



## INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT AND MANAGEMENT

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- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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- Garg Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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## RANKING MFIS IN INDIA: USING TOPSIS

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### ABSTRACT

Micro Finance institutions (MFIs) have grown rapidly in India. Indian microfinance sector is increasingly becoming a viable investment sector for commercial investors. So ranking Indian MFIs is of obvious interest for investors and researchers. CRISIL has ranked fifty Indian MFIs, based on loan amount outstanding for 2009. But there are a number of other indicators of performance of an MFI. A ranking based on a number of indicators, measuring outreach, sustainability, efficiency and financial structure, will be useful for quick comparison of overall performance of the Indian MFIs. Such a multi criteria ranking is a very challenging problem, as different MFIs seem to outperform, their peers, under different criteria. TOPSIS is a multi criteria method of ranking alternative solutions. It is based on the principle that the best solution is closest to an ideal solution (which is the best alternative, under any criterion), and farthest from a negative ideal solution (which represents the worst alternative, under any criterion). Using TOPSIS, we rank seventy seven Indian MFIs which report their performance, with respect to a number of criteria in the MIX website. Our rankings reflect the overall performance of these MFIs with respect to ten different indicators. We see that SKS Microfinance Ltd, Spandana Sphoorty Financial Ltd (SSFL) and Share Microfinance Ltd are the top three Indian MFIs, ranked first, second and third respectively, based on CRISIL as well as our TOPSIS rankings.

### KEY WORDS

MFI performance, Ranking, TOPSIS.

### INTRODUCTION

Micro Finance Institutions (MFIs) access financial resources from the banks and other mainstream financial institutions and provide financial and other services to the un-served clients (World Bank, 2010). In India, the Microfinance programme and institutions are one of the most important components of Government's strategies to reduce poverty (Singh (2009)). Forty percent of Indian population remains un-banked (Gandhi (2010)). Banks have merely penetrated nineteen percent of the rural India (Gandhi (2010)). The gap in supply and demand of financial services was initially addressed by the developmental agencies and NGOs. But from 1992 onwards, the growth of microfinance accelerated in India. Indian Microfinance sector is increasingly becoming a viable investment sector, and shares of Indian MFIs are expected to trade at significant premium to their book values (see Lok Capital (2010)). This has attracted the interest of investors as well as researchers, and greater emphasis is now given on performance of MFIs (Crombrugge et al. (2007), Stephens (2006), Okumu (2007)).

There are several indicators of performance of an MFI (see Rosenberg (2009)). In this paper we consider ten such indicators, viz.

1. Average loan balance per borrower expressed as percentage of GNI per capita.
2. Total women borrowers.
3. Number of active borrowers.
4. Capital asset ratio.
5. Debt equity ratio.
6. Gross loan portfolio to total assets.
7. Return on assets (ROA).
8. Return on equity (ROE).
9. Operational self sufficiency (we call it OSS).
10. Cost per borrower.

These indicators measure different aspects of performance. For instance, criteria 1, 2 and 3 measures *outreach* of an MFI. There are two aspects of outreach-*depth* and *breadth*. Depth of outreach refers to the extent to which an MFI serves the financially weaker section of a society (see Stephens and Tazi (2006)). Total women borrowers of an MFI serve as a proxy for its depth. A lower average loan balance per borrower also reflects greater depth of an MFI, the reason being that financially strong section of a society are less inclined to availing small or micro loans (see Stephens and Tazi (2006) and Rosenberg (2009)). So criteria 1 and 2 are used to measure *depth of outreach*. Number of active borrowers measures the *breadth of outreach* of an MFI.

Higher capital asset ratio, lower debt equity ratio and ratio of gross loan to total asset imply better *financing structure* of an MFI.

ROA, ROE and OSS are measures of *financial sustainability*. Higher these ratios, the more sustainable are an MFI.

The last criterion, viz. cost per borrower, is used to measure the *efficiency*. The lower this ratio, the more efficient is an MFI.

Detailed discussion on these indicators can be found in Rosenberg (2009), Chandra (2008) Stephens and Tazi (2006), and microfinance information exchange (we call it MIX) website. In this paper, we use these indicators as criteria for ranking Indian MFIs.

### DATA

Eighty eight Indian MFIs have reported their performance in terms of a number of indicators in MIX website, on 31/3/2010. Unfortunately, eleven MFIs have not reported data on all the indicators which we consider in this paper. Therefore we have ranked the other seventy seven MFIs which have reported data on all the indicators. These data are tabulated in Table 1, in Appendix.

### OBJECTIVE AND METHODOLOGY

In this paper we rank the performances of seventy seven Indian MFIs based on the ten indicators mentioned above.

From the data, in Table 1, it is easy to see that none of the MFIs is uniformly superior to its peers with respect to all the criteria. For instance, SKS Microfinance

has higher total women borrowers, number of active borrowers, ROA and lower debt equity ratio than Spandana. In contrast, Spandana exhibits higher ROE, OSS, lower gross loan to total asset ratio and lower cost per borrower than SKS. In general the ranking of the MFIs, based on different criteria, can be entirely different. For instance while SKS Microfinance and Spandana are the top two MFIs in terms of the number of active borrowers (i.e. outreach breadth), but these MFIs are not among even the top twenty Indian MFIs based on debt equity ratio.

One may question "which of these two criteria is more suitable for ranking MFIs?" These two criteria do not seem to be directly comparable, as they measure different aspects of growth. Besides, an institution may raise capital for increasing its outreach. Consequently, a large MFI may have higher debt, than a smaller MFI. Therefore, there seems to be no unique criterion for comparing or ranking MFIs. Hence a number of indicators need to be compared. It is very difficult to rank or compare seventy seven MFIs, based on multiple criteria, merely by eye inspection.

TOPSIS (technique for order preference by similarity to an ideal solution) is a multiple criteria method to identify solutions from a finite set of alternatives (see Hwang and Yoon (1981), Jahanshahloo et al. (2006)). The basic principle is that the best alternative should have the shortest distance from the positive ideal solution and the farthest distance from the negative ideal solution. In context of ranking MFIs, an ideal solution represents an MFI that outperforms all its peers with respect to all the criteria. In contrast, a negative ideal solution represents the worst performing MFI, with respect to all the criteria. None of the seventy seven MFIs, considered in this paper, is an ideal or negative ideal solution. We use TOPSIS method to assign scores to the MFIs. A high score will reflect that the corresponding MFI is far from the negative ideal and close to the ideal solution. Finally the MFIs are ranked from 1 to 77 using these scores (the highest score is assigned rank 1). The technical details of computation of the TOPSIS score are described later.

**LITERATURE REVIEW**

A number of studies have been conducted to know the financial performance and outreach of MFIs in the countries other than India (see Seible (1999), Kereta (2007), Wollni. (2001), Hermes and Lensink (2007)). In these studies authors have compared MFIs in Indonesia, Mexico, Ethiopia, Pakistan, Bolivia etc. The number of studies on Indian MFIs seems to be drastically limited. We have come across only three such papers, viz. Agarwal and Sinha (2010), Stephens and Tazi (2006) and Crombrughe et al. (2008), and reports on MFIs in India published by M-CRIL and Lok Capital. In each of these three papers the authors have studied some particular aspect(s) of performance of some Indian MFIs.

For instance, Stephens and Tazi (2006) found that eight, out of 25, highly leveraged MFIs in the global data set are Indian. The Indian MFIs are mainly financed by banks and financial institutions, which make them highly leveraged institutions in the world. Crombrughe et al. (2008) have investigated sustainability of Indian MFIs. Agarwal and Sinha (2010) have analyzed the financial structure, revenue, expenses and efficiency of the 'five star MFIs' in India, using financial ratios. They have studied performance of these Indian MFIs in terms of debt equity ratio, cost per borrower, operational self sufficiency etc. which are measures of efficiency and financial structure of the MFIs. These papers provide insight into specific aspects of performance of some of the Indian MFIs. But we have not come across any study comparing the overall performance of the different MFIs in India, based on a broad class of indicators.

M-CRIL (2010) and Lok Capital (2010) have reviewed different aspects of growth of Micro Finance sector in India. In M-CRIL (2010) a number of indicators of performance of the Indian Micro Finance sector is compared with the global average values of those indicators. It appears that the Indian MFIs are very cost efficient, and exhibiting annual growth (over 20 percent) in portfolio yield from 2006 onwards (see M-CRIL (2010)). Given this growth, Indian MFIs are attracting commercial investors. In this context a ranking of the overall performance of the Indian MFIs is of obvious interest to researchers as well as investors. Ranking of the Indian MFIs is not available in the above mentioned papers or reports. CRISIL has ranked 50 MFIs in India, based on loan amount outstanding for 2009. In the previous subsection, we have already discussed the motivation for a multi-criteria ranking, based on a number of indicators. This paper is an attempt in that direction.

**TOPSIS METHODOLOGY FOR RANKINGS**

Let  $x_{ij}$  denote the data on jth criterion for ith MFI,  $i=1,2,...,77$  and  $j=1,2,...,10$ .

In the context of our problem, the procedure of TOPSIS (see Jahanshahloo (2006)) can be expressed in a series of steps, mentioned below.

- (1) We normalize the  $x_{ij}$  values, i.e. we define

$$y_{ij} = x_{ij} / \sqrt{\sum_{i=1}^{77} x_{ij}^2}, \quad i=1,2,...,77 \text{ and } j=1,2,...,10.$$

- (2) Calculate the weighted normalized value  $v_{ij}$ s, as follows

$$v_{ij} = w_j y_{ij}, \quad i=1,2,...,77 \text{ and } j=1,2,...,10.$$

$$w_j \text{ weight assigned to the } j\text{th criterion, } j=1,2,..,10, \text{ and } \sum_{j=1}^{10} w_j = 1.$$

- (3) The ideal solution  $\{v_1^+, \dots, v_{10}^+\}$  and the negative ideal solution  $\{v_1^-, \dots, v_{10}^-\}$  are obtained as follows

$$v_j^+ = (\max\{v_{1j}, \dots, v_{77j}\}, \min\{v_{1j}, \dots, v_{77j}\}) \quad j=1,2,...,10$$

$$\text{and } v_j^- = (\min\{v_{1j}, \dots, v_{77j}\}, \max\{v_{1j}, \dots, v_{77j}\}) \quad j=1,2,...,10.$$

If high value of the jth criteria indicates superior performance of an MFI, then  $v_j^+ = \max\{v_{1j}, \dots, v_{77j}\}$ . Otherwise  $v_j^+ = \min\{v_{1j}, \dots, v_{77j}\}$ . For example  $v_j^+ = \min\{v_{1j}, \dots, v_{77j}\}$ , for average loan balance per borrower expressed as percentage of GNI per capita, debt equity ratio, gross loan portfolio to total assets and cost per borrower. For the other six criteria  $v_j^+ = \max\{v_{1j}, \dots, v_{77j}\}$ .

The interpretation of  $v_j^-$  is opposite to that of  $v_j^+$ .

- (4) For each MFI, we calculate the separation measures, using the n-dimensional Euclidean distance. The separation of each MFI from the ideal solution is given as

$$d_i^+ = \{\sum_{j=1}^{10} (v_{ij} - v_j^+)^2\}^{\frac{1}{2}}, \quad i=1,2,...,77.$$

Similarly, the separation from the negative ideal solution is given as

$$d_i^- = \left\{ \sum_{j=1}^{10} (v_{ij} - v_j^-)^2 \right\}^{\frac{1}{2}}, \quad i=1,2,\dots,77.$$

(5) We calculate the relative closeness to the ideal solution. The relative closeness of the *i*th MFI is defined as

$$R_i = d_i^- / (d_i^- + d_i^+), \quad i=1,2,\dots,77.$$

(6) Finally we rank the seventy seven MFIs using their relative closeness scores (i.e. using  $R_1, \dots, R_{77}$ ) in decreasing order. That is, rank 1 is assigned to the MFI with relative closeness equal to  $\max\{R_1, \dots, R_{77}\}$ .

**REMARKS:** It is important to note that in the 1<sup>st</sup> step of the TOPSIS method, the data is normalized i.e. made unit free. Consequently, the TOPSIS ranking are not affected by the unit or scale in which the different criteria are measured.

**FINDINGS: MFI RANKINGS**

Using the data in Table 1, and the TOPSIS method we rank the seventy seven MFIs in our study.

In the step 2 of the TOPSIS method, we use  $w_j = \frac{1}{10}, j = 1, \dots, 10$ , i.e. we assign equal weight to all the ten criteria. Since different criteria measure different aspects of performance, assigning higher weight to a criterion over another seems to be a debatable issue in the context of our problem. We want to rank the MFIs without being biased to any specific criterion.

The TOPSIS relative closeness scores and the ranks of the seventy seven MFIs are tabulated in Table 2.

**TABLE 2: TOPSIS RANKING OF THE INDIAN MFIS, BASED DATA REPORTED ON 31/3/2010**

Name of MFIs	Scores	Ranks	Name of MFIs	Scores	Ranks
SKS Microfinance Ltd	0.922	1	Sarvodaya Nano Finance	0.580	39
Spandana Sphoorty Financial Ltd (SSFL)	0.863	2	BSS	0.577	40
Share Microfinance Ltd.	0.773	3	SMSS	0.576	41
Bandhan Society	0.762	4	NEED	0.575	42
Asmitha Microfin Ltd (AML)	0.681	5	VFS	0.574	43
Sarala	0.656	6	CRSA	0.573	44
Equitas	0.655	7	GFSPL	0.572	45
Cashpor Micro Credit (CMC)	0.649	8	ESAF	0.570	46
BASIX	0.637	9	Mimo Finance	0.567	47
SKDRDP	0.632	10	AWS	0.565	48
RORES	0.624	11	PWMACS	0.564	49
FFSL	0.621	12	SEIL	0.563	50
Grama Vidiyal Microfinance Ltd.	0.620	13	Asomi	0.5625	51
SU	0.619	14	SCNL	0.5624	52
Asirvad	0.618	15	JFSL	0.562	53
NBJK	0.617	16	GTFS	0.5618	54
BISWA	0.616	17	India's Capital Trust Ltd	0.5609	55
MMFL	0.615	18	Janodaya	0.558	56
SWAWS	0.613	19	NCS	0.556	57
ASA India	0.612	20	BJS	0.555	58
Ujjivan	0.611	21	Indur MACS	0.554	59
Sahara Utsarga	0.608	22	Samasta	0.553	60
Sahayata	0.601	23	SVSDF	0.552	61
IDF Financial Services	0.600	24	Mahashakti	0.550	62
WSE	0.599	25	Mahasemam	0.547	63
Saadhana	0.598	26	GU	0.546	64
Trident Microfinance	0.592	27	Janalakshmi Financial Services Pvt. Ltd.	0.545	65
SMILE	0.590	28	KBSLAB	0.539	66
BWDC	0.589	29	Chaitanya	0.528	67
Sanghamithra	0.587	30	Nano	0.522	68
BFL	0.585	31	Disha	0.513	69
RGVN	0.58444	32	SEWA Bank	0.495	70
RASS	0.58442	33	Nidan	0.491	71
Adhikar	0.5842	34	RISE	0.473	72
GOF	0.5840	35	KOPSA	0.445	73
Arohan	0.583	36	Swadhaar	0.430	74
Sonata	0.582	37	Pustikar	0.424	75
UFSPL	0.581	38	HiH	0.368	76
			SVCL	0.232	77

**CONCLUSION**

From Table 2 we see that, SKS Microfinance Ltd, Spandana Sphoorty Financial Ltd (SSFL) and Share Microfinance Ltd are the top three Indian MFIs, ranked 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively, based on the TOPSIS relative closeness score. These MFIs are also the top three Indian MFIs in the CRISIL rankings (see <http://indiamicrofinance.com/top-50-microfinance-institutions-india.html>), based on loan amount outstanding for 2009.



We have introduced TOPSIS as a tool for comparison and ranking of the MFIs. The rankings in Table 2 are based on data reported on 31/3/2010. It will be interesting to compute and compare the TOPSIS rankings of these MFIs for subsequent years as well. Such comparison will provide insight into how the Indian MFIs maintain or improve their overall performance over successive years. We leave this problem as a topic for further research.

## REFERENCES

1. Agarwal, P. and Sinha, S. (2010), "Financial performance of microfinance institutions in India-A cross-sectional study", Delhi Business Review, Vol. 11, No. 2, pp. 37-46.
2. Chandra, P. (2008), "Financial Management". Tata McGraw, Hill, New Delhi.
3. Crombrugge, A., Tenikue, M. and Sureda, J., (2008), "Performance analysis for a sample of microfinance institutions in India", Annals of Public and Cooperative Economics 79:2 2008, pp 269-299.
4. Gandhi, R. (2010), "Calling on Mobile Banking: Financial Inclusion in Rural India", South Asia Monitor, Centre for strategic and international studies, Number 143.
5. Hermes, N. and Lensink, R., (2007), "The empirics of microfinance: what do we know," The Economic Journal, Vol. 117.
6. Hwang, C.L., and Yoon, K. (1981), "Multiple Attribute Decision Making Methods and Applications". Springer, Berlin Heidelberg.
7. Jahanshahloo, G.R., Hosseinzadeh Lotfi, F., and Izadikhah, M. (2006), "Extension of the TOPSIS method for decision-making problems with fuzzy data", Applied Mathematics and Computation, No. 181, pp. 1544-1551.
8. Kereta, B. (2007), "Outreach and Financial Performance Analysis of Microfinance Institutions in Ethiopia." Paper Presented in African Economic Conference at United Nations Conference Center (UNCC), Addis Ababa, Ethiopia, 15-17 November.
9. Lok Capital (2010), "Microfinance Industry in India", Lok Capital, March.
10. M-CRIL (2010), "Microfinance Contributes to Financial Inclusion." Microfinance Review.
11. Rosenberg, R. (2009), "Measuring Results of Microfinance Institutions, Minimum Indicators That Donors and Investors Should Track, A Technical Guide". Consultative Group to Assist the Poor, The World Bank.
12. Seibel, H. (1999), "Outreach and Sustainability of Rural Microfinance in Asia: Observations and Recommendations," Microfinance and Poverty Alleviation: Case Studies from Asia and the Pacific, London & New York, Pinter, 2000.
13. Singh T.N. (2009), "Micro Finance Practices In India: An Overview", International Review of Business Research Papers, Vol. 5, No. 5, September 2009, pp. 131.
14. Srinivasan, N. (2010), "Microfinance India State of the Sector Report." New Delhi, Sage Publications.
15. Stephens, B. and Tazi, H. (2006), "Performance and Transparency: A Survey of Microfinance in South Asia." Micro Banking Bulletin.
16. Wollni, M. (2001), "Assessing the poverty outreach of microfinance institutions at household and regional levels: A case study in Mexico," Thesis, Institute of Rural Development, University of Goettingen, Germany.
17. World Bank (2010), "Indian Economic Updates, Economic Policy and Poverty Team South Asia Region", The World Bank, pp.1-23.

## APPENDIX

TABLE 1: DATA ON THE VARIOUS CRITERIA OF PERFORMANCE OF THE 77 MFIS REPORTED 31/3/2010

Name	Average loan balance per borrower / GNI per capita	Total women borrowers	Number of active borrowers	Capital/asset ratio	Debt to equity ratio	Gross loan portfolio to total assets	Return on assets	Return on equity	OSS	Cost per borrower
Adhikar	13.97%	62,652	62,652	12.34%	7.1	82.580541	2.66%	26.51%	115.41%	12
AML	22.79%	1,340,288	1,340,288	11.09%	8.02	81.031854	4.31%	40.07%	81.03	13
Arohan	11.22%	174,492	187,754	13.67%	6.31	88.173819	2.01%	13.01%	114.87%	14
ASA India	12.30%	155,440	156,001	33.16%	2.02	79.038843	5.45%	11.95%	176.58%	10
Asirvad	9.61%	126,483	126,483	24.06%	3.16	84.845148	7.40%	28.20%	156.98%	11
Asomi	11.33%	39,374	40,449	40.15%	1.49	80.138162	-1.65%	-3.04%	94.21%	30
AWS	15.67%	18,930	18,930	17.70%	4.65	74.435383	0.37%	2.66%	102.45%	10
Bandhan	13.99%	2,301,433	2,301,433	10.45%	8.57	78.370144	3.52%	38.21%	78.37%	7
BASIX	14.99%	739,581	1,114,468	14.15%	6.07	56.999346	3.12%	23.29%	73.77%	26
BFL	11.34%	187,548	220,645	13.48%	6.42	73.014843	0.97%	7.20%	111.28%	5
BISWA	18.68%	302,167	305,679	18.28%	4.47	79.974676	5.58%	28.81%	141.10%	8
BJS	8.85%	6,040	6,040	3.94%	24.4	96.866712	1.56%	35.27%	105.62%	15
BSS	13.64%	228,433	228,514	15.72%	5.36	85.755017	0.78%	4.87%	105.61%	15
BWDC	10.47%	10,995	11,230	10.50%	8.52	85.354743	3.10%	33.37%	116.24%	7
Cashpor MC	13.81%	417,039	417,039	3.56%	27.13	95.79076	3.99%	147.03%	120.64%	15
Chaitanya	13.67%	1,674	1,679	97.53%	0.03	46.80357	-11.13%	-11.41%	49.33%	69
CreSA	15.25%	35,118	35,118	23.17%	3.32	78.444167	1.54%	9.09%	109.24%	18
Disha	8.31%	8,179	8,366	9.03%	10.07	72.179118	-3.27%	-37.96%	88.22%	19
Equitas	14.67%	888,600	888,600	36.45%	1.74	81.21033	4.50%	12.38%	81.21%	13
ESAF	15.23%	218,301	220,011	17.97%	4.56	84.812104	0.25%	1.44%	103.01%	19
FFSL	20.39%	257,991	257,991	13.36%	6.49	85.515593	7.04%	45.77%	152.43%	9
GFSPL	20.16%	350,514	352,648	16.40%	5.1	107.75192	0.40%	2.56%	103.61%	18
GOF	8.67%	67,310	67,310	36.47%	1.74	58.29631	0.71%	2.00%	103.94%	19
Grama Vidiyal Microfinance Ltd.	16.88%	772,050	772,050	11.97%	7.35	100.28997	3.65%	25.47%	100.3%	17
GTFS	15.33%	1,825	1,825	28.11%	2.56	97.212248	0.44%	1.56%	105.60%	23
GU	13.01%	67,240	67,240	5.58%	16.92	84.217662	0.17%	3.11%	101.12%	8
HiH	10.64%	82,118	82,118	39.41%	1.54	42.523706	-33.72%	-	115.41%	65
IDF Financial Services	9.67%	129,564	129,600	24.02%	3.16	90.416045	2.93%	15.76%	125.25%	6
India's Capital Trust Ltd	14.94%	18,571	18,571	49.37%	1.03	88.781532	1.84%	3.08%	107.00%	54
Indur MACS	17.40%	24,667	24,668	18.64%	4.37	78.17654	-0.76%	-4.55%	94.63%	12
Janalakshmi Financial Services Pvt. Ltd.	17.57%	82,161	82,161	39.48%	1.53	58.377955	-3.05%	-8.74%	86.46%	41

Janodaya	15.08%	9,966	9,988	15.90%	5.29	73.521246	0.87%	7.24%	103.87%	25
JFSL	8.11%	62,873	93,036	7.07%	13.14	80.040732	0.56%	7.14%	105.76%	9
KBSLAB	27.36%	35,680	61,467	10.68%	8.36	64.751365	1.12%	10.41%	109.54%	35
KOPSA	15.54%	1,284	1,284	99.69%	0	52.50346	-38.56%	-54.96%	-68.36%	16
Mahasemam	10.32%	98,197	98,197	6.57%	14.21	67.973061	0.78%	10.54%	102.02%	34
Mahashakti	12.41%	24,318	24,835	7.03%	13.23	90.024419	0.30%	4.48%	101.79%	9
Mimo Finance	14.18%	52,076	52,345	17.44%	4.73	75.219768	1.36%	8.14%	109.13%	22
MMFL	12.83%	250,208	250,208	27.31%	2.66	90.341349	4.41%	15.89%	162.20%	3
Nano	51.68%	6,970	6,970	62.32%	0.6	218.13133	6.31%	9.90%	116.25%	69
NBJK	12.48%	7,807	9,908	57.02%	0.75	82.879455	7.77%	13.81%	157.12%	13
NCS	13.58%	8,906	8,906	2.59%	37.61	87.153114	1.78%	75.27%	107.24%	19
NEED	13.86%	27,095	31,288	10.97%	8.12	88.053212	2.47%	23.72%	112.74%	14
Nidan	12.71%	1,593	1,660	2.21%	44.22	31.669036	-1.40%	-11.94%	42.16%	0
Pustikar	172.18%	2,075	9,407	13.76%	6.27	80.833544	4.39%	31.79%	141.58%	27
PWMACS	18.57%	36,543	36,543	15.07%	5.64	73.691048	1.17%	8.50%	107.94%	16
RASS	30.76%	47,265	47,265	15.10%	5.62	84.676246	4.43%	30.35%	144.62%	6
RGVN	11.90%	91,968	101,389	2.40%	40.7	86.804182	3.25%	101.46%	121.09%	9
RISE	12.35%	3,507	3,507	15.62%	5.4	71.857816	-9.61%	-62.72%	65.79%	30
RORES	12.47%	26,238	26,238	13.30%	6.52	88.238957	8.23%	70.53%	135.65%	16
Saadhana	15.84%	90,929	90,930	13.93%	6.18	86.25508	4.87%	38.32%	124.82%	15
Sahara Utsarga	12.05%	102,094	102,094	12.96%	6.71	73.59132	5.86%	41.10%	135.70%	13
Sahayata	14.06%	139,179	139,179	29.92%	2.34	76.637505	6.34%	17.46%	138.80%	27
Samasta	14.16%	40,117	40,117	27.06%	2.7	83.958194	-2.38%	-7.45%	87.97%	18
Sanghamithra	12.55%	117,820	118,807	13.39%	6.47	100.36859	2.47%	18.21%	119.13%	4
Sarala	9.16%	81,121	81,121	8.11%	11.33	91.229107	8.42%	118.57%	182.62%	6
Sarvodaya Nano Finance	12.53%	147,122	147,122	21.23%	3.71	87.510406	0.18%	0.91%	104.72%	3
SCNL	21.92%	141,033	166,102	12.61%	6.93	76.771058	1.81%	13.03%	114.14%	28
SEIL	37.76%	55,388	199,731	46.25%	1.16	53.849054	5.65%	13.78%	157.93%	65
SEWA Bank	47.85%	20,993	20,993	17.21%	4.81	32.74148	0.52%	3.06%	107.18%	70
SHARE	15.47%	2,357,456	2,357,456	11.26%	7.88	65.277135	5.50%	45.18%	65.28%	13
SKDRDP	10.80%	783,364	1,225,570	4.78%	19.91	82.614698	1.29%	30.06%	82.61%	5
SKS	16.05%	5,795,028	5,795,028	23.73%	3.21	107.00801	4.96%	21.56%	107%	16
SMILE	14.31%	214,280	214,280	20.54%	3.87	85.305881	1.51%	8.07%	119.37%	7
SMSS	15.49%	29,614	29,746	14.23%	6.03	90.448239	2.46%	19.22%	109.91%	13
Sonata	14.17%	85,897	85,897	40.94%	1.44	73.309957	1.12%	3.28%	108.34%	21
Spandana	20.81%	3,368,115	3,662,846	16.67%	5	121.63822	8.99%	55.67%	81.03%	10
SU	10.27%	61,128	61,128	13.13%	6.61	90.667565	5.92%	60.45%	129.34%	11
SVCL	19.88%	9,729	9,729	77.09%	0.3	59.255508	-60.68%	-78.48%	7.34%	237
SVSDF	19.70%	6,925	6,950	16.12%	5.2	83.27748	0.56%	3.35%	105.43%	20
Swadhaar	15.38%	24,259	27,391	42.37%	1.36	69.183623	-20.75%	-38.73%	49.24%	86
SWAWS	15.64%	122,656	122,656	32.40%	2.09	97.983453	7.45%	21.71%	165.98%	12
Trident Microfinance	15.94%	173,396	174,873	14.51%	5.89	74.111261	3.90%	19.64%	134.73%	14
UFSP	11.22%	11,988	11,988	16.25%	5.15	84.321036	3.84%	19.52%	124.29%	21
Ujjivan	14.08%	566,929	566,929	25.92%	2.86	91.102552	3.17%	9.45%	91.1%	26
VFS	12.45%	184,020	184,020	12.36%	7.09	78.677989	1.10%	7.07%	110.26%	15
WSE	7.67%	36,999	37,755	12.95%	6.72	90.3146	3.30%	34.57%	124.77%	5

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