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# **Institutional Credit through Cooperatives in Maharashtra: A Region-wise Analysis**

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## **Institutional Credit through Cooperatives in Maharashtra: A Region-wise Analysis**

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### *Context*

In the era of financial sector reforms, sustainability, viability and operational efficiency of rural financial institutions (RFIs) are the major issues that need to be taken cognizance of in ensuring effective rural credit delivery system. However, the major problems plaguing the efficiency of rural credit delivery system are the mounting overdue<sup>1</sup> and Non Performing Assets (NPAs)<sup>2</sup> of RFIs. The overdue problem of different entities of rural credit delivery structure is reported to be an all-pervasive phenomenon that cuts across these different agencies (Puhazhendi and Jayaraman, 1999). Among various RFIs, though commercial banks (CBs), Regional Rural Banks (RRBs) and Cooperatives are the major sources of credit for the agricultural sector at the village level, cooperatives alone account for 45 per cent share in the rural credit flow for agriculture and 31 per cent in rural deposits in terms of network, coverage and outreach (Gulati and Bathla, 2002). Co-operatives, therefore, enjoy major share in rural credit delivery.

The reform process in cooperatives have taken much longer time to start because of the need for generating a consensus among the various State Governments which govern and control cooperative credit institutions and the need to balance the interests of many diversified groups which control, operate and guide the cooperatives. Despite these limitations, a few major reforms, as indicated by Subrahmanyam (1999), have been introduced in the cooperative credit system.<sup>3</sup> However, the cooperatives are still too weak to face the market forces. In fact, the weakness of cooperative banking lies at the primary level. It is pertinent to note that in majority of the states neither the deposit mobilization nor the borrowing membership of PACS is high.

In the present milieu when cooperative laws are yet to be modified, the rural credit delivery through cooperatives is certainly not functioning well, as the mounting overdue and Non Performing Assets (NPAs) show. Cooperative Banks operating in Maharashtra have shown highest amount of NPAs. The share of Maharashtra in total NPAs of State Cooperative Banks (SCBs) at all-India level was estimated at as much as 31.76 per cent in 2002, which increased to 37.81 per cent in 2003 and further to 43.16 per cent in 2004 (Appendix I). On the other hand, the proportion of NPAs to loans outstanding of SCB in Maharashtra stood at much higher than the national average of the same, whereas recovery with respect to SCB in Maharashtra was perceptibly lower than the national average during the early 2000. These are certainly disquieting features insofar as working of cooperative banks in Maharashtra is concerned. There is, therefore, a need to re-look not at the entire rural credit scenario of Maharashtra but also the performance of

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cooperatives engaged in rural credit delivery in the state with emphasis on their growing NPAs and other deficiencies that require attention from various policy makers to truly restructure or transform rural credit delivery through cooperatives.

In the light of above background, the paper initially evaluates rural credit scenario of Maharashtra with emphasis on credit delivery system through PACS and other apex institutions in the state and subsequently traverses through region-wise synthesis of credit delivery through PACS over time with extension to evaluating the influence of various factors on outstanding loans of these credit institutions since overdue or outstanding loans or NPAs have profound bearing on the efficiency of rural credit delivery through PACS.

### ***Data and Methodology***

Data used for this study relating to the period between 1980-81 and 2002-03 were collected from various secondary sources and offices, which encompassed 'Socio-Economic Abstracts of Maharashtra, Directorate of Economics and Statistics, Government of Maharashtra, Mumbai', 'Agricultural Statistical Information, Maharashtra State, Part-II, Pune', 'Season and Crop Report, Commissioner of Agriculture, Department of Agriculture, Maharashtra State, Pune', and 'Cooperative Movement at a Glance in Maharashtra, office of the Commissioner for Cooperation and Registrar of Cooperative Societies, Maharashtra State, Pune'.

In this study, exponential trend equations were fitted to the time series data obtained for various parameters from various sources in order to compute compound rates of growth that were also tested for their significance by the student 't' statistics.<sup>4</sup> The effect of various factors on changes in outstanding loans through PACS in Maharashtra was also estimated. Though there could be several factors influencing outstanding loans of PACS, only the estimates relating to loan advances of these credit institutions, their membership and gross cropped area (GCA) for the concerned regions were collected encompassing the period between 1980-81 and 2002-03, particularly due to inconsistency in terms of availability of data on other parameters. The following model was considered to evaluate factors influencing outstanding loans through PACS:

$$\text{OUTSTG} = f(\text{TLOAN}, \text{MEMB}, \text{GCA})$$

where, OUTSTG = outstanding loans (ST+MT+LT) of PACS in '000' rupees  
TLOAN = total loan advances (ST+MT+LT) through PACS in '000' rupees  
MEMB = total membership of PACS in absolute number  
GCA = total gross cropped area in '00' hectares for the region

Regressions were estimated with outstanding loan as dependent variable and loan advances, membership and GCA as independent variables for two sub-periods, viz., period between 1980-81 and 1990-91, and 1991-92 and 2002-03. Three alternative specifications (Linear, Semi-log and Cobb-Douglas) were estimated. However, the results of only linear specification of the equations are reported considering  $R^2$  and statistical significance of variables, which, in this specification, turned out to be better.

### **Cooperative Credit Delivery**

Short and medium term set-ups constitute the credit cooperative structure in Maharashtra. A 3-tier system is central to the structure of both the short term and the medium term credit cooperatives. This 3-tier system consists of a Co-operative apex bank at the state level, Central Co-operative banks at the district level and of Primary Agricultural Co-operative Credit Societies (PACS) at the village level. The three-tier set-up is not only meeting the credit requirements of the farmers for seasonal agricultural operations (crop loans) but also investing on farm assets that do not entail huge capital outlay. Although there has been substantial increase in the membership of credit cooperatives in, the trend over the last two decades in terms of cooperative finances is not very encouraging, especially in more recent times.

Though the trend over the past two decades show a slower growth in institutional finance through credit cooperatives during the decade of economic reforms (1991-2000) as against the decade preceding it (1980-1990), the decade of reform is also marked with higher growth in deposit mobilization of these credit institutions (Table 1). The reform period also shows slower growth in membership of credit cooperatives in Maharashtra. On the other hand, the outstanding loans of these cooperatives have grown at much faster rate as compared to their loan advances during both pre-and post economic reform periods, though post economic reform period showing slowing down in outstanding loans.

**Table 1: Cooperative Bank Finances in Maharashtra; 1980-2000**

Particulars	Period			CGR (%)		
	TE 1982/83	TE 1990/91	TE 1999/2000	1980-1990	1991-2000	1980-2000
No. of Cooperative Institutions/Societies						
Apex	31	34	34	1.33	-	0.37
PACS	18565	19664	20378	-0.03 <sup>NS</sup>	0.48	0.65
Total	18596	19728	20412	-0.03 <sup>NS</sup>	0.48	0.65
No. of Members ('000')						
Apex	1109	1523	1340	1.01 <sup>NS</sup>	-1.91	1.65
PACS	5595	7910	10432	4.90	3.48	3.35
Total	6704	9433	11772	4.33	2.72	3.15
Loan Advances						
Apex	3318	9298	22195	14.47 <sup>NS</sup>	7.12	8.64
PACS	288	929	2280	13.64	9.36	12.93
Total	3606	10227	24475	14.08 <sup>NS</sup>	9.74	10.76
Deposit Mobilization						
Apex	1224	4618	19913	17.59	18.15	17.28
PACS	12	20	66	7.56	15.42	10.12
Total	1236	4638	19979	17.51	18.14	17.24
Outstanding Loans						
Apex	1507	4811	15274	23.97 <sup>NS</sup>	13.52	14.57
PACS	431	1521	3456	12.59	9.07	12.92
Total	1938	6332	18730	18.50	12.98	14.64

Source: Computations are based on figures obtained from various issues of 'Economic Survey of Maharashtra' and 'Cooperative Movement at a Glance in Maharashtra, office of the Commissioner for Cooperation and Registrar of Cooperative Societies, Maharashtra State, Pune.

Notes: 1) CGR = Compound Growth Rates; 2) All growth rates significant at 1 per cent level of probability

3) NS: Growth rates not significant at 1 per cent level of probability

4) Apex institutions include SCBs and DCCBs

One of the reasons for such a slow down could be the prudential discipline extended to cooperatives and a large number of banks' inability to meet section 11 of Banking Regulation Act, 1949. This had restricted the loaning business of co-operatives to a large extent as their capital base had eroded. As a result of this cautious step taken by banks, the growth in cooperative lending was slower during the period between 1991 and 2000.

Although PACS extend loan for varied purposes, short-term crop loans account for the major share in total loan advanced by them. These loans have direct bearing on crop production and they are extended on the basis of acreage and cost of cultivation of the crops grown, subject to the repayment capacity of the farmers. The magnitude of loans extended by PACS to its members differs considerably due to variations in area under different crops grown by the farmers. It is, therefore, essential to evaluate not only the distribution pattern of total and crop loans advanced by PACS but also their per member borrowing, outstanding loans and overdue across various regions of Maharashtra.<sup>5</sup>

### ***Regional Diversity***

Since distribution of loan or loans outstanding or overdue is generally correlated with gross cropped area (GCA), it has been evaluated on the basis of per hectare GCA. Estimates relating to per member loan advances, distribution of total as well as crop loans, outstanding loans and overdue based on per hectare GCA encompassing the period between 1980-81 and 2002-03 for different regions of Maharashtra are provided in Table 2.

The estimates presented in Table 2 showed wide variation in the pattern of loan advances by PACS across different regions of Maharashtra. While Western Maharashtra and Marathwada regions of Maharashtra showed significantly high amount of total as well as crop loans extended by PACS, the other regions like Vidarbha and Konkan were marked with lower amount of loans in this respect. The Western Maharashtra and Marathwada regions also showed higher growth in terms of loan advances by PACS on per hectare GCA basis during the entire period between 1980-81 and 2002-03. Further, though Vidarbha and Konkan regions also showed higher growth in loan advances through PACS during reform period, this substantial increase in loan advances could not offset the trend obtainable during the entire period, as the growth in the same was very low during the pre-reform period.

Interestingly, though all the regions showed slowing down in growth of per hectare outstanding loans of PACS during the reform period as against the pre-reform period with Vidarbha being an aberration in this scenario, the magnitude of per hectare outstanding loans was much higher than per hectare loan advances of PACS during the entire period between 1980-81 and 2002-03. On the other hand, estimates relating to per hectare loans overdue were lower than per hectare loan advances through PACS across all the regions during the entire period. Further, as against other regions, Vidarbha showed higher growth in outstanding loans, overdue as well as

loan advances only during reform period as compared to pre-reform period. However, like other regions, Vidarbha region also showed higher growth in per member loan advances through PACS during reform period as against pre-reform period, though per member amount of loan advances through PACS was much lower in this region as compared to Western Maharashtra and Marathwada regions.

**Table 2: Flow of Credit Through PACS in Maharashtra: 1980/81-2002-03**

Indicators/Region	TE 1982-83	TE 1992-93	TE 2002-03	(Amount in Rupees)		
				CGR (%)		
				1980/81- 1990/91	1991/92- 2002-03	1980/81- 2002/03
<b>Konkan</b>						
Total Loan Per Hectare GCA	57.51	119.69	601.53	12.02	22.45	10.50
Crop Loan Per Hectare GCA	39.79	75.79	443.94	10.90	22.27	11.09
Outstanding Loan Per Hectare GCA	82.93	254.59	709.20	13.39	11.94	10.08
Overdue Per Hectare GCA	47.27	149.02	420.43	11.01	10.38	11.70
Per Member Loan Advances	110.07	208.67	846.64	11.30	19.38	8.90
<b>Marathwada</b>						
Total Loan Per Hectare GCA	126.29	383.21	1445.76	15.90	14.70	12.98
Crop Loan Per Hectare GCA	97.15	282.55	1216.90	15.48	15.99	13.58
Outstanding Loan Per Hectare GCA	154.77	720.47	2651.75	17.96	13.99	14.56
Overdue Per Hectare GCA	87.92	301.50	1123.75	12.11	13.96	13.96
Per Member Loan Advances	446.62	997.64	3325.06	13.09	13.68	9.94
<b>Western Maharashtra</b>						
Total Loan Per Hectare GCA	218.64	539.93	1903.78	13.30	13.58	11.26
Crop Loan Per Hectare GCA	192.81	403.91	1350.95	11.00	12.85	10.47
Outstanding Loan Per Hectare GCA	289.51	1088.63	2622.59	15.62	8.96	11.46
Overdue Per Hectare GCA	94.47	385.06	678.28	14.83	5.44	10.78
Per Member Loan Advances	809.99	1385.56	4298.40	9.46	12.71	8.33
<b>Vidarbha</b>						
Total Loan Per Hectare GCA	111.82	165.57	529.09	5.11 <sup>NS</sup>	12.51	8.66
Crop Loan Per Hectare GCA	82.51	109.89	421.31	3.77	13.81	9.03
Outstanding Loan Per Hectare GCA	192.99	308.80	904.78	4.48	11.99	7.97
Overdue Per Hectare GCA	104.41	147.03	501.10	3.83 <sup>NS</sup>	12.73	7.67
Per Member Loan Advances	426.01	574.69	1852.29	5.04 <sup>NS</sup>	12.87	7.77
<b>Maharashtra State</b>						
Total Loan Per Hectare GCA	158.33	372.41	1341.20	12.38	14.01	11.20
Crop Loan Per Hectare GCA	131.15	272.92	1011.23	10.76	14.07	10.97
Outstanding Loan Per Hectare GCA	220.06	731.20	2050.72	13.75	10.93	11.47
Overdue Per Hectare GCA	93.61	283.80	722.11	11.17	9.62	10.76
Per Member Loan Advances	561.73	1013.74	3298.01	10.00	13.24	8.84

Source: Computations are based on figures obtained from 'Socio-Economic Abstracts of different districts of Maharashtra (various years), Directorate of Economics and Statistics, Government of Maharashtra, Mumbai' and 'Agricultural Statistical Information, Maharashtra State, Part-II, Pune'

Note: (a) All growth rates significant at 1 per cent level of probability.

(b) NS: Growth rates not significant at 1 per cent level of probability

In general, the total loan advances through PACS on the basis of per hectare GCA increased from Rs.58 in TE 1982-83 to Rs.602 in TE 2002-03 for Konkan region, Rs.126 in TE 1982-83 to Rs.1446 in TE 2002-03 in Marathwada region, Rs.219 in TE 1982-83 to Rs.1904 in TE 2002-03 in Western region and Rs.112 in TE 1982-83 to Rs.529 in TE 2002-03 in Vidarbha region with an overall increase in the same from Rs.158 in TE 1982-83 to Rs.1341 in TE 2002-03 for the state as a whole. On the other hand, the increase in outstanding loans of PACS for the state as a whole was seen to be from Rs.220 in TE 1982-83 to Rs.731 in TE 1992-93 and further to Rs.2051 in TE 2002-03.

The foregoing estimates not only show wide variation in total and crop loan advances but also outstanding loan, overdue and per member borrowing across different regions of Maharashtra. The per member loan advances of PACS varied between as low as Rs.110 in TE 1982-83 for Konkan region to as high as Rs.4298 in TE 2002-03 for Western Maharashtra region. Such wide variations in outstanding loans, overdue, loan advances, and per member borrowing could be a matter of concern, particularly in view of the existing cropping pattern and share of various crops in total loan advances of these primary level credit institutions operating in various districts and regions of Maharashtra (Table 3).

**Table 3: Share of Crops in Total Loans Advances of PACS in Maharashtra: (2002-03)**  
(Amount in '000' Rupees; Share in Per cent)

Region	Share in Total Crop Loan Advances											Amount of Loan Advances	
	Wheat	Rice	Jowar	Pulses	Other Food-grains	Total Food-grains	Cotton	Oilseed	Sugar-cane	Jute & Mesta	Other Non-Foodgrain		Total Non-Foodgrain
Western	0.64	3.03	5.68	0.13	2.31	11.79	11.47	3.88	59.88	0.02	12.96	88.21	15859328
Vidarbha <sup>@</sup>	1.35	16.00	13.02	3.18	2.95	36.50	44.64	9.11	3.53	-	6.22	63.50	2719702
Marathwada	1.93	1.02	12.12	5.32	1.61	21.99	20.51	8.59	38.75	0.08	10.08	78.01	4809141
Konkan	-	96.28	-	-	2.57	98.85	-	-	0.18	-	0.97	1.15	462077
Maharashtra State	0.97	5.91	7.71	1.52	2.24	18.35	16.85	5.35	48.04	0.03	11.38	81.65	23850248

Note: @- Estimates are for the reference year 2000-01

A critical evaluation of Table 2 reveals outstanding loans of PACS as the most crucial component or factor since it is seen to have exceeded loan advances with a comfortable margin in all the regions of Maharashtra. Undoubtedly, mounting outstanding loans not only adversely affect the efficiency of rural credit delivery through cooperatives but also their viability. It is, therefore, felt prudent to evaluate the factors influencing outstanding loans of PACS.

#### ***Factors Influencing Outstanding Loans***

The influence of various selected factors influencing outstanding loans of PACS is evaluated across various regions of Maharashtra encompassing the period between 1980-81 and 2002-03. The results of this exercise are shown in Table 4.

The independent variables included in the model explained 80-90 per cent variations in outstanding loans of PACS across various regions of Maharashtra during the two sub-periods. The independent variables included in the model showed two differing scenarios insofar as their influence on outstanding loans of PACS was concerned. While the period between 1980-81 and 1990-91 showed slower pace in the growth of outstanding loans with the rise in loan advances, membership and GCA, the second period between 1991-92 and 2002-03, coinciding with reforms, was found to be marked with much faster increase in outstanding loans of PACS with rise in their total loan advances and GCA.

In fact, the increasing tendency in outstanding loans with the rise in loan advances through PACS in Maharashtra during the first period was found due to positive relationship between these two variables for Western region, otherwise all other regions showed a declining tendency of outstanding loans with the rise in loan advances of PACS. On the other hand, the

decline in outstanding loans with the rise in membership of PACS in Maharashtra in the second period was due to negative association of outstanding loan and membership for Marathwada and Vidarbha regions.

**Table 4: Factors Influencing Outstanding Loan (ST+MT+LT) of PACS in Maharashtra**

Regions/State	Regression Estimates
<i>1980-81 to 1990-91</i>	
Konkan	OUTSTG = -1120002.45 - 0.4558 TLOAN + 2.1737* MEMB + 28.5239*** GCA (0.3982) (0.4992) (15.9304) Adjusted R <sup>2</sup> = 0.9590 F-Statistics = 78.9860 Observations = 11
Marathwada	OUTSTG = -12944687.6 - 0.0720 TLOAN + 2.8729* MEMB + 226.7529** GCA (0.2172) (0.6662) (84.6572) Adjusted R <sup>2</sup> = 0.9635 F-Statistics = 89.1124 Observations = 11
Western Maharashtra	OUTSTG = -23285956.3 + 0.4689** TLOAN + 3.3778* MEMB + 216.4235** GCA (0.2048) (0.7170) (79.7429) Adjusted R <sup>2</sup> = 0.9835 F-Statistics = 199.8533 Observations = 11
Vidarbha	OUTSTG = -4703686.82 - 0.0965 TLOAN - 0.3105 MEMB + 116.4761* GCA (0.3606) (0.4645) (42.8876) Adjusted R <sup>2</sup> = 0.6339 F-Statistics = 6.7728 Observations = 11
Maharashtra State	OUTSTG = -38711304.70 + 0.3652 TLOAN + 2.6286 MEMB + 149.0895 GCA (0.3238) (1.7160) (121.4143) Adjusted R <sup>2</sup> = 0.9495 F-Statistics = 63.6282 Observations = 11
<i>1991-92 to 2002-03</i>	
Konkan	OUTSTG = -869330.75 + 0.9821* TLOAN + 0.5046 MEMB + 73.1964*** GCA (0.1205) (0.5414) (41.2403) Adjusted R <sup>2</sup> = 0.9404 F-Statistics = 58.8272 Observations = 12
Marathwada	OUTSTG = 4661977.80 + 2.0597* TLOAN - 10.4293 MEMB + 317.3639 GCA (0.3749) (7.2396) (949.8016) Adjusted R <sup>2</sup> = 0.7703 F-Statistics = 13.2975 Observations = 12
Western Maharashtra	OUTSTG = 10763468.07 + 1.1894* TLOAN + 0.4758 MEMB - 111.8029 GCA (0.3979) (8.6328) (434.4169) Adjusted R <sup>2</sup> = 0.8724 F-Statistics = 26.0675 Observations = 12
Vidarbha	OUTSTG = -1082089.48 + 1.5413* TLOAN - 3.8827* MEMB + 137.0509** GCA (0.0876) (0.8498) (61.4995) Adjusted R <sup>2</sup> = 0.9813 F-Statistics = 193.2212 Observations = 12
Maharashtra State	OUTSTG = -23367306.00 + 1.5473* TLOAN - 11.3818 MEMB + 578.4251GCA (0.2807) (9.2882) (821.1449) Adjusted R <sup>2</sup> = 0.8887 F-Statistics = 30.2702 Observations = 12

Note: 1) Figures in parentheses show the standard errors of regression coefficients.

2) \*, \*\* and \*\*\* indicate significance of regression coefficients at one, five and ten per cent level of probability, respectively.

In general, the reform period in Maharashtra showed Rs.1547 increase in outstanding loans for every Rs.1000 increase in loan advances through PACS, which was only Rs.365 during pre-reform period. Similarly, for every annual hundred hectares addition to GCA, the reform period showed Rs.5,78,425 annual increase in outstanding loans through PACS, which was Rs.1,49,090 during pre-reform period. These are certainly disquieting features as PACS in Maharashtra of late are showing increasing tendency in outstanding loans with rise in loan advances and GCA. The only saving grace is membership of these credit institutions, which show declining tendency in outstanding loan with rise in membership of PACS during reform period.

The most disquieting feature of this investigation is the lowest magnitude of credit delivery through PACS in Vidarbha region of Maharashtra that has remained at lower ebb over the past two decades when compared to other regions of Maharashtra. This is the region where from maximum number of suicide cases stand reported, which also shows around 85,000 hectares



of area lost under cotton crop during the period between 1997-98 and 2003-04. One of the reasons for significantly higher proportion of Self-Help Groups (SHGs) linked with bank credit in Vidarbha regions can be traced in lackadaisical performance of formal credit extension through PACS in this region when compared with other regions of Maharashtra.<sup>6</sup> Obviously, farmers belonging to Vidarbha region are looking for other alternate rural credit delivery system in view of refusal of credit from formal institution or due to complexities involved in availing credit facilities from these institutions. Thus, the study presented us with several issues that need to be taken cognizance of to truly revitalize the rural credit delivery system through co-operatives in Maharashtra. These include tackling issues like repayment performance of these credit institutions and, thus, overcoming their NPA related problems, overcoming inequality in distribution of their credit across various regions of Maharashtra despite not very significant difference in the existing cropping pattern available in these regions of the state.

### *Conspectus*

The credit cooperatives operating in Maharashtra have not only shown slower growth in their institutional finance coupled with much slower growth in their membership but also faster growth in outstanding loans as against their loan advances during the reform period. The reason for this dismal scenario can be associated with adverse environment created by the financial sector reforms, which have reduced the entire rural credit delivery through cooperatives to a moribund state (Mujumdar, 2001). The financial sector reforms have accorded greater flexibility to cooperatives to invest in non-target avenues like shares and debentures of corporates, units of mutual funds, bonds of public sector undertakings, etc. This obviously has affected credit flow from these major institutions operating in rural Maharashtra as most of their loans meant for farm finance are diverted to investments. Not only this, the credit cooperatives in Maharashtra are also beset with several other deficiencies, which mainly relate to their low operational efficiency, high incidence of overdue, low level of recovery, distributional aspects of their loan advances, coverage of SC/ST members, etc. (Shah, 2003).

The estimates not only show wide variation in total and crop loan advances of PACS but also their outstanding loans, overdue and per member borrowing across different regions of Maharashtra. The outstanding loan of PACS based on per hectare GCA is seen to have exceeded loan advances with a comfortable margin in all the regions of the state. Although increase in outstanding loan with rise in loan advances and GCA is another issue, the most important one among all is the mounting overdue and NPAs of cooperatives that sets a path where from there is no return and, which ultimately leads to inefficiency in cooperative credit delivery. In order to rejuvenate rural credit delivery system through cooperatives, the major problems facing the system, viz., high transaction cost, poor repayment performance, mounting NPAs, distributional aspect of credit, coverage of SC/ST members, etc., need to be tackled with more fiscal jurisprudence reserving exemplary punishment for willful defaults, particularly large farmers. In

fact, insofar as the rural credit delivery system is concerned, the focus should be on strategies that are required for tackling issues such as sustainability and viability, operational efficiency, recovery performance, small farmer coverage and balanced sectoral development.

**Notes:**

1. Lack of recovery of loan results into overdues. Overdues are defined as loans and interest thereon not repaid on due dates. The financial health of banking business heavily depends on recovery of loans. Of the total amount of loan due at different points of time, some of it is recoverable and some irrecoverable and the latter often turns into bad debt or defaults (Gulati and Bathla, 2002).
2. As per M. Narasimham (RBI 1991) Committee, the non-performing assets (NPAs) are those loan advances, which are marked with non-payment of interest or repayment of principal or both for a period of two quarters or more during the year ending. An amount is considered as 'post due' if it is unpaid for 30 days beyond due date. The NPAs are broadly classified as sub-standard, doubtful and loss assets.
3. According to Subrahmanyam (1999), the major reforms/steps initiated during the period from 1991/ 92 to 1997/98 are: (a) relaxation in branch expansion policy, (b) liberalization and relaxation in Credit Authorization Scheme, (c) permission to SCBs to introduce STOCKINVEST and Currency Chest Branches, (d) some additional scheme to SCBs under National Level Consortium arrangement for financing, (e) a policy decision to permit SCBs on case by case to subscribe to the Public Sector Bonds, (f) assistance to SCBs from Cooperative Development Fund by NABARD to ensure proper Management Information System and to conduct research studies, (g) deregulated interest rates on advances and deposits by SCBs / DCBs, (h) preparation of Development Action Plans and entering into MOUs at the instance of NABARD, (i) applicability of Prudential norms to SCBs / DCCBs, and (j) relaxation in extending finance to individuals with a view to provide avenues for broader deployment of the resources.
4. The equation fitted to analyze the trend is semi-log exponential form  

$$y = e^{A+Bt}$$

$$\text{Log } y = A + B * t$$

The compound growth rates (r) =  $(e^B - 1) \times 100$  were tested for their significance by the student 't' statistics.
5. Name of districts under various regions of Maharashtra: *Konkan Region*: Thane, Raigad, Ratnagiri, and Sindhudurg; *Marathwada Region*: Aurangabad, Jalna, Parbhani, Beed, Osmanabad, Nanded, and Latur; *Western Maharashtra Region*: Kolhapur, Solapur, Sangli, Satara, Pune, Ahmednagar, Nasik, Dhule, and Jalgaon; *Vidarbha Region*: Yavatmal, Chandrapur, Bhandara, Nagpur, Wardha, Amravati, Akola, Buldhana, and Gadchiroli.
6. As on November 2004, as many as 47,014 SHGs were linked with bank credit in the state of Maharashtra out of which Vidarbha region alone accounted for 55.72 per cent share, followed by Western Maharashtra (22.68 per cent), Marathwada (15.63 per cent), and Konkan (5.98 per cent).

**References**

Gulati, Ashok and Seema Bathla (2002), 'Institutional Credit to Indian Agriculture: Defaults and Policy Options', *Occasional Paper-23*, NABARD, Mumbai.

Mujumdar, N.A. (2001), 'The New Architecture of the Rural Credit System', Professor M.L. Dantwala *Monograph Series Monograph No. 1*, Department of Economics, University of Mumbai, Mumbai, August.

Shah, Deepak (2003), 'An Economic Evaluation of Agricultural Financial Institutions in Maharashtra', *Artha Vijnana*, Vol. 45, Nos. 3 & 4, September-December, pp. 185-296.

Shah, Deepak (2006), 'Resurrection of Rural Credit Delivery System in Maharashtra', Background paper for the project 'Suicide of Farmers in Maharashtra', undertaken by the IGIDR, Mumbai. The report was submitted to the Government of Maharashtra (GOM). Paper is available at: [http://www.igidr.ac.in/suicide/BackgroundPapers\\_SFM\\_IGIDR\\_26Jan06.pdf](http://www.igidr.ac.in/suicide/BackgroundPapers_SFM_IGIDR_26Jan06.pdf)

Subrahmanyam, B (1999), 'Cooperative Credit Structure: A Perspective for 2000 A.D.', in Positioning Cooperatives in 21<sup>st</sup> Century, op. cit., pp. 182-190.

Puhazhendhi, V. and B.Jayaraman (1999), 'Rural Credit Delivery: Performance and Challenges Before Banks', *EPW*, January 16, pp. 175-182.

#### Appendix I: State-wise Performance of SCBs (As on 31 March)

State	Profit/Loss (+)/(-)			Total NPAs			NPAs as % to Loans Outstanding			Recovery (%) As at end June		
	2001-02	2002-03	2003-04	2002	2003	2004	2002	2003	2004	2002	2003	2004
Andman & Nicobar	1.24	1.39	1.74	10.15	11.72	16.32	23.84	22.70	25.96	77.95	66.62	87.87
Andhra Pradesh	2.35	3.00	4.16	1140.71	1668.52	1374.84	24.67	36.81	30.67	65.40	45.96	73.82
Arunachal Pradesh	0.86	-0.51	-3.43	40.84	40.84	73.34	73.73	73.73	71.98	20.17	19.32	29.82
Assam	10.57	-22.87	-13.99	150.17	182.96	199.00	61.35	67.97	67.49	19.88	24.69	31.54
Bihar	1.14	1.26	114.02	221.88	365.37	254.55	41.85	67.65	51.95	12.00	20.20	51.49
Chandigarh	1.49	2.34	1.60	2.85	3.79	3.88	31.91	37.10	37.18	62.32	61.95	58.08
Chattisgarh	-4.95	0.90	4.45	14.03	13.96	25.89	14.51	8.64	27.31	95.98	87.32	78.95
Delhi	14.30	16.16	12.95	29.34	28.44	29.09	25.09	19.14	17.70	35.52	74.70	52.31
Goa	1.04	0.21	5.16	82.99	91.13	79.65	25.22	28.26	24.76	59.58	65.73	65.94
Gujarat	3.76	4.19	4.81	83.91	127.29	125.75	4.59	5.89	6.45	90.52	91.29	85.60
Haryana	36.03	39.67	29.29	13.54	13.54	10.83	0.83	0.74	0.59	99.60	99.50	99.63
H. P.	31.57	17.64	19.89	53.84	66.81	69.86	14.41	15.96	11.22	70.68	68.88	71.93
J & K	1.06	1.22	4.58	14.10	13.68	15.41	25.16	21.76	23.50	33.62	43.04	38.22
Karnataka	20.20	10.55	2.78	99.58	173.15	207.44	6.60	10.37	11.99	90.03	85.60	85.50
Kerala	0.71	6.12	5.05	78.18	92.61	92.61	6.38	7.49	8.29	92.70	94.50	94.50
M.P.	-72.57	1.59	1.84	150.80	150.84	195.66	9.53	9.62	11.56	93.40	93.76	91.62
Maharashtra	10.68	271.91	31.93	1404.28	2371.87	2733.22	16.09	26.63	32.41	69.60	68.66	68.59
Manipur	-3.05	-0.70	NA	14.84	13.62	13.62	94.50	65.66	65.66	4.25	8.91	8.91
Meghalaya	2.95	2.99	0.70	19.63	20.02	22.36	22.01	22.36	24.14	35.90	38.97	31.10
Mizoram	-1.45	0.22	0.69	9.85	10.85	16.91	29.06	22.99	25.55	25.12	54.40	54.13
Nagaland	-2.25	-3.85	-1.77	14.82	21.65	21.40	43.20	57.38	55.42	18.60	27.27	27.27
Orissa	7.50	10.37	13.47	148.15	167.60	155.39	16.20	16.61	14.14	84.41	78.01	82.93
Pondicherry	1.46	1.77	1.96	8.42	8.17	8.17	11.32	8.55	8.55	69.46	78.21	78.21
Punjab	19.24	21.01	31.35	59.79	61.16	60.56	3.41	2.81	2.68	96.22	95.38	96.13
Rajasthan	13.07	15.04	17.55	83.25	37.85	26.98	8.40	3.40	2.20	88.01	95.46	83.37
Sikkim	1.09	0.24	0.70	0.06	0.13	0.54	3.45	1.87	7.23	43.30	76.06	76.06
Tamil Nadu	50.74	15.75	19.41	13.29	14.46	14.46	0.69	0.75	0.75	99.47	97.36	97.36
Tripura	-2.85	-1.84	-1.02	37.85	40.40	52.35	37.14	35.69	43.19	28.95	35.44	44.87
Uttar Pradesh	17.07	27.28	27.36	355.57	393.97	344.27	12.95	14.70	12.29	74.87	70.55	71.81
Uttaranchal	-	-	0.04	-	-	-	-	-	-	-	-	-
West Bengal	8.17	26.74	35.50	64.36	71.30	88.60	7.52	5.28	6.52	83.22	84.79	86.85
All -India	171.17	469.79	372.77	4421.07	6277.66	6332.95	13.52	18.13	18.30	82.24	79.55	83.34

Source: Compiled from 'NABARD Annual Reports 2003-04 and 2004-05', NABARD, Mumbai.