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Impact of Farm Loan Waiving Scheme on Credit Management of Kumbakonam Primary Co- operative Agricultural and Rural Development bank

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Abstract

Cooperative Banking, which is now a century old, has a unique position in the rural credit delivery system of India. The needs of the borrower, particularly the needs of funds among farmers, are expanding in tune with changing agricultural environment. At the same time, the loan operation becomes highly complex and more challenging. Hence, to help farmers Government of India has formulated a cooperative credit system under the banner of Primary Agricultural Cooperative Societies (PACS). . It is very notable record that the Government of Tamil Nadu has waived the loan amount to the poor farmer, availed from the Co-operative agricultural banks, under the scheme of Tamil Nadu Government Farm Loan Waiver scheme introduced in 2006. Realizing this fact, the present study has been formulated in order to assess the credit Performance of kumbakonam PCARDB in Thanjavur District before and after implementation of the farm loan waiver scheme. The Credit Management in terms of issue and recovery of loan to Farm Sector, Non Farm Sector as well as against Jewel by kumbakonam PCARDB before and after the implementation of Farm Loan Waiving Scheme has analyzed .

Key Words: ***Credit Management, Farm Loan Waiving Scheme, PCARD Bank, Descriptive statistics, Non- Parametric Mann-Whitney 'U' Test.***

Introduction

Cooperative Banking, which is now a century old, has a unique position in the rural credit delivery system of India. Having made significant studies in the field of rural credit through its short and the long-term structures, it continues to play a crucial role in dispensation of credit for agriculture and rural development. Though commercial banks after nationalization and later on RRBs have entered the rural areas, but cooperative banks still continue to enjoy an important place in the rural credit scenario. We have co-operative credit institutions at the Village level, Taluk level, District level, State level and National level. These institutions are well knit.

The needs of the borrower, particularly the needs of funds among farmers, are expanding in tune with changing agricultural environment. At the same time, the loan operation becomes highly complex and more challenging. Hence, to help farmers Government of India has formulated a cooperative credit system under the banner of Primary Agricultural Cooperative Societies (PACS). It is the PACS which has a direct interface with individual farmers, provides short term and medium term credit, supplies agricultural inputs, distributes consumer articles and arranges for marketing of produce of its members through a cooperative marketing society. The Primary Agricultural and Rural Development Bank in India across States under State Co-operative Agricultural and Rural Development Banks (SCARDBs) maintain different loan portfolios keeping in mind the needs of the farmers and rural people as well as the availability of funds to issue credit. In this scenario the Tamil Nadu Government implemented the Farm Loan Waiver Scheme in 2007.

In this study, an attempt has been made to evaluate the status of credit in terms of issue, recovery and net value of loan before and after implementation of waiving schemes in kumbakonam Primary Cooperative Agricultural and Rural Development (PCARD) Bank at Thanjavur District.

The issue, recovery and net value of loan to farm sector, non-farm sector and jewel loan is compared between pre and post-period of loan waiving scheme. As the number of observations (seven years in pre-period and two in post-period are small and does not follow any distributions, Mann-Whitney U test is used to compare the status of issue, recovery and net value of loan between two periods. The year in which the loan waiving scheme is implemented is excluded from the comparative analysis. Further, the trend and growth in issue, recovery and net value of agricultural and non-agricultural loan is also evaluated for the period of six years before implementation of the waiving scheme. The results of the analysis are tabulated and discussed hereunder.

Statement of the Problem

The share of the co-operatives in agricultural credit disbursed has declined over the years. The lower levels of business volume, relatively high overhead costs and increased competition from the commercial banks have contributed to the diminishing role of the agricultural co-operative institutions. The cooperative banks are struggling to conform to the banking norms and to mobilize adequate resources to meet the requirements of the farmers. The sluggish growth of agrarian economy and a series of poor crop seasons affected by adverse weather conditions have taken their toll on the co-operative societies that depend upon agriculture. In order to ascertain this problem this present study is undertaken to find out the Credit Management of kumbakonam Primary Co-operative Agricultural and Rural Development Bank before and after implementation of Farm Loan Waiver Scheme

Need and scope of the Study

In India, the Primary Co-operative Agricultural and Rural Development Banks are playing a major role in the socio economic development of the rural people, especially the poor farmers by way of providing loan facilities for agricultural production and marketing at very nominal interest and in special cases without interest. It is very notable record that the Government of Tamil Nadu has waived the loan amount to the poor farmer, availed from the Co-operative agricultural banks, under the scheme of Tamil Nadu Government Farm Loan Waiver scheme introduced in 2006. Most of the farmers in the villages have benefited under the scheme and it is also expected that the performance of the banks would be improved. Therefore it is necessary to undertake micro and macro level studies on the functioning of Primary Co-operative Agricultural and Rural Development Banks (PCARDB). Realizing this fact, the present study has been formulated in order to assess the credit Performance of kumbakonam PCARDB in Thanjavur District before and after implementation of the farm loan waiver scheme.

Objectives of the study

To find out the status of Credit Management of kumbakonam Primary Co-operative Agricultural and Rural Development Bank in Thanjavur District before and after implementation of Tamil Nadu Government Farm Loan Waiver Scheme.

Hypothesis

H0: There is no significant difference in the credit management of kumbakonam PCARDB between pre and post Farm Loan Waiving period.

Period of study

The study pertains to a period of ten years from 1999-2000 to 2008-2009.

Sources of data

The study is based on secondary data collected from the audited annual records of the study bank, published reports of the Registrar of Co-operative Societies, State and Central government, reports of various Committees on Co-operation, books, journals and newspapers relating to Cooperative Banks in Tamil Nadu.

Tools used for analysis of the study

Descriptive statistics such as mean, standard deviation, co-efficient of variation are used to ascertain the central tendency as well as level of consistency in the financial variables.

Compounded Annualized Growth Rate and Linear Growth Rate are used to find out the growth and trend in the variables.

The statistical significance of the growth and trend are ascertained using Student‘t’ test.

For assessing the effect of implementation of loan waiver scheme on the Credit Management of kumbakonam PCARDB a non- parametric Mann-Whitney ‘U’ test is applied.

Limitations of the study

- The study is based on secondary data and therefore, limitations of secondary data are applicable to this study.
- The period of study covers only ten years from 1999 – 2009.
- The study is confined to only one bank.

Table 1A: Trend and Growth in Issue, Recovery and Net Value of Farm Sector Loan before Implementation of Waiving Scheme in Kumbakonam PCARDB

(Amount Rs. In lakhs)

Year	Issue	Recovery	Total
Opening Balance			492.83
1999-00	61.52	45.59	508.75
2000-01	24.16	42.17	490.74
2001-02	27.02	40.66	477.10
2002-03	40.48	32.32	485.26
2003-04	39.73	42.62	482.37
2004-05	2.04	34.92	449.49
2005-06	0.10	37.61	411.98
Mean	27.86	39.41	472.24
SD	21.93	4.68	31.94
CV	78.69	11.87	6.76
CAGR	-57.23**	-4.28	-2.81***
t-Value	-2.86	-2.00	-4.14
LGR	-7.71**	-1.30	-13.13***
t-Value	-2.61	-1.68	-4.32
Linear Equation Model for Linear Growth Rate			
Equation	58.69 - 7.71 t	44.62 - 1.30 t	524.75 - 13.13 t

**Significant at 5% level; ***Significant at 1% level

According to the Table 1 A, the issue of Farm Sector Loan stood at Rs.61.52 lakhs in 1999-00 but declined to Rs.24.16 lakhs in 2000-01 before moving up to Rs.27.02 lakhs in 2001-02. Again in 2002-03, it went up to Rs.40.48 lakhs and declined heavily to Rs.2.04 lakhs in 2004-05 after stopping at Rs.39.73 lakhs in 2003.04.

The average of issue of loan to Farm Sector by Kumbakonam PCARDB stood at Rs.27.86 lakhs between 1999-00 and 2005-06. The issue of loan to Farm Sector declined remarkably at compound rate of 57.23 per cent (CAGR = -57.23, $t = -2.86$, $p < 0.05$) and linear rate of Rs.7.71 lakhs on an average every year LGR = -7.71, $t = -2.61$, $p < 0.05$) during the Pre-Waiving Period.

At the same time, the recovery of Farm Sector Loan with an average of Rs.39.41 lakhs was at Rs.45.59 lakhs in 1999-00 and reached a low at Rs.37.61 lakhs in 2005-06. The rates of decline, both compounded and linear rates, were insignificant, despite average recovery was higher than that of issue of loan to Farm Sector.

The net value of loan (total loan) to Farm Sector was Rs.508.75 lakhs in 1999-00 but significantly declined to Rs.411.98 lakhs in 2005-06 at CAGR of 2.81 per cent ($t = -4.14$, $p < 0.01$) and LGR of Rs.13.13 lakhs ($t = -4.32$, $p < 0.01$) during the Pre-Waiving Period under study.

On the whole, it is found that there was significant decline in the issue and net value of loan whereas the decline in recovery was not significant in Kumbakonam PCARDB before the implementation of Waiving Scheme to farmers.

As per Table 1B, the volume of Farm Sector Loan waived by the PCARDB in Kumbakonam was Rs.411.98 lakhs, leaving the net value of loan to nil.

Table1B

Status of Issue, Recovery and Net Value of FARM Sector Loan During and After Implementation of Waiving Scheme in Kumbakonam PCARDB

(Amount Rs. In lakhs)

Year	Issue	Recovery	Total
Opening Balance			411.98
In the year of Loan Waiving			
2006-07	0.00	411.98	0.00
After Loan Waiving			
2007-08	0.04	0.00	0.10
2008-09	4.66	0.00	4.76

Mean	2.35	0.00	2.43
SD	3.27	0.00	3.30

During the Post-Waiving Period of two years from 2007-08 to 2008-09, the issue of loan to Farm Sector stood at an average of Rs.2.35 lakhs while there was no recovery.

Table 1C

Comparison of Issue, Recovery and Net Value of FARM Sector Loan Before and After Implementation of Waiving Scheme in Kumbakonam PCARDB

Loan Status		Mean (Rs. Lakhs)	SD	Sum of Ranks	Mann Whitney U Value	Z Value
Issue	Before	27.86	21.93	40.0	2.0	-1.46 NS
	After	2.35	3.27	5.0		
Recovery	Before	39.41	4.68	42.0	0.0	-2.06**
	After	0.00	0.00	3.0		
Net Value	Before	472.24	31.94	42.0	0.0	-2.05**
	After	2.43	3.30	3.0		

**Significant at 5% level. NS – Not Significant

From the comparison of issue, recovery and net value of Farm Sector Loan between Pre and Post-Waiving Period, results of which are shown in Table 1C, it is found that issue of loan to Farm Sector was independent of the Waiving Scheme but implementation of Waiving Scheme significantly affected the recovery ($U = 0.0$, $Z = -2.06$, $p < 0.05$) and net value ($U = 0.0$, $Z = -2.05$, $p < 0.05$) of loan to Farm Sector between the two periods.

Table 2A

Trend and Growth in Issue, Recovery and Net Value of NON-FARM Sector Loan before Implementation of Waiving Scheme in Kumbakonam PCARDB. Regarding the status of Non-Farm Sector Loan by Kumbakonam PCARDB during the Pre-Waiving Period, it can be observed from the Table 2A that the average of issue of loan to Non-Farm Sector was Rs.33.29 lakhs. It stood at the high of Rs.87.83 lakhs in 2002-03 but gradually declined from Rs.35.49 lakhs in 1999-00 to Rs.0.03 lakhs in 2005-06, at CAGR of 30.33 per cent and LGR of Rs.5.97 lakhs.

On the other hand, the recovery of Non-Farm Sector Loan, which was Rs.41.66 lakhs on an average during the Pre-Waiving Period, declined to Rs.15.11 lakhs in 2005-06 from Rs.53.45 lakhs in 1999-00. The rate of decline in recovery of Non-Farm Sector Loan was 15.79 per cent when compounded annually (CAGR = - 15.79, t = -2.85, $p < 0.05$) and Rs.5.43 lakhs on an average every year (LGR = 5.43, t = -2.96, $p < 0.05$). The net loan to Non-Farm Sector with an average of Rs.167.66 lakhs, declined at compound rate of 1.98 per cent and linear rate of Rs.3.18 lakhs, but the decline was not at mentionable level as both CAGR and LGR were insignificant.

The CV value at 96.08 for issue was much higher compared to that of recovery (CV = 35.28) and net value (CV = 13.17) of Farm Sector Loan. This shows that issue of Non-Farm Sector Loan was highly inconsistent in Kumbakonam PCARDB. Overall, it is found that there was significant decline in recovery of Non-Farm Sector Loan whereas the decline in issue and net value of farm sector loan was not at mentionable level for PCARDB in Kumbakonam.

Table 2A

(Rs. In Lakhs)

Year	Issue	Recovery	Total
Opening Balance			198.97
1999-00	35.49	53.45	181.01
2000-01	16.66	50.54	147.12
2001-02	61.17	42.94	165.36
2002-03	87.83	50.25	202.94
2003-04	30.03	51.71	181.26
2004-05	1.85	27.61	155.49
2005-06	0.03	15.11	140.41
Mean	33.29	41.66	167.66
SD	31.99	14.70	22.08
CV	96.08	35.28	13.17
CAGR	-30.33	-15.79**	-1.98
t-Value	-1.43	-2.85	-0.78
LGR	-5.97	-5.43**	-3.18
t-Value	-0.98	-2.96	-0.73
Linear Equation Model for Linear Growth Rate			
Equation	57.17 - 5.97 t	63.39 - 5.43 t	180.39 - 3.18 t

**Significant at 5% level.

Table 2B shows the quantum of issue, recovery and net value of Non-Farm Sector Loan in the year of implementation of Waiving Scheme as well as during Post-Waiving Period.

Table 2B

Status of Issue, Recovery and Net Value of NON-FARM Sector Loan During and After Implementation of Waiving Scheme in Kumbakonam PCARDB

(Amount Rs. In lakhs)

Year	Issue	Recovery	Total
Opening Balance			140.41
In the year of Loan Waiving			
2006-07	0.03	4.72	135.72
After Loan Waiving			
2007-08	0.00	13.71	121.95
2008-09	0.00	5.61	116.34
Mean	0.00	9.66	119.15
SD	0.00	5.73	3.97

As per the Table, the recovery of Non-Farm Sector Loan was Rs. 4.72 in the year of implementation of Waiving Scheme. There was no issue of loan to Non-Farm Sector but the recovery was Rs.13.71 lakhs and Rs.5.61 lakhs in 2007-08 and 2008-09 respectively. On an average, recovery was Rs.9.66 lakhs and net Non-Farm Sector Loan was Rs.119.15 lakhs.

The results of Mann-Whitney U Test comparing the status of issue, recovery and net value of Non-Farm Sector between Pre and Post-Waiving Period are presented in Table 2C.

Table 2C

Comparison of Issue, Recovery and Net Value of NON-FARM Sector Loan Before and After Implementation of Waiving Scheme in Kumbakonam PCARDB

Loan Status		Mean (Rs. Lakhs)	SD	Sum of Ranks	Mann Whitney U Value	Z Value
Issue	Before	33.29	31.99	39.0	0.0	-2.33**
	After	0.00	0.00	6.0		
Recovery	Before	41.66	14.70	39.0	0.0	-2.32**
	After	9.66	5.73	6.0		
Net Value	Before	167.66	22.08	39.0	0.0	-2.32**
	After	119.15	3.97	6.0		

**Significant at 5% level

It is understood from the Table that issue, recovery, net value of Non-Farm Sector Loan by Kumbakonam PCARDB were affected by the implementation of the Waiving Scheme. This is indicated by Z values, for the differences in issue ($U = 0.0$, $Z = -2.33$, $p < 0.05$), recovery ($U = 0.0$, $Z = -2.32$, $p < 0.05$) and net value ($U = 0.0$, $Z = -2.32$, $p < 0.05$), between two periods obtained from Mann-Whitney Test, being significant.

Table 3A

Trend and Growth in Issue, Recovery and Net Value of JEWEL Loan before Implementation of Waiving Scheme in Kumbakonam PCARDB

(Rs. In Lakhs)

Year	Issue	Recovery	Total
Opening Balance			2.03
1999-00	0.00	2.03	0.01
2000-01	0.00	0.00	0.01
2001-02	3.88	0.25	3.63
2002-03	11.58	7.69	7.52
2003-04	11.86	12.24	7.14
2004-05	4.70	9.53	2.31
2005-06	11.55	7.17	6.70
Mean	6.22	5.56	3.90
SD	5.39	4.82	3.28

CV	86.55	86.63	83.93
CAGR	13.67	50.21	243.47**
t-Value	1.14	1.62	2.84
LGR	1.86*	1.66*	1.01
t-Value	2.50	2.49	1.99
Linear Equation Model for Linear Growth Rate			
Equation	-1.21 + 1.86 t	-1.08 + 1.66 t	-0.13 + 1.01 t

*Significant at 10% level; **Significant at 5% level

Pertaining to issue, recovery and net value of Jewel Loan by PACRDB in Kumbakonam, Table 3A shows that the issue of Jewel Loan was substantial at around Rs.11 lakhs in 2002-03, 2003-04 and 2005-06 while it was none in the first two years.

During 2001-02 and 2004-05, it was Rs.3.88 lakhs and Rs.4.70 lakhs respectively. The recovery of Jewel Loan was more than the average (Mean = 5.56 lakhs) in the last four years of the Pre-Waiving Period. The Total Jewel Loan, with an average of Rs.3.90 lakhs, was also higher than its average in 2002-03, 2003-04 and 2005-06. The rate of growth in issue and recovery of Jewel Loan was not at a remarkable level. But the linear trend for both issue (LGR = 1.86, t = 2.50, $p < 0.10$) and recovery (LGR = 1.66, t = 2.49, $p < 0.10$) were significant marginally at 10 per cent level. On the other hand, the growth in total value of Jewel Loan was significant (CAGR = 243.47, t = 2.84, $p < 0.05$) whereas the linear trend was insignificant.

Table 3B

Status of Issue, Recovery and Net Value of JEWEL Loan During and After Implementation of Waiving Scheme in Kumbakonam PCARDB

(Amount Rs. In lakhs)

Year	Issue	Recovery	Total
Opening Balance			6.70
In the year of Loan Waiving			
2006-07	7.80	10.78	3.71
After Loan Waiving			
2007-08	4.92	5.09	3.54
2008-09	19.48	9.27	13.75

Mean	12.20	7.18	8.65
SD	10.30	2.96	7.22

During the Post-Waiving Period, as shown in Table 3B, Loan to Jewel issued by the Kumbakonam PCARDB was Rs.4.92 lakhs against recovery of Rs.5.09 lakhs in 2007-08. In 2008-09, issue of Jewel Loan was higher at Rs.19.48 lakhs, compared to recovery of Rs.9.27 lakhs. Overall, during the Post-Waiving Period, the average issue of Jewel Loan (Mean = 12.20) was higher than that of recovery (Mean = 7.18).

From the comparison of Jewel Loan in respect of issue, recovery and net value between Pre and Post-Waiving Period, results of which are presented in Table 3C, using Mann-Whitney Test, it becomes apparent that Z value for issue, recovery and net value of Jewel Loan was insignificant.

Table 3C

Comparison of Issue, Recovery and Net Value of JEWEL Loan Before and After Implementation of Waiving Scheme in Kumbakonam PCARDB

Loan Status		Mean (Rs. Lakhs)	SD	Sum of Ranks	Mann Whitney U Value	Z Value
Issue	Before	6.22	5.39	25.0	4.0	-1.30 NS
	After	12.20	10.30	20.0		
Recovery	Before	5.56	4.82	27.0	6.0	-0.77 NS
	After	7.18	2.96	18.0		
Net Value	Before	3.90	3.28	26.0	5.0	-1.04 NS
	After	8.65	7.22	19.0		

NS – Not Significant

The insignificant Z value indicated that the issue, recovery and net value of jewel loan by Kumbakonam PCARDB was independent of the implementation of the Waiving Scheme.

Testing of hypothesis

Issue of FS	Recovery of FS	Issue of N FS	Recovery of NFS	Issue of Jewell loan	Recovery of Jewell loan
NS	S	S	S	NS	NS

There was significant difference in the issue of Non Farm Sector Loan, recovery of Farm Sector and Non Farm Sector Loans. Hence the hypothesis (iii), **"There is no significant difference in the Credit Management of Kumbakonam PCARDB between Pre and Post Farm Loan Waiving Period,"** is rejected. Instead it is concluded that there was significant difference in the Credit Management of Kumbakonam PCARDB before and after implementation of the Waiving Scheme.

Findings and conclusions

- There is significant difference in the credit management of Kumbakonam PCARDB before and after implementation of waiving scheme.
- It is found that there was a significant decline in the issue and net value of loan whereas the decline in recovery was not significant in Kumbakonam PCARDB before the implementation of waiving scheme to farmers.
- It is found that issue of loan to farm sector is independent of the waiving scheme but implementation of waiving scheme has significantly affected recovery and net value of loan to farm sector between two periods.
- There is a significant decline in recovery of non-farm sector loan whereas the decline in issue and net value of farm sector loan was not at mentionable level for PCARDB in Kumbakonam.
- There has been a significant decline in net value of non-farm sector loan in Kumbakonam PCARDB after implementation of waiving scheme.

The Credit Management in terms of issue and recovery of loan to Farm Sector, Non Farm Sector as well as against Jewel by kumbakonam PCARDB before and after the implementation of Farm Loan Waiving Scheme has analyzed. From the discussion of the results of the analysis, it is concluded that there was a decline in issue, recovery and net loan to Farm Sector and Non-Farm Sector Loan during the Pre Waiving Period. It is further understood that there was significant reduction in issue of Farm Sector and issue and recovery of Non-Farm Sector loan after the implementation of Farm Loan Waiving Scheme in kumbakonam PCARDB at Thanjavur District. There was no remarkable difference in the issue and recovery management of Jewel Loan between Pre and Post-Waiving Periods. The issue, recovery and net value of jewel loan by Kumbakonam PCARDB is independent of the implementation of waiving scheme.

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