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The Performance of Regional Rural Banks (RRBs) in India:Has Past Anything to Suggest for Future?

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Since their inception, regional rural banks (RRBs) have taken deep roots and have become a sort of inseparable part of the rural credit structure in India. The financial viability of the RRBs has, however, been a matter of concern since the 1980s, just five years after their existence. A number of committees have gone into the issue of their financial viability and possible restructuring. This study follows a deductive approach. First the extent of the problem of the loss making RRBs has been studied to analyse if the problem is confined to some particular sponsor banks or States. Subsequently, an attempt is made to enquire as to factors that influence the performance of the RRBs and the role-played by the sponsor banks. The empirical analysis has been couched in terms of profit and loss making RRBs for a reasonably long (10-year) period to draw robust policy inferences.

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Introduction

Regional Rural Banks have been in existence for around three decades in the Indian financial scene. Inception of regional rural banks (RRBs) can be seen as a unique experiment as well as experience in improving the efficacy of rural credit delivery mechanism in India. With joint share holding by Central Government, the concerned State

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Government and the sponsoring bank, an effort was made to integrate commercial banking within the broad policy thrust towards social banking keeping in view the local peculiarities. The genesis of the RRBs can be traced to the need for a stronger institutional arrangement for providing rural credit. The Narsimham committee conceptualised the creation of RRBs in 1975 as a new set of regionally oriented rural banks, which would combine the local feel and familiarity of rural problems characteristic of cooperatives with the professionalism and large resource base of commercial banks. Subsequently, the RRBs were set up through the promulgation of RRB Act[1] of 1976. Their equity is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35. RRBs were supposed to evolve as specialised rural financial institutions for developing the rural economy by providing credit to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs.

Over the years, the RRBs, which are often viewed as the small man's bank, have taken deep roots and have become a sort of inseparable part of the rural credit structure[2]. They have played a key role in rural institutional financing in terms of geographical coverage, clientele outreach and business volume as also contribution to development of the rural economy[3]. A remarkable feature of their performance over the past three decades has been the massive expansion of their retail network in rural areas. From a modest beginning of 6 RRBs with 17 branches covering 12 districts in December 1975, the numbers have grown into 196 RRBs with 14,446 branches working in 518 districts across the country in March 2004. RRBs have a large branch network in the rural area forming around 43 per cent of the total rural branches of commercial banks. The rural orientation of RRBs is formidable with rural and semi-urban branches constituting over 97 per cent of their branch network. The growth in the branch network has enabled the RRBs to expand banking activities in the unbanked areas and mobilise rural savings.

The mandate of promoting banking with a rural focus, however, would be an enduring phenomenon only when the financial health of

the RRBs is sound. With built-in restrictions[4] on their operations, it is common to expect that the financial health of the RRBs itself would be a matter of concern. As regards their financial status, during the year 2003-04, 163 RRBs earned profits amounting to Rs.953 crore while 33 RRBs incurred losses to the tune of Rs.184 crore. Ninety RRBs had accumulated losses as on March 31, 2004. Aggregate accumulated loss of RRBs amounted to Rs. 2,725 crore during the year 2003-04. Of the 90 RRBs having accumulated loss, 53 RRBs had eroded their entire owned funds as also a part of their deposits. Furthermore, non-performing assets (NPAs) of the RRBs in absolute terms stood at Rs.3,299 crore as on March 31,2004. The percentage of gross NPAs was 12.6 during the year ending March 31, 2004. While 103 RRBs had gross NPAs less than the national average, 93 had NPAs more than it.

Given the multi agency share holding, this study makes an attempt to enquire into such factors that influence the performance of the RRBs and the role played by sponsor bank in a broader scenario. The problem has been approached in a deductive pattern. First, an attempt is made to identify the extent of the problem of loss making RRBs and see if they are confined to some particular sponsor banks or States. If the problem banks and States could be identified that would help in focussing the attention for an enduring solution. Subsequently, a model-based approach has been pursued to identify the factors that are responsible for the problems faced by the RRBs. This study contributes to the literature on RRBs primarily in two ways. First, the issues concerning RRBs are an area that is less visited empirically (econometrically) compared to the vast literature on commercial banks. Whatever studies have emerged on the topic, they have primarily relied on exploratory analysis done for a particular year or on a group of RRBs to draw inferences. This kind of an approach has a serious limitation in that the findings are guided by the choice of the year of analysis or the particular RRB(s) in question. To overcome this problem, one needs to consider, as attempted in this paper, a reasonably long period for analysis where extreme observations would be evened out so that one gets results that are more dependable. This study is an attempt

in that direction. The present study considers the entire population rather than a few RRBs and a ten-year period for empirical analysis so that results are broad based and robust. Second, given the attention at the policy level to restructure the RRBs, it is necessary that the behaviour of RRBs be analysed separately for the profit and loss making ones, than all RRBs bunched together so that it helps in policy formulation. Such an approach has been followed in this study.

The rest of the paper is organised in six segments. Section I provides a brief review of the course for restructuring and financial viability of RRBs suggested by different committees over the years. Section II reviews briefly the different factors identified in the literature that affects the financial performance of commercial banks and also the extant literature on factors affecting performance of RRBs. A bird's eye view of the spatial distribution of the performance of RRBs across the States and sponsor banks is given in section III. The methodology of the empirical analysis is discussed in Section IV. Section V discusses the empirical results. Concluding observations are set out in Section VI.

Section I
Restructuring Strategies

The financial viability of RRBs has engaged the attention of the policy makers from time to time. In fact, as early as 1981, the Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAFICARD) addressed the issue of financial viability of the RRBs. The CRAFICARD recommended that 'the loss incurred by a RRB should be made good annually by the shareholders in the same proportion of their shareholdings'. Though this recommendation was not accepted, under a scheme of recapitalisation, financial support was provided by the shareholders in the proportion of their shareholdings. Subsequently, a number of committees have come out with different suggestions to address the financial non-viability of RRBs. For instance, the Working Group on RRBs (Kelkar Committee) in 1984

recommended that small and uneconomic RRBs should be merged in the interest of economic viability. Five years down the line, in a similar vein, the Agricultural Credit Review Committee (Khusro Committee), 1989 pointed out that 'the weaknesses of RRBs are endemic to the system and non-viability is built into it, and the only option was to merge the RRBs with the sponsor banks. The objective of serving the weaker sections effectively could be achieved only by self-sustaining credit institutions'. The Committee on Restructuring of RRBs, 1994 (Bhandari Committee) identified 49 RRBs for comprehensive restructuring. It recommended greater devolution of decision-making powers to the Boards of RRBs in the matters of business development and staff matters. The option of liquidation again was mooted by the Committee on Revamping of RRBs, 1996 (Basu Committee).

The Expert Group on RRBs in 1997 (Thingalaya Committee) held that very weak RRBs should be viewed separately and possibility of their liquidation be recognised. They might be merged with neighbouring RRBs. The Expert Committee on Rural Credit, 2001 (Vyas Committee I) was of the view that the sponsor bank should ensure necessary autonomy for RRBs in their credit and other portfolio management system. Subsequently, another committee under the Chairmanship of Chalapathy Rao in 2003 (Chalapathy Rao Committee) recommended that the entire system of RRBs may be consolidated while retaining the advantages of regional character of these institutions. As part of the process, some sponsor banks may be eased out. The sponsoring institutions may include other approved financial institutions as well, in addition to commercial banks. The Group of CMDs of Select Public Sector Banks, 2004 (Purwar Committee) recommended the amalgamation of RRBs on regional basis into six commercial banks - one each for the Northern, Southern, Eastern, Western, Central and North-Eastern Regions. Thus one finds that a host of options have been suggested starting with vertical merger (with sponsor banks), horizontal merger (amongst RRBs operating in a particular region) to liquidation by different committees that have gone into the issue of financial viability and restructuring strategies for the RRBs.

More recently, a committee under the Chairmanship of A.V Sardesai revisited the issue of restructuring the RRBs (Sardesai Committee, 2005). The Sardesai committee held that 'to improve the operational viability of RRBs and take advantage of the economies of scale, the route of merger/amalgamation of RRBs may be considered taking into account the views of the various stakeholders'. Merger of RRBs with the sponsor bank is not provided in the RRB Act 1976. Mergers, even if allowed, would not be a desirable way of restructuring. The Committee was of the view that merging a RRB with its sponsor bank would go against the very spirit of setting up of RRBs as local entities and for providing credit primarily to weaker sections. Having discussed various options for restructuring, the Committee was of the view that 'a change in sponsor banks may, in some cases help in improving the performance of RRBs. A change in sponsorship may, *inter alia*; improve the competitiveness, work culture, management and efficiency of the concerned RRBs'. Against this backdrop, a number of issues need empirical probing. Such as, which are the RRBs that need focus and whether for them the sponsor bank has really to be made accountable. All these issues fall under the broader questions of what factors drive the performance of RRBs? and do the sponsor banks have a role to play? Section II reviews the literature on factors affecting performance of a commercial bank in general and also in the context of RRBs.

Section II

Review of Literature

RRBs though operate with a rural focus are primarily scheduled commercial banks with a commercial orientation. Beginning with the seminal contribution of Haslem (1968), the literature probing into factors influencing performance of banks recognises two broad sets of factors, *i.e.*, internal factors and factors external to the bank. The internal determinants originate from the balance sheets and/or profit and loss accounts of the bank concerned and are often termed as micro or bank-specific determinants of profitability. The external determinants are systemic forces that reflect the economic

environment which conditions the operation and performance of financial institutions. A number of explanatory variables have been suggested in the literature for both the internal and external determinants. The typical internal determinants employed are variables, such as, size and capital [Akhavein *et al.* (1997), Demirguc-Kunt and Maksimovic (1998) Short (1979) Haslem (1968), Short (1979), Bourke (1989), Molyneux and Thornton (1992) Bikker and Hu (2002) and Goddard *et al.* (2004)]. Given the nature of banking business, the need for risk management is of crucial importance for a bank's financial health. Risk management is a reflection of the quality of the assets with a bank and availability of liquidity with it. During periods of uncertainty and economic slow down, banks may prefer a more diversified portfolio to avoid adverse selection and may also raise their liquid holdings in order to reduce risk. In this context, both credit and liquidity risk assume importance. The literature provides mixed evidence on the impact of liquidity on profitability. While Molyneux and Thornton (1992) found a negative and significant relationship between the level of liquidity and profitability, Bourke (1989) in contrast, reports an opposite result. One possible reason for the conflicting findings may be the different elasticity of demand for loans in the samples used in the studies (Guru, Staunton and Balashanmugam, 2004). Credit risk is found to have a negative impact on profitability (Miller and Noulas, 1997). This result may be explained by taking into account the fact that more the financial institutions are exposed to high-risk loans, the higher is the accumulation of unpaid loans implying that these loan losses have produced lower returns to many commercial banks (Athanasoglou, Brissimis and Delis, 2005). Some of the other internal determinants found in the literature are funds source management and funds use management (Haslam, 1968), capital and liquidity ratios, the credit-deposit ratio and loan loss expenses [Short (1979); Bell and Murphy (1969); Kwast and Rose (1982)]. Expense management, a correlate of efficient management is another very important determinant of bank's profitability. There has been an extensive literature based on the idea that an expenses-related variable should be included in the cost part of a

standard microeconomic profit function. In this context, Bourke (1989) and Molyneux and Thornton (1992) find that better-quality management and profitability go hand in hand.

As far as the external determinants of bank profitability are concerned the literature distinguishes between control variables that describe the macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent market characteristics. The latter refer to market concentration, industry size and ownership status. Among the external determinants which are empirically modeled are regulation [Jordan (1972); Edwards (1977); Tucillo (1973)], bank size and economies of scale [Benston, Hanweck and Humphrey (1982); Short (1979)], competition [Phillips (1964); Tschoegl (!982)], concentration [Rhoades (1977); Schuster (1984)], growth in market [Short (1979)], interest rates as a proxy for capital scarcity and government ownership (Short, 1979). The most frequently used macroeconomic control variables are the inflation rate, the long-term interest rate and/or the growth rate of money supply. Revell (1979) introduced the issue of the relationship between bank profitability and inflation. He notes that the effect of inflation on bank profitability depends on whether banks' wages and other operating expenses increase at a faster pace than inflation. Perry (1992) in a similar vein contends that the extent to which inflation affects bank profitability depends on whether inflation expectations are fully anticipated. The influence arising from ownership status of a bank on its profitability is another much debated and frequently visited issue in the literature. The proposition that privately owned institutions are more profitable, however, has mixed empirical evidence in favour of it. For instance, while Short (1979) provides cross-country evidence of a strong negative relationship between government ownership and bank profitability, Barth *et al.* (2004) claim that government ownership of banks is indeed negatively correlated with bank efficiency. Furthermore, Bourke (1989) and Molyneux and Thornton (1992) find ownership status is irrelevant in explaining profitability. While many of the above factors would be relevant, it would be instructive to scan the literature that has exclusively focussed on the RRBs.

The literature on RRBs recognises a host of reasons responsible for their poor financial health. According to the Narasimham Committee, RRBs have low earning capacity. They have not been able to earn much profit in view of their policy of restricting their operations to target groups. The recovery position of RRBs is not satisfactory. There are a large number of defaulters. Their cost of operation has been high on account of the increase in the salary scales of the employees in line with the salary structure of the employees of commercial banks. In most cases, these banks followed the same methods of operation and procedures as followed by commercial banks. Therefore, these procedures have not found favour with the rural masses. In many cases, banks have not been located at the right place. For instance, the sponsoring banks are also running their branches in the same areas where RRBs are operating. The issue whether location matters for the performance has been addressed in some detail by Malhotra (2002). Considering 22 different parameters that impact on the functioning of RRBs for the year 2000, Malhotra asserts that geographical location of RRBs is not the limiting factor for their performance. He further finds that 'it is the specific nourishment which each RRB receives from its sponsor bank, is cardinal to its performance'. In other words, the umbilical cord had its effect on the performance of RRBs. The limitation of the study is that the financial health of the sponsor bank was not considered directly to infer about the umbilical cord hypothesis. Nitin and Thorat (2004) on a different note provide a penetrating analysis as to how constraints in the institutional dimension[5] have seriously impaired the governance of the RRBs. They have argued that perverse institutional arrangements that gave rise to incompatible incentive structures for key stakeholders such as political leaders, policy makers, bank staff and clients have acted as constraints on their performance. The lacklustre performance of the RRBs during the last two decades, according to the authors can be largely attributed to their lack of commercial orientation. An appropriate restructuring strategy would require to identify the problems leading to the non-satisfactory performance of the RRBs. The performance of the RRBs under the aegis of their sponsor banks in the spatial dimension has been dealt in some detail in Section III.

Section III

Performance of RRBs in the Spatial Dimension: Some Stylised Facts

The RRBs, over the years have made impressive strides on various business indicators. For instance, deposits of RRBs have grown by 18 times and advances by 13 times between 1980 and 1990. Between 1990 and 2004, deposits and advances grew by 14 times and 7 times, respectively (Table 1). Between the year 2000 and 2004, loans disbursed by RRBs more than doubled reflecting the efforts taken by the banks[6] to improve credit flow to the rural sector. The average per branch advances also increased from Rs.25 lakh in March 1990 to Rs.154 lakh in March 2003. When one considers the deployment of credit relative to the mobilisation of resources, the credit-deposit (C-D) ratio of RRBs were more than 100 per cent during the first decade of their operations up to 1987. Though the C-D ratio subsequently became lower, of late, it has shown an improvement and went up from around 39 per cent in March 2000 to 44.5 per cent in March 2004[7].

Table 1: Evolution of RRBs: Select Indicators

(Rs. Crore)

Parameter	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
No. of RRBs	85	188	196	196	196	196	196	196	196	196	196	196	196
Capital	21	46	91	166	358	705	1,118	1,380	1,959	2,049	2,143	2,141	2,221
Deposits	222	1,315	4,023	11,141	14,171	17,976	22,191	27,059	32,226	38,294	44,539	49,582	56,295
Investments	20	164	60	1,348	2,879	3,891	5,280	6,680	7,760	8,800	9,471	17,138	21,286
Advances	262	1,405	3,384	5,987	7,057	7,908	9,021	10,559	12,427	15,050	17,710	20,934	25,038
Total Assets	426	2,320	6,081	14,886	18,969	24,376	29,468	35,820	42,236	49,596	56,802	62,500	70,195
Interest Earned	NA	NA	480	1,158	1,421	2,033	2,624	3,281	3,938	4,619	5,191	5,391	5,535
Other income	NA	NA	113	72	89	103	136	151	207	240	370	430	697
Total Income	NA	NA	593	1,230	1,511	2,136	2,760	3,432	4,145	4,859	5,561	5,821	6,231
Interest expended	NA	NA	326	851	1,065	1,462	1,773	2,131	2,565	2,966	3,329	3,440	3,363
Operating expenses	NA	NA	254	657	726	804	845	982	1,056	1,165	1,459	1,667	1,825
Provisions and contingencies	NA	NA	NA	120	171	673	72	99	96	128	163	132	289
Total expenses	NA	NA	581	1,509	1,791	2,265	2,617	3,113	3,621	4,130	4,787	5,107	5,187
Operating Profit	NA	NA	12	-279	-280	-129	143	319	524	729	774	714	1,044

Note : Total expenses are excluding provisions and contingencies.
Source : Reserve Bank of India.

The presence of RRBs shows wide variation both across States and sponsor banks. Although RRBs are spread over twenty-six States, they have most of their presence in seven States, *i.e.*, Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Maharastra, Rajasthan and Uttar Pradesh. Uttar Pradesh has the highest number of RRBs, *i.e.,* thirty-six and Kerala has got only two amongst the major States of the country (Table 2). The north-eastern States like Manipur, Meghalya, Mizoram and Nagaland have got only one RRB. Like-wise, seven sponsor banks amongst twenty-eight, *viz.,* Bank of Baroda, Bank of India, Central Bank of India, Punjab National Bank, State Bank of India, United Bank of India and UCO bank account for more than three fifths of the RRBs. More than 160 RRBs earned profit in March 2004 while 150 RRBs were found to be earning profits for three consecutive years beginning with the year 2000-01. More than half of these loss-making RRBs are found to be operating in four States, *i.e.,* Bihar, Madhya Pradesh, Maharastra and Orissa. Seen at the level of sponsor banks, three banks, *i.e.,* Bank of India, Central Bank of India and State Bank of India accounted for more than half of the loss making RRBs.

As a number of sponsor banks have promoted RRBs in more than one State, it becomes natural to ask whether the presence of RRBs sponsored by a few banks whose area of operation is confined to some specific States is camouflaging the performance of better run RRBs. There can be three possibilities in such a situation. One, irrespective of the State, the RRBs sponsored by some banks are incurring losses; second, irrespective of sponsor banks, certain States are simply not conducive to better performance for RRBs; and third, there is nothing inherent either with a sponsor bank or a particular State in which the RRBs operate to contribute towards the performance of RRBs and it is a combination of some other factors. To answer these possibilities, one needs to assess the presence of RRBs sponsored by different banks across the States and their performance. Such an attempt is made in Table 3 where performance of sponsor banks across regions is depicted.

Seen from the perspective of the State in which they are operating, five out of the eight-loss making RRBs in Bihar are

Table 2: State and Sponsor Bank-wise Distribution of RRBs

Sr No	State	RRBs		Sr No	Sponsor Bank	RRBs	
		No.	Profit Making			No.	Profit Making
1	Andhra Pradesh	16	15	1	Allahabad Bank	7	7
2	Arunachal Pradesh	1	0	2	Andhra Bank	3	3
3	Assam	5	4	3	Bank of Baroda	19	15
4	Bihar	16	8	4	Bank of India	16	10
5	Chhattisgarh	5	3	5	Bank of Maharastra	3	1
6	Gujarat	9	8	6	Bank of Rajasthan	1	0
7	Haryana	4	4	7	Central Bank of India	23	15
8	Himachal Pradesh	2	2	8	Canara Bank	8	8
9	Jammu & Kashmir	3	1	9	Corporation Bank	1	0
10	Jharkhand	6	3	10	Dena Bank	4	4
11	Karnataka	13	12	11	Indian Overseas Bank	3	2
12	Kerala	2	2	12	Indian Bank	4	4
13	Madhya Pradesh	19	14	13	J&K Bank	2	1
14	Maharashtra	10	5	14	Punjab & Sind Bank	1	1
15	Manipur	1	0	15	Punjab National Bank	19	17
16	Meghalaya	1	1	16	State Bank of Bikaner and Jaipur	3	2
17	Mizoram	1	1	17	State Bank of Hyderabad	4	4
18	Nagaland	1	0	18	State Bank of India	30	18
19	Orissa	9	3	19	State Bank of Indore	1	1
20	Punjab	5	5	20	State Bank of Mysore	2	2
21	Rajasthan	14	10	21	State Bank of Patiala	1	1
22	Tamil Nadu	3	3	22	State Bank of Saurashtra	3	3
23	Tripura	1	0	23	Syndicate Bank	10	10
24	Uttar Pradesh	36	34	24	United Bank of India	11	9
25	Uttaranchal	4	4	25	UCO Bank	11	7
26	West Bengal	9	8	26	Uttar Pradesh State Co-operative (U.P.S.C.) Bank	1	0
				27	Union Bank of India	4	4
				28	Vijaya Bank	1	1
	Total	196	150		Total	196	150

Note : Based on three consecutive years performance beginning with the year 2000-01

Source : Statistical Tables relating to banks in India (Various Issues)

Table 3: Performance of Sponsor Banks Across Regions

Sponsor Bank	No of RRBs	State	Loss Making
Allahabad Bank	7	Uttar Pradesh (6), Madhya Pradesh (1)	
Andhra Bank	3	Andhra Pradesh (2), Orissa (1)	
Bank of Baroda	19	Uttar Pradesh (9), Rajasthan (5), Gujarat (3), Madhya Pradesh (1), Uttaranchal (1)	Gujarat (1), Madhya Pradesh (1), Rajasthan (2)
Bank of India	16	Uttar Pradesh (3), Madhya Pradesh (4), Maharastra (4), Jharkhand (4), Orissa (1)	Jharkhand (1), Madhya Pradesh (2) Maharastra (3)
Bank of Maharastra	3	Maharastra (3)	Maharastra (2)
Bank of Rajasthan	1	Rajasthan (1)	Rajasthan (1)
Central Bank of India	23	Bihar (8), Chattisgarh (1), Madhya Pradesh (7), Maharastra (3), Rajasthan (1), Uttar Pradesh (2), West Bengal (1)	Bihar (5) Madhya Pradesh (1) Uttar Pradesh (1) West Bengal (1)
Canara Bank	8	Uttar Pradesh (3), Karnataka (4), Kerala	
Corporation Bank	1	Karnataka (1)	Karnataka (1)
Dena Bank	4	Gujarat (3), Chattisgarh (1)	
Indian Overseas Bank	3	Orissa (2), Tamil Nadu (1)	Orissa (1)
Indian Bank	4	Andhra Pradesh (2), Tamil Nadu (2)	
J&K Bank	2	Jammu & Kashmir (1)	Jammu & Kashmir (1)
Punjab & Sind Bank	1	Punjab (1)	
Punjab National Bank	19	Uttar Pradesh (6), Punjab (3), Rajasthan (2) Bihar (4), Himachal Pradesh (1), Haryana (3)	Bihar (1), Uttar Pradesh (1)
State Bank of Bikaner and Jaipur	3	Rajasthan (3)	Rajasthan (1)
State Bank of Hyderabad	4	Andhra Pradesh (4)	
State Bank of India	30	Andhra Pradesh (5), Arunachal Pradesh (1), Assam (1), Bihar (1), Chattisgarh (3), Himachal Pradesh (1), Jammu & Kashmir (1), Jharkhand (2), Karnataka (1), Madhya Pradesh (3), Meghalaya (1), Mizoram (1), Nagaland (1), Orissa (3),	Andhra Pradesh (1), Arunachal (1), Assam (1), Uttar Pradesh (2), Uttaranchal (3) Bihar (1), Chattisgarh (1), Jammu & Kashmir (1), Jharkhand (2), Nagaland (1), Orissa (3)
State Bank of Indore	1	Madhya Pradesh (1)	
State Bank of Mysore	2	Karnataka (2)	
State Bank of Patiala	1	Punjab (1)	
State Bank of Saurashtra	3	Gujarat (3)	
Syndicate Bank	10	Andhra Pradesh (3), Haryana (1), Karnataka (4), Kerala (1), Uttar Pradesh (1)	
United Bank of India	11	West Bengal (5), Assam (4), Manipur (1), Tripura (1)	Manipur (1), Tripura (1)
UCO Bank	11	West Bengal (3), Bihar (3), Orissa (2), Rajasthan (2), Madhya Pradesh (1) Orissa (2)	Bihar (1) Madhya Pradesh (1),
Uttar Pradesh State Co-operative (U.P.S.C.) Bank	1	Uttar Pradesh (1)	Uttar Pradesh (1)
Union Bank of India	4	Uttar Pradesh (3), Madhya Pradesh (1)	
Vijaya Bank	1	Karnataka (1)	

Note : The figures in parenthesis indicate the number of RRBs by the Sponsor banks. Performance relates to the period 2000-01 to 2002-03

Source : Statistical Tables Relating to Banks in India (Various Issues) and Annual Accounts of Scheduled Commercial Banks in India 1989-2001, Reserve Bank of India

sponsored by the Central Bank of India and one each by the Punjab National Bank, SBI and the UCO bank. Of the five-loss making RRBs found in Madhya Pradesh, two are sponsored by Bank of Baroda and one each by the Bank of India, the Central Bank of India and the UCO Bank. Like wise, of the five-loss making RRBs found in Maharastra, three are sponsored by Bank of India and two by Bank of Maharastra. From the sponsor bank's perspective one finds that the RRBs in which they have a stake and which are not earning profits, are not confined to a single State. It is spread across the States in which they have a presence. For instance, the eight loss making RRBs for which the Central Bank of India is the sponsor bank, are spread over Bihar, Madhya Pradesh, Uttar Pradesh and West Bengal. Similarly, the twelve loss making RRBs sponsored by the SBI are spread across Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Nagaland and Orissa. The same is the case with the RRBs sponsored by Bank of India and UCO bank. Hence, one finds no strong systematic pattern so as to infer whether or not the peculiarities of any particular sponsor bank or a specific State in which they operate drives the performance of RRBs. In such a situation, financial performance of the RRBs has been modeled based on balance sheet information of the RRBs for a ten-year period to decipher, what all factors that contribute to their financial health. The modalities of the econometric estimation have been taken up in the next section.

Section IV

Data and Methodology

Net income as a percentage to total assets (NITA)[8] is taken to be the indicator of financial performance of the RRBs. NITA measures how profitably and efficiently the RRB is making use of its total assets. Deflating the net income by total assets also takes account of the variation in the absolute magnitude of the profits, which may be size related. The performance of RRBs is postulated to depend upon two broad sets of factors, internal to the RRBs as well as external to them. The internal factors are represented through the balance sheet information of the individual RRBs. RRBs are scheduled commercial

banks whose source of income arises primarily from lending and investment. Balance sheet management on part of RRBs requires a judicious mix between lending and investment. As such, loans and advances of each RRB as a percentage of total assets (LOTA) and investments in securities of each RRB as a percentage of total assets (INTA) are included as explanatory variables. In terms of liquidity management, since banks are involved in the business of transforming short-term deposits into long-term credit, they would be constantly faced with the risks associated with the maturity mismatch. In order to hedge against liquidity deficits, which can lead to insolvency problems, banks often hold liquid assets, which can be easily converted to cash. However, liquid assets are often associated with lower rates of return. Hence, high liquidity is expected to be associated with lower profitability (Molyneux and Thornton, 1992). The impact of liquidity on profitability is captured through the variable LIQ, which is represented through Cash in Hand of the RRBs as a proportion of their Assets. Another internal factor that can be expected to have a significant effect on the financial health of the RRBs is their efficiency in expense management. The 'total expenses' shown in profit & loss account of the RRBs is the sum of 'interest expenses' and 'operating expenses'. While rising operating costs to support increasing business activities is natural, increasing operating costs relative to non operating expenses is a matter of concern and reflects poor expense management. To judge the impact of expense management on balance sheet health, the variable operating expenses as a percentage of total expenditure (OE) has been taken as another independent variable.

Apart from the internal factors, the literature recognises the influence of the sponsor bank on a RRB's health through what is termed as the *umbilical cord* (Malhotra, 2002). According to the umbilical cord hypothesis, given the very close relationship[9] between the RRB and its sponsor bank, the attitude of the sponsor bank would have a bearing on the performance of the RRB. As it is quite complex to quantify the attitude of the sponsor bank towards the concerned RRB, the impact of the sponsor bank has been subsumed under a single indicator and it is the financial health of the sponsor bank. Financial health of the sponsor bank reflected through its net income

as a percentage of its total assets (NITASPON) has been included as one of the regressors. Based on the above discussion, to ascertain the impact of the internal and the external factors on bank profitability, panel data regression models have been used. Equation (1) describes the general specification of the model. Equation (1) can be estimated either by least squares or through a procedure that accounts for fixed/ random effects.

$$NITA_{i,t} = \eta_1 LOTA_{i,t} + \eta_2 INTA_{i,t} + \eta_3 LIQ_{i,t} + \eta_4 OE_{i,t} + \eta_5 NITASPON_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where,

$\eta_1, \eta_2, \eta_3, \eta_4,$ and η_5 are parameters to be estimated.

NITA=Net Income to Assets

LOTA = Loan as a proportion of Total Assets.

INTA =Investment as a proportion of Total assets.

LIQ=Cash in Hand as a proportion of Total Assets

OE= Operating Expenses as a proportion of Total Expenditure

NITASPON= Net Income to Assets of the Sponsor Bank.

$\varepsilon_{i,t}$= Error Term

The subscripts i and t refer to the year and cross section (RRB); respectively.

In addition to the above factors, an environmental factor that may affect both the costs and revenue of the RRBs is the inflationary conditions in the economy. The impact of inflation rates on bank profitability depends on its effect on a bank's costs and revenues. The effect of inflation on bank performance depends on whether the inflation is anticipated or unanticipated (Perry, 1992). If inflation is fully anticipated and interest rates are adjusted accordingly resulting in revenues rising faster than costs, then it would have a positive impact on profitability. However, if the inflation is not anticipated and the banks are sluggish in adjusting their interest rates then there is a possibility that bank costs may increase faster than bank revenues and hence, adversely affect bank profitability. Interest rates in India

were administered for a long time till the onset of financial liberalization. In the post liberalisation phase though banks have greater freedom to price their products, maneuverability on part of banks in adjusting the interest rates are rather limited on account of the preference for fixed rate deposits, administered savings, etc. Furthermore, as all the variables in (1) are expressed as ratios, inflation is already accounted for in the model. Hence, inflation as an additional variable has been excluded from the regression model. It is quite possible that past year's performance has a bearing on today's performance and non-incorporation of the same in the econometric estimation would blur the impact of other variables on NITA. To account for the past year's performance, lagged value of NITA has also been considered in an extended model. The extended model assumes specification as laid down in equation (2)

$$NITA_{i,t} = \eta_0 NITA_{i,t-1} + \eta_1 LOTA_{i,t} + \eta_2 INTA_{i,t} + \eta_3 LIQ_{i,t} + \eta_4 OE_{i,t} + \eta_5 NITASPON_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where, ηs are the parameters to be estimated.

The extended model (2) is a dynamic panel data model. A dynamic panel model poses a number of econometric issues. The major problem that arises when lagged dependent variable is introduced as an explanatory variable is that the error term and the lagged dependent variable are correlated, with the lagged dependent variable being correlated with the individual specific effects that are subsumed into the error term. This implies that standard estimators are biased, and as such an alternative method of estimating such models is required. The standard procedure to provide consistent estimates is to adopt an instrumental variable procedure, with different lags of the dependent variable used as instruments. Although a number of candidates are possible, the Arellano and Bover (1995) approach is adopted as this generates the most efficient estimates. While using lagged dependent variables as instruments, overall instrument validity is examined using a Sargan test of over identifying restrictions.

The study covers the period 1994-2003. The choice of end points for the period of analysis is essentially governed by two

considerations. Based on the recommendations of the Narasimham Committee Report (1992), reforms were initiated in 1993 to turn around the failing RRBs. To enhance financial viability, a new set of prudential accounting norms of income recognition, asset classification, provisioning, and capital adequacy were implemented. Banks were also required to make full provisioning for bulk of their non-performing assets. Furthermore, they were permitted to lend to non-target group borrowers up to 60 per cent of new loans beginning in 1993-94. Permission was also granted to introduce new services, such as loans for consumer durables. As such, year 1993-94 has been taken as the initial year for estimation when the RRBs were given the opportunity to operate in a more liberal framework. The choice of the terminal year for the empirical study is guided by the availability of balance sheet information on both RRBs as well as the sponsor bank from the various issues of Statistical Tables Relating to Banks in India brought out by the Reserve Bank of India. Balance sheet information was available till 2002-03 for RRBs when the study was carried out. The study deals with all the 196 RRBs except one[10]. To get a deeper insight into the factors contributing to the financial performance of RRBs, the empirical analysis has been carried out separately for the profit and the loss making RRBs apart from for all the RRBs taken together. Those RRBs that earned profits consecutively for three years during 2000-01 till 2002-03 have been categorized as the profit making RRBs and the rest as loss making RRBs.

Section V

Empirical Results

To choose the appropriate model for estimating specification (1), Hausman test is employed. The very low p-value obtained for Hausman Statistics indicates a preference for fixed effects over random effect model. The fixed effect estimation results indicate that investments contributed positively to net income of both profit and loss making RRBs. On the other hand, advances had a positive impact on the financial health of the profit making RRBs only; the impact is found to be negative, although insignificant, for the loss making

Table 4: Fixed Effects Estimation Results

Independent Variables	Profit Making RRBs		Loss Making RRBs		All RRBs	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
LOTA	0.013	0.02	-0.01	0.36	0.003	0.56
INTA	0.029	0.00	0.031	0.00	0.028	0.00
LIQ	0.034	0.62	-0.206	0.21	-0.037	0.56
OETOTE	-0.232	0.00	-0.217	0.00	-0.226	0.00
NITASPON	0.053	0.40	0.132	0.42	0.09	0.12
Adjusted R^2	0.80		0.75		0.82	

RRBs. Liquidity also turned out to be insignificant in the statistical sense to affect the net income of any category of RRBs. Operating expenses have an across-the-board negative and significant impact on the RRBs' financial performance. Furthermore, sponsor bank's health turns out to be insignificant in having an impact on the concerned RRBs irrespective of whether it is making profits or incurring losses. Thus, going by the fixed effect estimation results, the umbilical cord hypothesis appears to be on a weak footing.

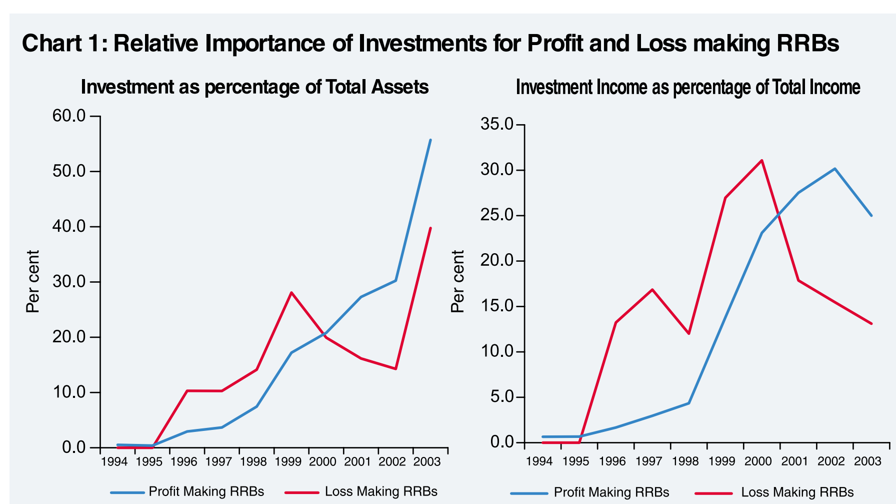
However, estimation of the extended model (2), which employs more rigorous estimation procedures, provides strikingly different results (Table 5). The dynamic panel data estimation reveals that performance in the past years had a significant[11] impact for the current year for both categories of RRBs. Advances contributed negatively

Table 5: Dynamic Panel Data (GMM) Estimation Results

Independent Variables	Profit Making RRBs		Loss Making RRBs		All RRBs	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
NITA(-1)	0.454	0.00	0.490	0.00	0.410	0.00
NITA(-2)	0.033	0.07	0.039	0.01	0.040	0.00
LOTA	-0.074	0.00	0.097	0.00	-0.069	0.01
INTA	0.016	0.01	-0.002	0.82	0.020	0.00
LIQ	0.064	0.82	-1.682	0.00	0.51	0.12
OETOTE	-0.110	0.00	-0.149	0.00	-0.129	0.00
NITASPON	0.304	0.00	-0.747	0.00	0.200	0.0.04
P-Value of Sargan Test	0.18		0.10		0.08	

to the health of the profit making RRBs. This is in contrast to the fixed effects estimation result where advances had a positive impact for the profit making RRBs. For the loss making RRBs, the negative and insignificant coefficient for advances in the fixed effects estimations turns out to be positive and significant in the dynamic model. For all RRBs taken together, advances are found to adversely affect the bottom line. As far as investments are concerned, they contributed positively and significantly to the performance of the profit making RRBs. Again in sharp contrast to the fixed effects results, investments seem to be inconsequential in influencing the bottom line of loss making RRBs. For all RRBs taken together, impact of investments turns out to be positive and significant. The relative importance attached to investment vis-a-vis advances in their portfolio management by the profit and loss making RRBs, can be seen from Chart 1, which depicts yearly average figures. As can be seen from Chart 1, investments over the years have assumed increasing importance in the asset portfolio of profit making RRBs. Income from investments relative to advances has also contributed a higher proportion to income for profit making RRBs in the recent years compared to the loss making ones (Chart 1). For instance, investment income in total income while increased from 6 per cent to 9 per cent for the loss making RRBs, it increased from 2 per cent to 14 per cent for the profit making RRBs between the period 1994-99 and 2000-

Chart 1: Relative Importance of Investments for Profit and Loss making RRBs



03. Compared to the period 1994-99, there has been a relative shift towards investments in the portfolio management of both profit and loss making RRBs during the period 2000-03. The shifting away from advances, however, has been sharper for the profit making RRBs. While the proportion of loans to assets declined from 41.5 percent to 35 per cent for the loss making RRBs, the decline was more pronounced from 59 per cent to 48 per cent for the profit making RRBs over the sub periods 1994-99 and 2000-03.

Operating expenses had a negative impact on the profitability of both profit and loss making RRBs. A more interesting finding from the panel GMM estimations in contrast to the fixed effect estimations concerns to the umbilical cord hypothesis. One would be tempted to say that the umbilical cord hypothesis does not hold good going by the fixed effect estimation results. The GMM estimation[12] results, however, indicate that while the sponsor bank acted as a positive force for the profit making RRBs, the impact was negative for the loss making RRBs. For all RRBs taken together, the impact of the sponsor bank's health on the financial health of the concerned RRB turns out to be positive and statistically significant. The profit making RRBs are able to reap the synergy from their association with the sponsor bank. The sponsor bank, on the other hand, is found to act, as a drag on the financial health of the loss making RRBs. The literature (Malhotra, 2002 etc.) recognises a host of reasons for the drag. It could be due to competition for business rather than co-operation between the RRB and the sponsor bank, which are co-present in a particular geographical area. Else, it could simply be, because of the apathetic attitude of the sponsor bank towards the RRBs when it requires a supporting hand. Support could be in the form of advice on financial decisions, or meeting skill requirements of the RRBs or management of the affairs of the RRB. This finding is significant in the present milieu where a number of options are being considered to restructure the RRBs. The results indicate that different strategies need to be thought of keeping in view whether the RRB under consideration is making profits or incurring losses. While going into the details of the modalities of the restructuring process of RRBs is beyond the scope of this study, it can be held that a one size fits all prescription (be it for horizontal or vertical merger

of the RRBs) for the restructuring of the RRBs needs to be revisited. Very recently, 28 RRBs sponsored by nine banks[1] in six States have been amalgamated into nine new RRBs, bringing down the number of RRBs to 177. The consolidation exercise mostly involved merger of profit making RRBs of the same sponsor bank within a State. It is much easier (as they are in any case financially viable) to decide about the course of restructuring of the RRBs that are making profits. The approach to the restructuring of the loss making RRBs is an area, which would require deeper analysis. Merger of loss making RRBs operating in a contiguous area has the possibility of bringing some rewards in terms of house keeping, better administrative control, etc. The other possibility is that by merging two RRBs that are financially unviable, the inefficiencies are compounded and the merged entity falls under its own dead weight. With the umbilical cord hypothesis operational, it may be suggested that for the loss making RRBs, the sponsor banks need to play a more proactive role.

Section VI
Conclusion

The study made an attempt to examine whether the problems associated with the RRBs are specific to certain sponsor banks or States in which they operate. To get a deeper insight, all the RRBs were categorised either as profit making or loss making ones. RRB earning profits consecutively for the past three years from the terminal year of the study have been classified as profit making and the rest as loss making. Such a classification led to 150 RRBs falling in the profit making category and rest 46 as loss making. The exploratory analysis revealed that the problem of the loss making RRBs is neither confined to some specific States nor to a group of sponsor banks. In the absence of any strong systematic pattern so as to suggest that the performance of RRBs is driven by the peculiarities of any particular sponsor Bank or a specific State in which they operate, econometric estimation was employed so as to decipher the factors that contribute to their financial health. Based on the balance sheet information on individual RRBs for the past ten years, this study has approached the issue primarily form the asset side of the RRBs balance sheet. Given the

linkage between the RRBs and their sponsor bank, an attempt was also made to infer whether or not the umbilical cord hypothesis is operational. Both fixed effect and panel GMM estimations were carried out.

The more appropriate GMM estimation results indicated that the loan portfolio management for the profit making RRBs is an area of concern. Investments contribute positively to the financial performance of the profit making RRBs. Advances while had a positive impact, investments, however, turned out to be inconsequential for the performance of loss making RRBs. The results further indicated that the umbilical cord hypothesis is operational. The sponsor bank contributes positively to the financial health of the profit making RRBs. For the loss making RRBs, the sponsor bank acts as a drag on their performance. The income from investments coupled with synergy from the sponsor bank's association could mitigate the negative impact flowing from the loan portfolio for the profit making RRBs. The loss making RRBs on the other hand, could have done better had the sponsor banks played a proactive role, especially in their investment portfolio management. The loss making RRBs need focused attention of the all the stake holders, in general, and of the sponsor bank, in particular, so as to transform them into profitable ventures. In view of the intricacies involved, some critical thinking is called for at the policy level in restructuring the loss making RRBs are concerned. The sponsor bank for the loss making RRBs could be given a time frame and if within this period, significant improvement is not made, the possibility of changing the sponsor bank as suggested by the Sardesai Committee may be a worthwhile option.

Notes

1. RRBs were established "with a view to developing the rural economy by providing, for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, credit and other facilities, particularly to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs, and for matters connected therewith and incidental thereto"(RRBs Act, 1976).
2. Debate in the XV Lok Sabha on Regional Rural Bank (Amendment Bill, 2004).

3. RRBs alone have organised roughly 12 lakh self-help groups, 45 per cent of the total self-help groups in the country. RRBs have also issued over 40 lakh Kisan Credit Cards to the farmers and organised over 5,000 out of 11,000 farmers' clubs under NABARD scheme.
4. Following the recommendations of the Narasimham Committee (1991), there have been gradual relaxations in their choice of clientele and area of operations.
5. Lack of a single owner with clear ownership and control, and no prospects for profits, diffused accountability and weakened oversight of the RRBs.
6. Though the growth in credit when seen in isolation gives an impression of the impressive strides made by RRBs in disbursing credit, they account for a very small proportion (around 3 per cent) of the total assets of the Indian banking sector, despite their significant branch network.
7. While C-D ratio for 50 RRBs was more than 60 per cent that for 87 banks was less than 40 per cent in March 2004.
8. Net Income has been defined as the excess of total income over total expenditure.
9. Specifically, the sponsor bank contributes thirty-five per cent of issued capital of a RRB, appoints its chairman, advises on decisions regarding investments, monitor its progress and suggest corrective measures to be taken by the RRB. More on the relationship between the sponsor bank and their RRBs is discussed in Annex 2.
10. The left out RRB is the Kshetryia Kisan Gramin Bank due to lack of information on the Sponsor Bank for the entire period of 1994-2003. This RRB is sponsored by U.P.S.C.B., a Cooperative Bank.
11. This in a way testifies the appropriateness of employing the extended dynamic model for estimation. Guided by statistical significance, two lags of the dependent variable have been used in the GMM estimation.
12. The p-values for the Sargan test are 0.18, 0.10 and 0.08 for the profit making, loss making and all RRBs, respectively.
13. The Government of India (Ministry of Finance), issued nine notifications on September 12, 2005 for amalgamation of 28 RRBs into nine new RRBs sponsored by nine banks in six States. These amalgamations have become effective from September 12, 2005.

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Annex-1

The Basis for the Umbilical Cord Hypothesis

1. Section 3 of Chapter II of RRB Act, 1976 stipulates that only ***on request*** of a Sponsor Bank, Central Government would consider establishment of a RRB.
2. Duties of the Sponsor Bank have been spelled out in Section 3 (3) of RRB act as:

a. Subscribing to the share capital of RRB,
b. Training the personnel of RRB,
c. Providing such managerial and financial assistance during the first five years as mutually agreed upon.

3. Under Section 4 of RRB Act, 1976, the RRB will have its Head Office at such place as decided by the Central Government in consultation with NABARD and the Sponsor Bank.
4. Section 6(2) of RRB Act stipulates that the Sponsor Bank will contribute thirty-five per cent of issued capital of its RRB.
5. Under Section 9(d) of RRB Act, two directors, who are officers of the Sponsor Bank, shall be nominated on the Board of RRB.
6. Under Section 11 of Act, the Sponsor Bank shall appoint the Chairman of a RRB and specify the period of appointment. The appointment, however, would not exceed a period of five years.
7. The Sponsor Bank has the right to remove the Chairman at any time (Section 11(4)).
8. The Sponsor Bank shall depute officers or other employees to RRB as may be necessary or desirable (Section 17 of RRB Act, 1976).
9. Amalgamation of RRBs under Section 23-A can be done by Central Government in consultation with NABARD, State Government and the Sponsor Bank.
10. Section 24-A of RRB Act stipulates that the Sponsor Bank are required to monitor the progress of RRBs and carry out inspection, internal audit and scrutiny and suggest corrective measures to be taken by the RRB.
11. Interest rate on SLR deposits of all maturity held by RRB with the sponsor bank would be at 0.5 per cent over the maximum term deposit rate of the sponsor bank.
12. Governments of India and Reserve Bank of India have further issued the directives that, 'for overall management of the RRB it would be the responsibility of the Sponsor Bank to guide the RRB in various matters on human resource management, computerization, business development, branch expansion, etc.'

13. Many RRBs have an agency arrangement with their Sponsor Bank for issue of Demand Drafts.
14. Sponsor Bank also directly helps RRB in matters of daily cash remittances, over draft facility, decisions on investments, etc.

The relationship between the sponsor bank and its RRBs as evolved over the years can further be assessed in terms of summary and descriptive statistics as laid out below:

Summary Characteristics of the Determinants of RRB Profitability

(Per cent)

Year	Net Income to Assets (NITA)		Loans to Assets (LOTA)		Investment To Assets (INTA)		Liquidity (LIQ)		Operating Expenses to Total Expenses (OETOTE)		Net Income to Assets of Sponsor Bank (NITASPON)		Inflation
	Profit	Loss	Profit	Loss	Profit	Loss	Profit	Loss	Profit	Loss	Profit	Loss	Inf
1994	-4.22	-6.98	61	36.5	0.3	0	0.89	1.22	49.3	43.8	0.36	2.71	8.4
1995	-2.89	-3.97	59.9	34.2	0.2	0	1.14	1.49	46.6	44.1	0.48	2.49	12.5
1996	-0.07	-5.46	63.8	39.3	1.9	4.1	0.89	1.39	36.1	39.8	-1.26	2.55	8.1
1997	1.84	-5.95	57.7	51.1	2.1	5.2	1.19	1.49	30.7	34.4	-0.81	2.06	4.6
1998	3.4	-3.85	58	49.9	4.3	7.1	0.95	1.32	35	31.2	-1.08	1.76	4.4
1999	4.33	-2.23	51.5	37.9	8.9	10.6	1.07	1.34	34.4	30.6	-0.76	1.81	5.9
2000	3.26	-2.04	51.8	35.2	10.8	7	1.54	1.27	32.8	28.2	0.1	1.79	3.3
2001	2.89	-2.45	46.2	33.1	12.6	5.3	1.77	1.17	30	27.4	0.23	1.64	7.2
2002	2.95	-0.22	46.4	34.1	14	4.9	1.22	1.14	28.1	29.6	1.01	1.85	3.6
2003	2.78	0.04	46.1	38.8	25.7	15.4	0.65	1.11	30.1	31.2	1.67	2.25	3.5

Source: Statistical Tables Relating to India (Various Issues).

Descriptive Statistics of Variables Employed

(Per cent)

Bank Category	Measure	NITA	INTA	LOTA	LIQ	OETOTE	NITASPON	Inflation
Profit	Mean	0.2	15.9	33.9	1.3	34.0	1.4	6.1
	Median	0.9	13.4	32.2	1.1	32.9	1.5	5.9
	SD	2.5	13.5	13.6	0.7	8.9	0.9	2.8
	Skewness	-1.3	1.0	0.5	1.3	0.6	-0.8	1.0
	Kurtosis	5.3	4.0	2.5	5.1	3.5	3.9	3.1
	CV	1227.2	85.1	40.0	56.5	26.0	62.1	45.3
Loss	Mean	-2.6	31.5	9.3	1.3	34.0	1.4	6.1
	Median	-2.1	30.9	5.5	1.3	31.2	1.5	5.9
	SD.	3.2	12.3	11.3	0.1	6.0	0.8	2.8
	Skewness	-0.7	0.5	1.6	0.2	0.7	-0.9	1.0
	Kurtosis	3.2	2.8	5.3	1.8	1.9	4.2	3.1