Factors influencing profitability of Regional Rural Banks (RRBs) in India

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Abstract - Regional Rural Banks (RRBs), which emerged as an important financial institution in India for meeting the rural credit requirement. It is always argued that the RRBs have not been able to earn much profit in view of their policy of restricting their operation to target groups. In spite of that the RRBs made a remarkable performance. The present paper will make an attempt to probe and understand the factors influencing the profitability of RRBs. The researcher adopted the CRAMEL technique to observe the values and these factors have been adopted in the multivariate technique. The determined values are experimented through path analysis.

Key words - CRAMEL, Dependent variable, Independent variable, RRBs, Turnaround phase.

1.1 Introduction and statement of the problem

The outreach of financial assistance to rural public in India was further enhanced by the commercial banks after the introduction of RRBs. 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 the small and marginal farmers, agricultural workers, artisans and small entrepreneurs and for matters connected there with and incidental there to. The role of Regional Rural Banks gained, after their introduction in Indian financial system witnessed a systematic change in micro financing. However it was argued that RRBs’ performance are not worth watching from the financial point of view since the concept of developing RRBs was not for commercial adventure but for social uplift of downtrodden specifically in the rural areas hence it is prone for failures in terms of profit. Problems related to Area of operation, Clientele base, Capital base, Organizational structure, Loan delinquencies, Cost structure, Perceived as specialized bank, Financial management skills, Staff structure, Dependence on sponsor banks, Professionalism in management and Erosion of deposits. Most serious problem faced by the RRBs is their economic non-viability, i.e., insufficiency of interest revenue and transaction costs incurred by it. Any programme in banking sector is an enduring phenomenon only when the financial health of the same is sound. Though RRBs are operating with a rural focus they are primarily scheduled commercial banks with a commercial orientation hence there is need to establish its financial viability through its operation.

1.2 Methodology

The present article place on record the factors determining and influencing the profitability of RRBs. The researcher has adopted the CRAMEL technique to find the various ratios which is the base for further observation and analysis. To validate the findings and strengthen the arguments the researcher has adopted Path Analysis as statistical tool. The technique of path analysis is based on a series of multiple regression analysis with an added assumption of causal relationship between independent and dependent variables. The main principle of path analysis is that any correlation coefficient between two variables or a gross or overall measure of empirical relationship can be decomposed into a series of parts: separate paths of influence leading through chronologically intermediate variable to which both correlated variables have links. The direct and indirect effect of independent variables on the dependent variable is calculated. The present paper will attempt to probe and examine the progress and growth of Regional Rural Banks in India. For the present study the period was ideally selected to cover the turnaround phase which covers a period of ten financial years from 1997-98 to 2006-07. All the units in the population coming under the study are included and they are categorized into six regions viz., North, North East, Central, East, West and South. The study is analytical and descriptive in nature since each and every unit of the population is considered for analysis and interpretation.

1.2.1 Resource deployment ratios:

Various studies are conducted in the area of problems and prospects of RRBs, commercial viability, earning capacity, cost efficiency, branch expansion, lending pattern and determinant of profit and profitability. The present study is framed in such a way to cover all RRBs in India during the turnaround phase through CRAMEL ratio analysis.

1.3 Objective of the study

- To observe the factors influencing the profitability of Regional Rural Banks during the study period under CRAMEL method.

1.4 Hypothesis of the study

- The growth in working funds contributes much towards the profitability of banks.

1.5 Measuring the Extent of Factors Influencing Bank Profitability

The following factors have been adopted in the multivariate technique.

1.6.1 Capital adequacy ratios:

- Advances to total assets (X1), Debt to equity (X2)

1.6.2 Resource deployment ratios:

- Investment to total assets (X3), Other assets to...
total assets (X₈), Credit to Deposit (X₉), Investment to deposit(X₁₀), Credit and investment to deposit (X₁₁), Fixed assets to total assets (X₃₁), Fixed assets to net worth (X₃₉)

1.6.3 Assets quality ratios:

- Returns on advances (X₁₀), Interest income to total (X₁₁), Other liabilities to total asset (X₁₂), Net worth to capital employed (X₁₃)

1.6.4 Management efficiency ratios:

- Return on net worth (X₁₄), Wage bill to total income (X₁₅), Operating expenses to total expenses (X₁₆), Interest expended to interest earned (X₁₇), Interest expended to total expenses (X₁₈), Equity paid up to capital employed (X₁₉)

1.6.5 Earning ratios:

- Spread to working fund (X₂₀), Burden to working fund (X₂₁), Operating profit to total assets (X₂₂), Return on total assets (Y), Interest income to total income (X₂₆), Non interest income to total income (X₂₇), Non operating expenses to total assets (X₂₈), Non operating expenses to total expenses (X₂₉), Equity paid up to net worth(X₃₀).

1.6.6 Liquidity ratios:

- Deposit to total assets (X₃₁), Liquid assets to total assets (X₃₂), Provision and contingencies to total assets (X₃₃), Cash to deposits(X₃₄), Investments to advances (X₃₅), Interest coverage(X₃₆).

Out of the above-denoted factors, the variable Y i.e. Return on total assets is dependent variable and the variables X₁ to X₃₃ are independent variables.

1.6 Analysis and interpretation

1.7.1 Northern region

It is observed from the forthcoming table 1 that among the RRBs in Northern region of for the period from 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X₂⁻ Debt to equity (0.164), X₁₈⁻ Interest expended to total expenses (-0.007), X₂₀⁻ Spread to working fund (0.011), X₂₆⁻ Return on capital employed .923), X₃₆, Liquid assets to total assets (.071), X₃₈, Provision and contingencies to total assets ( -0.023), X₃₂, Investments to advances (-0.029) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. Finally, an insight this reveals that the variables X₂₀, X₃₆ contributes towards profitability.

1.7.3 Central Region

An observation of the table 3 reveals that among the RRBs in Central region for the period from 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X₂₆⁻ Return on capital employed (0.997) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. Further, an insight this reveals that the variables X₂₆ contributes towards profitability.

1.7.4 Eastern Region

Table 4

<table>
<thead>
<tr>
<th>S.NO</th>
<th>RATIO</th>
<th>STANDARDIZED COEFFICIENTS - BETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X₂⁻  Debt to equity</td>
<td>-0.28</td>
</tr>
<tr>
<td>2</td>
<td>X₂₆⁻ Return on capital employed</td>
<td>.161</td>
</tr>
<tr>
<td>3</td>
<td>X₃₆⁻ Interest coverage</td>
<td>.865</td>
</tr>
</tbody>
</table>

The examination of table 4 shows that the RRBs in Eastern region for the period from 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X₂⁻ Debt to equity (-0.028), X₂₆⁻ Return on capital employed (0.161), and X₃₆⁻ Interest coverage (0.865) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. Finally, an insight this reveals that the variables X₂₀, X₃₆ contributes towards profitability.

1.7.5 Western Region

Table 5

<table>
<thead>
<tr>
<th>S.NO</th>
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<th>STANDARDIZED COEFFICIENTS - BETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X₂⁻  Debt to equity</td>
<td>.198</td>
</tr>
<tr>
<td>2</td>
<td>X₁₄⁻ Return on net worth</td>
<td>.915</td>
</tr>
</tbody>
</table>

It is experiential from table 5 that in the Western region for the period from 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X₂⁻ Debt to equity (.198) and X₁₄⁻ Return on net worth (.915) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. Finally, an insight this reveals that all the above variables contribute towards profitability.
1.7.6 Southern Region

Table 6
DIRECT AND INDIRECT EFFECTS OF INDEPENDENT VARIABLES ON RETURN ON TOTAL ASSETS – RRBs - SOUTHERN REGION

<table>
<thead>
<tr>
<th>S.NO</th>
<th>RATIO</th>
<th>STANDARDIZED COEFFICIENTS - BETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X_{34} - Noninterest income to working fund</td>
<td>-0.214</td>
</tr>
<tr>
<td>2</td>
<td>X_{26} - Return on capital employed</td>
<td>-0.465</td>
</tr>
<tr>
<td>3</td>
<td>X_{37} - Deposit to total assets</td>
<td>1.231</td>
</tr>
</tbody>
</table>

It could be studied from table 6 that between the RRBs in Southern region for the period from 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X_{34} - Noninterest income to working fund (-0.214), X_{26} - Return on capital employed (-0.465), and X_{37} - Deposit to total assets (1.231) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. Finally, an insight this reveals that the variables X_{28} contributes towards profitability and X_{24}, X_{26} reduces the profitability position.

1.7.7 All Regions

Table 7
DIRECT AND INDIRECT EFFECTS OF INDEPENDENT VARIABLES ON RETURN ON TOTAL ASSETS – ALL RRBs

<table>
<thead>
<tr>
<th>S.NO</th>
<th>RATIO</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X_{24} - Noninterest income to working fund</td>
<td>-0.092</td>
</tr>
<tr>
<td>2</td>
<td>X_{26} - Return on capital employed</td>
<td>1.044</td>
</tr>
<tr>
<td>3</td>
<td>X_{37} - Equity</td>
<td>-0.025</td>
</tr>
</tbody>
</table>

It is noted from table 7 that between the RRBs in for the period of 1997-98 to 2006-07, the following independent factors have significant correlation co-efficient with the ratio of return on total assets; X_{34} - Noninterest income to working fund (-0.092), X_{26} - Return on capital employed (1.044) and X_{37} - Equity paid up to Net worth (-0.025) and other variables have contributed directly towards the ratio of return on total assets whereas it is also indirectly reasonable when the respective variable is combined with other indirect effects but it is found to be statistically not significant. It is imminent that the variable X_{28} contributes towards profitability and X_{24} and X_{27} reduces the profitability.

1.7 Findings and Conclusion

It is found that the following independent factors have significant correlation co-efficient with the ratio of return on total assets; in the Northern region of RRBs the variables X_1, X_{28}, X_{26}, X_{32} contributes towards profitability and X_{14}, X_{38}, and X_{22} reduces the profitability. In Central region of RRBs, it is clear that the X_{28} contributes towards profitability. In North Eastern region of RRBs, the variables X_{17}, X_{2}, and X_{10}, contributes towards profitability. Next, The scrutiny of data reveals that among the Eastern region of RRBs, the variables X_{26} and X_{35} contributes towards profitability. It can be observed that in the Southern region of RRBs the variables X_{28} contributes towards profitability. It can be experiential that in Western region of RRBs the variables X_3 and X_{14}, contribute towards profitability of the banks. Further it is exposed that the variables X_{32} contributes towards profitability and X_{22}, X_{17} reduces the profitability position. The framed hypothesis i.e. the growth in working funds contributes much towards the profitability of RRBs is established through path analysis. It can be observed by the following independent factors which have significant correlation co-efficient with the ratio of return on total assets; X_3 – Investment to total assets in North Eastern region (0.022), X_{29} – Spread to working fund in Northern region (0.01) and X_{28} – Deposit to total assets (1.231) in Southern region. Finally, the variables X_3, X_{20} and X_{28} contributes much towards the profitability of RRBs and hence hypothesis is proved correct.

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Annexure

Table 1
DIRECT AND INDIRECT EFFECTS OF INDEPENDENTS VARIABLES ON RETURN ON TOTAL ASSETS – RRBs- NORTHERN REGION

<table>
<thead>
<tr>
<th>S.NO</th>
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<tbody>
<tr>
<td>1</td>
<td>$X_{26}$. Return on capital employed</td>
<td>.923</td>
</tr>
<tr>
<td>2</td>
<td>$X_{37}$. Investments to advances</td>
<td>-.029</td>
</tr>
<tr>
<td>3</td>
<td>$X_{2}$. Debt to equity</td>
<td>.164</td>
</tr>
<tr>
<td>4</td>
<td>$X_{20}$. Liquid assets to total assets</td>
<td>.071</td>
</tr>
<tr>
<td>5</td>
<td>$X_{30}$. Provision and contingencies to total assets</td>
<td>-.023</td>
</tr>
<tr>
<td>6</td>
<td>$X_{30}$. Spread to working fund</td>
<td>.011</td>
</tr>
<tr>
<td>7</td>
<td>$X_{38}$. Interest expended to total expenses</td>
<td>-.007</td>
</tr>
</tbody>
</table>