.Therefore it is important to study the significant difference in the rate of OS and ROE among sample MFIs.

**Testing of H0A: Significance of OS**

Analysis of, shows that the average rate of OS of all the MFIs is above 100 percent. It indicates that MFIs operating in Gujarat are able to cover financial expense, operating expense and required provision for loan loss.

**Figure 5 Average OS of MFIs and Gujarat. Figure 6 OS of MFIs and Gujarat**



**Table 7 Analysis of OS**

Year	AFSL	DML	PFSL	SEWA	SAATH	SMDM	MNSM	PRAYAS	SUPATH	Gujarat
2010-11	130.40	112.81	Nil	107.28	117.56	117.53	81.00	120.33	Nil	<b>112.42</b>
2011-12	141.51	112.23	98.13	103.78	123.19	124.08	115.01	126.61	100.18	<b>116.08</b>
2012-13	138.83	113.19	105.15	105.24	101.80	132.07	129.08	111.43	100.56	<b>115.26</b>
2013-14	137.46	108.53	111.22	100.36	98.75	141.15	131.54	107.27	101.51	<b>115.31</b>
2014-15	145.44	124.65	112.58	88.92	82.80	144.59	137.08	118.36	104.34	<b>117.64</b>
<b>Avg.</b>	<b>138.73</b>	<b>114.28</b>	<b>106.77</b>	<b>101.12</b>	<b>104.82</b>	<b>131.88</b>	<b>118.74</b>	<b>116.80</b>	<b>101.65</b>	<b>115.34</b>
<b>Variance</b>	30.93	37.05	43.65	52.85	257.66	128.55	511.36	57.72	3.53	



<b>Std. Dev.</b>	5.56	6.09	6.61	7.27	16.05	11.34	22.61	7.60	1.88	<b>16.35</b>
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Figure 5 above shows that, OS of five MFIs and Gujarat is above the desired rate of OS indicating operational sustainability of sample microfinance intuitions and Gujarat. Further AFSL has the highest and SEWA has the lowest OS. Table 7 shows that variance and standard deviation of MNSM (511.36 and 22.61 respectively) is highest and for SUPATH (3.53 and 1.88 respectively) among all sample MFIs. Graph shows sharp increase of OS in MNSM and decrease in SAATH. Graph of SMDM also shows increasing trend and SEWA shows decreasing trend. All these four sample.

One cannot predict significance of OS by observing the data or graph. Statistical tools give more realistic answer than yearly data or graph value. Table 8 shows Skewness for OS 0.60 with standard error of Skewness 0.361. The value of Kurtosis for OS is -0.560 with std. error of kurtosis at 0.709. Considering the normality of data distribution and sample size parametric test of ANOVA analysis and Kruskal - Wallis test of nonparametric is conducted to study the significant difference and independence of sample.

**Table 8 Descriptive Statistics OS**

	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
<b>ROE</b>	43	12.7883	9.63672	.874	.361	1.288	.709

**Table 9 ANOVA of OS**

Source of Variation	SS	df	MS	F	P-value	F crit
<b>Between Groups</b>	6785.133	8	848.1417	6.485928	4.04E-05	2.22534
<b>Within Groups</b>	4446.059	34	130.7664			
<b>Total</b>	11231.19	42				

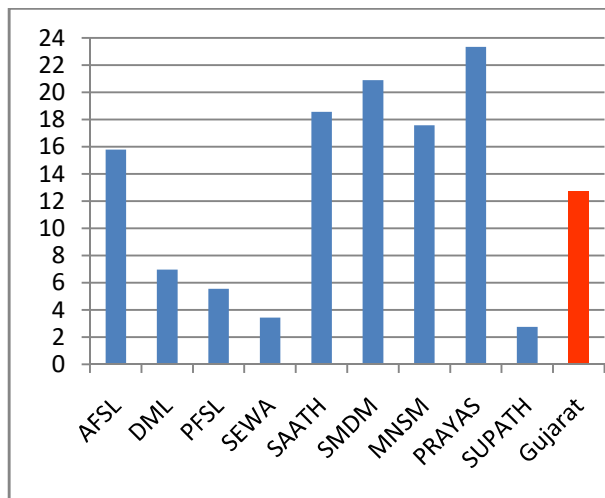
A single factor ANOVA was conducted in Microsoft Excel to compare the result of OS for sample MFIs. The result of Table 9, indicates significant difference in the result of OS at 5 percent significance level for sample MFIs. In this output, the test statistic, F is reported in the analysis of variance Table 9,  $F(8, 34) = 6.4859$ , is more than the critical value of  $F = 2.225$ . The p-value for this statistics is 0.001 (reported in the table as 4.04E-05). The ANOVA result rejects  $H_0$ , this means that there is evidence that there are differences in the OS across sample MFIs and significant difference may prevail in the OS between the sample MFIs. Further Kruskal - Wallis test of nonparametric is conducted to study the independence of sample. SPSS result of Kruskal-Wallis also reject  $H_0$ , this means that the distribution of OS is not same across the sample MFIs.

**Testing of  $H_0$ : Significance of ROE**

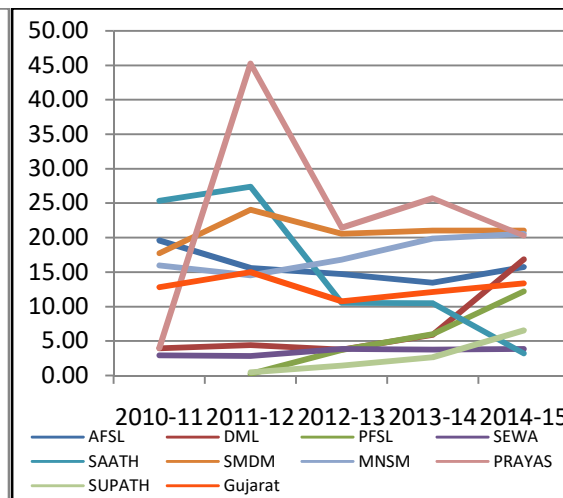
Table 10 Error! Reference source not found., shows that the average rate of ROE is positive for all the MFIs it indicates that all the MFIs operating in Gujarat are incurring profit. Figure 7 shows that ROE of five MFIs and Gujarat is above desired rate of ROE. It shows wide variance between highest ROE (PRAYAS) and lowest ROE (SEWA). To study the significance of ROE of sample MFIs, individual rate of ROE during the study needs to be considered.

Table 10 and corresponding Figure 6 shows variance and standard deviation of PRAYAS (218.67 and 14.79 respectively) is highest and SEWA (0.25 and 0.50 respectively) is lowest among all sample MFIs. Further standard deviation of Gujarat is 9.64. The graph of PRAYAS in the above figure shows high fluctuation, whereas graph of SEWA shows nearly constant steady flow. Further the Table 10 Analysis of ROE shows that ROE was highest for PRAYAS (45.27 percent), SAATH (27.36 percent) and SMDM (24.05 percent) in 2011-12.

**Figure 7 Average ROE of MFIs and Gujarat**



**Figure 8 ROE of MFIs and Gujarat**



**Table 10 Analysis of ROE**

Year	AFSL	DML	PFSL	SEWA	SAATH	SMDM	MNSM	PRAYAS	SUPATH	Gujarat
2010-11	19.57	3.93	-	2.92	25.32	17.74	15.98	3.97	Nil	<b>12.78</b>
2011-12	15.55	4.39	0.25	2.84	27.36	24.05	14.54	45.27	0.44	<b>14.97</b>
2012-13	14.70	3.75	3.74	3.81	10.53	20.56	16.82	21.46	1.43	<b>10.75</b>
2013-14	13.43	5.90	5.99	3.75	10.47	21.04	19.88	25.70	2.63	<b>12.09</b>
2014-15	15.69	16.86	12.22	3.82	3.20	21.05	20.56	20.27	6.52	<b>13.35</b>
<b>Avg.</b>	<b>15.79</b>	<b>6.96</b>	<b>5.55</b>	<b>3.43</b>	<b>15.38</b>	<b>20.89</b>	<b>17.56</b>	<b>23.33</b>	<b>2.76</b>	<b>12.79</b>
<b>Variance</b>	5.27	31.31	25.34	0.25	109.58	5.03	6.64	218.67	7.10	
<b>Std. Dev.</b>	2.30	5.60	5.03	0.50	10.47	2.24	2.58	14.79	2.66	<b>9.64</b>

The value of Skewness and Kurtosis is considered to study the normality of ROE of various MFIs operating in Gujarat. The value of Skewness of ROE appearing in Table 11 is 0.874 with standard error of Skewness at 0.361. Whereas value of Kurtosis for ROE, is 1.288 with standard error of kurtosis 0.709. Further appendix 6 Histogram of OS and ROE indicates non-normal distribution for ROE.

**Table 11 Descriptive Statistics ROE**

	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
<b>ROE</b>	43	12.7883	9.63672	.874	.361	1.288	.709

As the sample under the study represents almost whole population and size of the sample is small parametric test of ANOVA analysis is considered to test the significant difference in OS of sample MFIs.



**Table 12 ANOVA of ROE**

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	2296.101	8	287.0127	6.082639	7.23E-05	2.22534
Within Groups	1604.309	34	47.18555			
Total	3900.41	42				

A single factor ANOVA was conducted in Microsoft Excel to compare the result of ROE for sample MFIs (AFSL, DML, PFSL, SEWA, SAATH, SMDM, MNSM, PRAYAS and SUPATH). The result of Table-12, indicates significant difference in the result of ROE at 5 percent significance ( $p < .05$ ) level for sample MFIs. In this output, the test statistic, F, is reported in the analysis of variance

,  $F(8,34) = 6.0826$ , is more than the critical value of  $F = 2.225$ . The p-value for this statistics is 0.001 (reported in the table as 7.23E-05). The ANOVA result rejects  $H_{0B}$ , this means that there is evidence that there are differences in the means of ROE across sample MFIs and significant difference may prevail in the ROE between the sample MFIs. Further as the data are non-normal, to cross verify the result obtained from parametric test, Kruskal – Wallis test of nonparametric is conducted to study the independence of sample. SPSS result of Kruskal-Wallis rejects  $H_{0B}$ , this means that the distribution of ROE is not same across the sample MFIs.

**OBSERVATION**

From the analysis of  $H_{01}$  it is observed that the average rate (arithmetic mean) of OS and ROE (115.34 percent and 12.79 percent respectively) of sample MFIs in Gujarat is more than the desired rate (110 percent and 11.94 percent respectively). It indicates that Gujarat has fulfilled both the criteria for financial sustainability. It is further observed that AFSL, SMDM, MNSM and PRAYAS satisfy both the conditions for financial sustainability and falls under the first position of financial sustainability. DML is able to satisfy only first condition of OS and falls under the second position of financial sustainability. SAATH is able to satisfy only second condition of ROE and falls under the third position of financial sustainability. Whereas both infant institute (PFSL and SUPATH) and most mature institute (SEWA), have failed to fulfil both the conditions for financial sustainability and falls under the fourth position of financial sustainability. From the ANOVA and Kruskal-Wallis test for  $H_{0A}$  and  $H_{0B}$  it is observed that, the distribution of rate of OS and ROE is not same across the sample MFIs and significant difference in the rate of OS and ROE.

**CONCLUSION**

Above observations drawn from the data analysis leads to the following conclusion:

- MFIs in Gujarat fulfil the Operating Approach and Profitability approach criteria for financial sustainability.
- Null hypothesis  $H_{01}$ , MFIs operating in Gujarat are financially sustainable, is accepted.
- Four sample MFIs fall under the first position, one each in second and third position and three in fourth position of financial sustainability.
- All three MFIs under the fourth position is infant or most mature category of age group. So probably age is affecting factor for financial sustainability. The same is analysed in  $H_{04}$  and concluded in later part.
- The rate of OS and ROE is not same across the sample MFIs, and  $H_{0A}$  and  $H_{0B}$  is not accepted.