

## **Operating Performance Evaluation of Select MFIs- an empirical Analysis**

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### **I. Introduction:**

"Microfinance creates access to productive capital, which together with two other forms of capital- human capital, addressed through education and vocational training, and social capital, built through creating representative, local organization building, promoting democratic systems, and strengthening human rights; enables people to move out of poverty. Microfinance enables poor self-employed people to create productive capital, to protect the capital they have, to deal with risk, and to avoid the destruction of capital. It attempts to build assets and create wealth among people who lack them. For the very poor, microfinance becomes a liquidity tool that helps smooth their consumption patterns and to reduce their level of vulnerability.

The Institutions whose major business is the provision of financial services. Microfinance institutions are "those which provide thrift, credit and other financial services and products of very small amounts mainly to the poor in rural, semi-urban or urban areas for enabling them to raise their income level and improve living standards". A variety of microfinance institutions catering to the needs of poor exist in India. There are around 900 microfinance institutions with varied legal forms. MFIs are engaged in extending micro-credit loans – and often other financial services – to poor borrowers for income generating and self-employment activities.

### **Objectives:**

This paper is outlined to analyse the following:

- ❖ To analyze the Cost per Borrower of select MFIs.
- ❖ To evaluate the Operating Expenses to Loan Portfolio of select MFIs.
- ❖ To examine Operating Expenses to Assets of select MFIs.

### **II. Methodology:**

The data collected for the study includes secondary data. The various sources used to collect secondary data include research papers, journals, Status of Microfinance in India reports published by NABARD and various other websites. The secondary data collected is analyzed using various statistical tools and techniques such as mean, and one way ANOVA. The technique is used to identify if there exist a significant difference in the mean of different of select MFIs.

It is proposed to analyze the performance of select microfinance institutions. The data of eleven years (from 2001 to 2011) required for the analysis part have been collected through online database [www.mixmarket.org](http://www.mixmarket.org). The analysis part is carried out with the help of the following variables:

### **Operating efficiency:**

1. Cost per Borrower
2. Operating Expenses to Loan Portfolio
3. Operating Expenses to Assets

### **1. Cost per Borrower:**

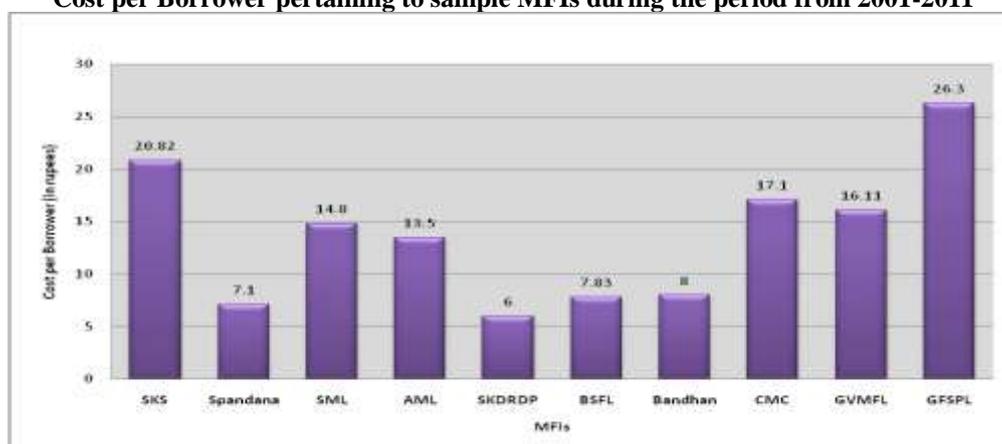
Cost per borrower incurred by an MFI in the process of loan sanction in favour of borrower is considered as the operating cost commitment of concerned MFI. Lower the cost per borrower shall be the indication for high operational efficiency of the MFI. The data relevant to cost incurred by various microfinance institutions per borrower in extending loans are presented in table-1.

**Table – 1**  
**Cost per Borrower of select Microfinance Institutions during the period from 2001 to 2011**  
 (Amount in Rupees)

Years	SKS	Spandana	SML	AML	SKDRDP	BSFL	Bandhan	CMC	GVMFL	GFSP	Mean
2001	52	5	16					18	17	47	25.83
2002	21	6	15					14	12	38	17.67
2003	19	5	16				8	12	13	27	14.29
2004	16	5	17				10	27	13	23	15.86
2005	12	6	18	14	4	15	6	22	16	21	13.40
2006	16	6	11	10	4	9	6	17	16	18	11.30
2007	19	7	14	14	12	6	9	15		27	13.67
2008	19	9	15	15	5	5	8	15	18	21	13.00
2009	16	10	13	13	5	5	7	15	17	18	11.90
2010	18	12	13	15	6	7	10	16	23	23	14.30
2011	21										21.00
Mean	20.82	7.10	14.80	13.50	6.00	7.83	8.00	17.10	16.11	26.30	13.76

Source: Compiled from the database developed by Microfinance Institutions Exchange (Mix market) for the period from 2001 to 11.

**Figure - 1**  
**Cost per Borrower pertaining to sample MFIs during the period from 2001-2011**



Source: Performed by using data of Mean cost per borrower compiled from table-1

The analysis of the data in table-1 and figure-1 disclose that the yearly industry cost per borrower recorded with a highest of Rs.25.83 in 2001 and lowest of Rs.11.30 in 2006 with an aggregate industry average of Rs.13.76 during the study period from 2001 to 2011.

The yearly cost per borrower compared with yearly industry average depicts that Spandana, Bandhan, and SKDRDP MFIs were performing well as their cost per borrower had been below the yearly industry average during all the years of the study period. In case of BSFL, the cost per borrower was also below the yearly industry average in all the years except in 2005. However, the operational efficiency of SML, SKS, AML, CMC, GVMFL, and GFSP was found below the stranded as the cost per borrower recorded above the yearly industry average during all most all the years of the study.

The aggregate analysis disclose that the Mean cost per borrower of Spandana with Rs.7.10, AML Rs.13.50, SKDRDP Rs.6.0, BSFL Rs.7.83, and Bandhan Rs.8.0 was found satisfactory as it was below the aggregate industry average of Rs.13.76, Where as, the yearly average cost per borrower of SKS with Rs.20.82, SML Rs.14.80, CMC Rs.17.10, GVMFL Rs.16.11, and GFSP Rs.26.30 found above the yearly aggregate industry average.

The Mean cost per borrower of SKS, Spandana, SML, AML, SKDRDP, BSFL, Bandhan, CMC, GVMFL, and GFSP have been compared by performing one way ANOVA with the following null hypothesis which was tested at 5% level of significance and results are shown table-2.

**Table-2**  
**ANOVA Result of cost per borrower**

<b>SUMMARY</b>				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SKS	11	229	20.81818	113.7636
Spandana	10	71	7.1	5.877778
SML	10	148	14.8	4.4
AML	6	81	13.5	3.5
SKDRDP	6	36	6.0	9.2
BSFL	6	47	7.833333	14.56667
Bandhan	8	64	8.0	2.571429
CMC	10	171	17.1	19.21111
GVMFL	9	145	16.11111	11.11111
GF SPL	10	263	26.3	86.9

<b>ANOVA</b>						
<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	3514.39723	9	390.489	12.2211	1.02E-11	2.005543
Within Groups	2428.35859	76	31.9521			
<b>Total</b>	<b>5942.75581</b>	<b>85</b>				

Source: ANOVA Performed by using MS-Excel software based on the data compiled in table-1

**Ho:** The Mean cost per borrower of SKS, Spandana, SML, AML, SKDRDP, BSFL, Bandhan, CMC, GVMFL, and GF SPL do not differ significantly.

**Inference:** The null hypothesis stands rejected since the calculated value of “F” =12.221 is greater than the table value of F (crit) =2.0055. As such, it can be inferred that there is significant difference of Mean cost per borrower among the entire sample MFIs.

## 2. Operating Expenses to Loan Portfolio:

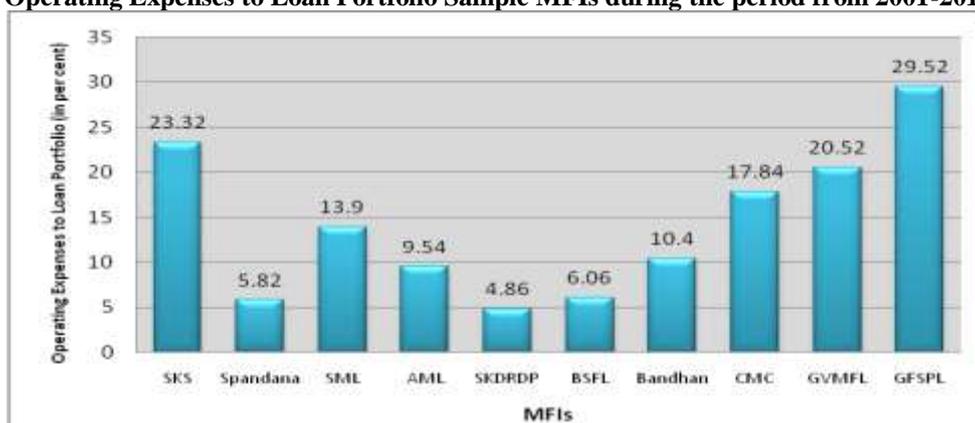
The cost incurred by an MFI at the time of sanctioning and disbursing loan among various SHGs and other individual borrowers as percent to gross loan portfolio has been considered for analysis. The data pertaining to operating expenses to loan portfolio is presented in table – 3.

**Table – 3**  
**Operating Expenses to Loan Portfolio of select Microfinance Institutions during the period from 2001 to 2011**  
(In percent)

<b>Years</b>	<b>SKS</b>	<b>Spandana</b>	<b>SML</b>	<b>AML</b>	<b>SKDRDP</b>	<b>BSFL</b>	<b>Bandhan</b>	<b>CMC</b>	<b>GVMFL</b>	<b>GF SPL</b>	<b>Mean</b>
2001	57.53	6.55	23.59					26.59	37.40	77.69	<b>38.23</b>
2002	25.52	7.13	19.96					18.01	23.23	62.80	<b>26.11</b>
2003	73.94	5.14	18.54					13.33	21.88	41.83	<b>29.11</b>
2004	15.07	4.11	15.94				21.48	29.00	19.75	27.89	<b>19.03</b>
2005	10.47	5.82	15.17	13.69	3.91	7.01	11.81	23.68	21.32	18.30	<b>13.12</b>
2006	13.22	6.08	10.59	9.98	3.30	6.69	8.76	17.88	16.79	13.93	<b>10.72</b>
2007	12.32	5.79	10.67	10.72	8.86	5.79	10.44	13.34		17.57	<b>10.61</b>
2008	13.31	6.17	9.48	9.75	4.16	5.98	8.78	13.00	17.08	12.32	<b>10.00</b>
2009	10.14	5.36	8.20	6.34	4.78	5.48	5.43	11.43	11.79	9.54	<b>7.85</b>
2010	10.62	6.08	6.82	6.76	4.12	5.41	6.12	12.09	15.47	13.33	<b>8.68</b>
2011	14.42										<b>14.42</b>
<b>Mean</b>	<b>23.32</b>	<b>5.82</b>	<b>13.90</b>	<b>9.54</b>	<b>4.86</b>	<b>6.06</b>	<b>10.40</b>	<b>17.84</b>	<b>20.52</b>	<b>29.52</b>	<b>14.18</b>

Source: Compiled from the Microfinance Institutions Exchange (Mix market) for the period from 2001 to 2011.

**Figure – 2**  
**Operating Expenses to Loan Portfolio Sample MFIs during the period from 2001-2011**



Source: Performed by using data of Mean Operating expenses to Loan Portfolio compiled in table-3

The analysis of data in table-3 and figure-2 disclose that the ratio of operating expenses as to loan portfolio of Indian Microfinance industry varied between the highest of 38.23 times in 2001 and lowest of 7.85 times in 2009 with the aggregate industry average 14.18 times during the study period 2001 to 2011. The lower ratio indicates high operational efficiency and there by yielding high profitability. Spandana, SKDRDP, BSFL, Bandhan MFIs have operated well in maintaining their operating expenses to loan portfolio ratio was below the yearly industry average in all the years of the study. However, the operating expenses ratio of SKS, CMC, GVMFL, and GFSPL MFIs recorded above the yearly industry average during most of the years during the period of the study in general and particularly during the period from 2006 to 2011 as this ratio was found adverse as compared to that of the yearly industry average.

The aggregate analysis indicates that the Spandana, SML, AML, SKDRDP, BSFL, and Bandhan were the most efficient companies which able to maintain the yearly average operating expenses ratios accounted for 5.82 times, 13.9 times, 9.54 times, 4.86 times, 6.06 times, and 10.4 times respectively found at lower than that of aggregate industry average of 14.18 times during the study period. Further, it has been noted that SKS, CMC, GVMFL, and GFSPL were maintained their average operating expenses ratio of 23.23 times, 17.84 times, 20.52 times, and 29.52 times respectively were higher than that of aggregate industry average.

The data pertaining to the Mean ratio of operating expenses as to loan portfolio are compared and analyzed by performing one way ANOVA with the following hypothesis and the results are disclosed in table-4.

**Table – 4**  
**ANOVA Result of operating expenses to loan portfolio**

<b>SUMMARY</b>				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SKS	11	256.56	23.32364	470.8156
Spandana	10	58.23	5.823	0.678401
SML	10	138.96	13.896	31.27394
AML	6	57.24	9.54	7.3642
SKDRDP	6	29.13	4.855	4.07599
BSFL	6	36.36	6.06	0.42752
Bandan	7	72.82	10.40286	28.84822
CMC	10	178.35	17.835	41.49003
GVMFL	9	184.71	20.52333	52.85285
GFSPL	10	295.2	29.52	561.2218

<b>ANOVA</b>						
<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	5491.116	9	610.124	4.131622	0.000239	2.00726
Within Groups	11075.38	75	147.6718			
<b>Total</b>	<b>16566.5</b>	<b>84</b>				

Source: ANOVA Performed by using MS-Excel software based and the data compiled in table-3.

**Ho:** There is no significance difference among SKS, Spandana, SML, AML, SKDRDP, BSFL, Bandhan, CMC, GVMFL, and GFSPL MFIs as far as the Mean ratio of operating expenses to loan portfolio is concerned.

**Inference:** Since the calculated value of “F”= 4.131622 is greater than the table value of Fcrit = 2.00726, the hypothesis stands rejected. As such, it can be inferred that the Mean ratio of operating expenses to loan portfolio among the sample MFIs differ significantly.

### 3. Operating Expenses to Assets:

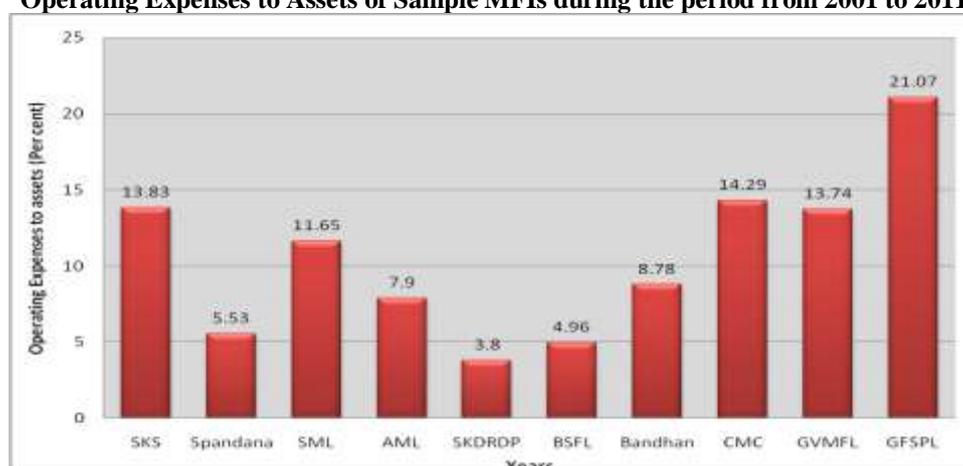
An expense ratio is calculated by dividing the operating expenses by the total assets. It is also known as management expense ratio. The lower the ratio implies that the institution is more profitable and shows its ability to cover the costs effectively. The ratio of operating expenses to Assets of Indian Microfinance Industry is depicted in table-5

**Table – 5**  
**Operating expenses to Assets of sample Microfinance Institutions during the period from 2001 to 2011**  
 (In percent)

Years	SKS	Spandana	SML	AML	SKDRDP	BSFL	Bandhan	CMC	GVMFL	GFSPL	Mean
2001	31.56	5.93	19.07					17.53	19.79	50.30	24.03
2002	18.21	6.63	16.71					12.09	15.11	40.94	18.28
2003	12.37	4.62	15.37					10.29	15.63	26.59	14.15
2004	11.75	3.59	13.85				17.58	21.66	12.43	20.32	14.45
2005	8.22	5.05	13.08	11.34	3.34	5.95	10.86	18.28	9.43	13.38	9.89
2006	10.50	5.33	9.28	8.34	2.56	5.85	8.27	14.88	10.65	11.06	8.67
2007	9.63	5.08	8.92	8.80	6.62	5.01	8.75	11.86		13.81	8.72
2008	10.62	5.97	8.53	7.90	3.29	4.82	6.68	13.56	13.95	12.23	8.76
2009	9.80	6.14	6.14	5.15	3.94	4.06	4.18	11.89	11.06	10.64	7.30
2010	10.84	7.00	5.54	5.84	3.04	4.08	5.11	10.86	15.60	11.42	7.93
2011	18.61										18.61
Mean	13.83	5.53	11.65	7.90	3.80	4.96	8.78	14.29	13.74	21.07	10.55

Source: Compiled from Microfinance Institutions Exchange (Mix market) for the period from 2001 to 2011.

**Figure – 3**  
**Operating Expenses to Assets of Sample MFIs during the period from 2001 to 2011**



Source: Performed by using data of Mean Operating expenses to assets compiled in table-5

The analysis of data in table-5 and figure-3 disclose that the ratio of operating expenses to total assets of Indian Microfinance Industry varied between the highest of 24.03 times in 2001 and the lowest of 7.30 times in 2009 with eleven years average of 10.55 times during the study period 2001 to 2011.

Year wise analysis indicate that the operating expenses to assets ratio of SPANDANA, SKDRDP, and BSFL microfinance institutions ranged between lowest of 3.59 times, 2.56 times, 4.06 times respectively and

highest of 7.0 times, 6.62 times, and 5.95 times respectively which were below the yearly industry average during all the years of study. This reflects these that MFIs have been operating well in controlling such operating expenses which leads to achieve high profitability. AML could also able to maintain lower ratio in all the years except in the years 2005 and 2007. In case of GFSPL, it could in vain in maintaining its ratio lower than yearly industry average in all the years from 2001 to 2011. SKS maintained lower ratio during 2002 to 2005 and thereafter it has turned into above the yearly industry average during the years 2006 to 2010. SML was also in vain in maintaining lower ratio except in the years 2001, 2002, 2004, 2009, and 2010. Bandhan has been improving its efficiency from 2008 onwards where its ratio was below the yearly industry average during the period from 2008 to 2011. However, CMC and GVMFL could unable to maintain their operating expenses to assets ratio below the yearly industry average during the period from 2004 and 2006 respectively to 2011.

The analysis also disclose that SKS, SML, CMC, GVMFL, and GFSPL Microfinance institutions could not maintain their operating expenses to assets ratio below the industry average in aggregate, whereas, Spandana, AML, SKDRDP, BSFL, and Bandhan microfinance institutions could operate well in maintaining their ratio below the industry average which have been accounted for 5.53 times, 7.90 times, 3.80 times, 4.96 times and 8.78 times respectively during the study period. However, SKS with operating expenses to assets ratio of 13.83 times, SML with 11.65 times, CMC with 14.29 times, GVMFL with 13.74 times, and GFSPL with 21.07 found above the aggregate industry average of 10.55 times over the period of study, as such it has been clearly reflected that these MFIs could unable to control the operating expenses, as such, negative impact on profitability would be expected accordingly.

The operating expenses to total Assets are higher for some of the microfinance institutions. The reason for this is the MFIs have incurred training expenses for their staff members, education of borrowers etc. Also, the delivery model of MFIs at the doorstep of borrowers is a reason for the MFIs to have incurred high operating costs.

The data pertaining to the Mean ratio of operating expenses as to Total assets are compared and analyzed by performing one way ANOVA with the following hypothesis and the results are disclosed in table-6.

**Table – 6**  
**ANOVA Result of operating expenses to Assets**

<b>SUMMARY</b>				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SKS	11	152.11	13.82818	45.85298
Spandana	10	55.34	5.534	1.017893
SML	10	116.49	11.649	21.31997
AML	6	47.37	7.895	4.92863
SKDRDP	6	22.79	3.798333	2.111777
BSFL	6	29.77	4.961667	0.675737
Bandan	7	61.43	8.775714	20.1777
CMC	10	142.9	14.29	13.98727
GVMFL	9	123.65	13.73889	10.32224
GFSPL	10	210.69	21.069	196.9266

<b>ANOVA</b>						
<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	2194.079	9	243.7865	6.529949053	8.11415E-07	2.00726
Within Groups	2800.02	75	37.3336			
<b>Total</b>	<b>4994.099</b>	<b>84</b>				

Source: ANOVA Performed by using MS-Excel software based an the data compiled in table-5

**Ho:** The Mean Operating Expenses to Assets ratio of SKS, Spandana, SML, AML, SKDRDP, BSFL, Bandhan, CMC, GVMFL, GFSPL microfinance institutions do not differ significantly.

**Inference:** There is significant difference in the operating expenses to total assets ratio of MFIs at 5% level of significance, thereby rejecting null hypothesis since the calculated value of “F”= 6.529949053 is greater than the table value of Fcrit = 2.00726. As such it can be inferred that the Mean ratio of operating expenses to loan portfolio among the sample MFIs differ significantly.

### **III. Conclusion:**

The aggregate analysis disclose that the Mean cost per borrower of Spandana with Rs.7.10, AML Rs.13.50, SKDRDP Rs.6.0, BSFL Rs.7.83, and Bandhan Rs.8.0 was found satisfactory as it was below the aggregate industry average of Rs.13.76, Where as, the yearly average cost per borrower of SKS with Rs.20.82, SML Rs.14.80, CMC Rs.17.10, GVMFL Rs.16.11, and GFSPL Rs.26.30 found above the yearly aggregate industry average.

The aggregate analysis indicates that the Spandana, SML, AML, SKDRDP, BSFL, and Bandhan were the most efficient companies which able to maintain the yearly average operating expenses ratios accounted for 5.82 times, 13.9 times, 9.54 times, 4.86 times, 6.06 times, and 10.4 times respectively found at lower than that of aggregate industry average of 14.18 times during the study period. Further, it has been noted that SKS, CMC, GVMFL, and GFSPL were maintained their average operating expenses ratio of 23.23 times, 17.84 times, 20.52 times, and 29.52 times respectively were higher than that of aggregate industry average.

The analysis also disclose that SKS, SML, CMC, GVMFL, and GFSPL Microfinance institutions could not maintain their operating expenses to assets ratio below the industry average in aggregate, whereas, Spandana, AML, SKDRDP, BSFL, and Bandhan microfinance institutions could operate well in maintaining their ratio below the industry average which have been accounted for 5.53 times, 7.90 times, 3.80 times, 4.96 times and 8.78 times respectively during the study period. However, SKS with operating expenses to assets ratio of 13.83 times, SML with 11.65 times, CMC with 14.29 times, GVMFL with 13.74 times, and GFSPL with 21.07 found above the aggregate industry average of 10.55 times over the period of study, as such it has been clearly reflected that these MFIs could unable to control the operating expenses, as such, negative impact on profitability would be expected accordingly.

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