Chapter - 7
Asset Liability Management of Meghalaya Rural Bank
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The previous chapter has assessed the loan recovery performance and the level of non-performing assets of MRB in the context of RRB’s performance at national level. It is found from the analysis that the MRB is associated with lower loan recovery and higher NPA level than that of the RRBs as a whole. The NPA of MRB has also adverse impact on profitability and productivity. Taking queue from the chapter preceding to this, the present chapter is an attempt to assess the asset liability management of MRB on the basis of the major balance sheet variables.
1. Introduction

The Reserve Bank of India introduced the concept of Asset-Liability Management and Risk Management in India for the first time in the year 1998-99. Initially, this concept was made mandatory for all Scheduled Commercial Banks, excluding RRB. In the year 2002, the scope of Asset-Liability Management and Risk Management was enhanced to cover All Scheduled Urban Co-operative Banks in India. The Reserve Bank of India also made this concept mandatory for all other Co-operative Banks and other banks who work under the supervision of the National Bank for Agriculture and Rural Developments (NABARD).

RRBs are now operating in a fairly deregulated environment and are required to determine their own interest rates on deposits and on their advances which are subject to only the minimum lending rate (MLR) prescription. The interest rates on banks’ investments in government and other permissible securities are also now market related. The intense competition for business, involving both the assets and liabilities, together with increasing volatility in the domestic interest rates and foreign exchange rates, has brought pressure on the management of banks to maintain an optimal balance between spreads, profitability and long-term viability. The un-scientific and ad-hoc pricing of deposits in the context of present competition and alternative avenues for the borrowers has resulted in an inefficient deployment of resources. At the same time, imprudent liquidity management can put banks’ earnings and reputation at great risk. These pressures call for a comprehensive approach towards management of banks’

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2 RBI, Directive Circular No. POT.SUCB.CIR.9/09.120.00/2001-02 Dated 2nd April 2002, p. 1 to 22
balance sheets and not just ad hoc action. The management of RRBs have to base their business decisions on sound risk management systems with the ultimate objective of protecting the interest of depositors and stakeholders. It is, therefore, important that RRBs have introduced effective Asset Liability Management (ALM) systems to address the issues related to liquidity, interest rate and currency risks. In the normal course, RRBs are exposed to credit, market, operational, reputational, etc., risks in view of the asset-liability transformation (RBI)\(^4\). With the liberalisation of the Indian financial markets over the last few years and growing integration of domestic markets with external markets, the risks associated with banks’ operations have become complex and large, requiring strategic management. Since the RRBs is an integral part of the financial system and most of these banks are undertaking businesses as varied as in the case of commercial banks, there is an imperative need for RRBs in general, to put in place appropriate internal control and risk management systems. The recent events like, amalgamation of RRBs reinforce the immediate need for introduction / adoption of sound risk management policies, practices and procedures.

As desired by the RBI, the NABARD has undertaken the task of framing suitable guidelines on Asset- Liability Management (ALM) for RRBs. The salient features of ALM are discussed hereunder-

1. RRBs are required to put in place an effective ALM System. The banks should set up an internal Asset-Liability Committee (ALCO), headed by the Chairman. The Board should oversee the implementation of the system and review its functioning periodically.

\(^4\)RBI, Asset Liability Management (ALM) Guidelines for Regional Rural Banks (RRBs) Retrieved from http://rbidocs.rbi.org.in/rdocs/content/PDFs/78978.pdf (date of visit: 04/7/11)
2. Keeping in view the level of computerisation and the current MIS in many of the RRBs, adoption of a uniform ALM System by all banks may not be feasible. The guidelines have been formulated to serve as a benchmark for those banks which lack a formal ALM System.

3. Banks which have already adopted more sophisticated systems may continue their existing systems, but should ensure to fine tune their current system to ensure compliance with the requirements of the ALM system as per guidelines. Other banks should examine their existing MIS and arrange to have an information system to meet the prescriptions of the ALM Guidelines.

4. To begin with, RRBs should ensure coverage of at least 60 per cent of their liabilities and assets. As for the remaining 40 per cent of their assets and liabilities, banks may include the position based on their estimates. It is necessary that banks set interim targets so as to cover 100 per cent of their business by April 1, 2008. Once the ALM System stabilises and banks gain experience, they should prepare to switch over to more sophisticated techniques like Duration Gap Analysis, Simulation and Value at Risk for interest rate risk management.

5. In order to capture the maturity structure of the cash inflows and outflows, the RBI (2007)\textsuperscript{5} Task Force suggests that the Statement of Structural Liquidity should be prepared, to start with, as on the last reporting Friday of March / June/ September / December and put up to ALCO/Top Management within a month from the close of the last reporting Friday. It is the intention to put the reporting system on a

\textsuperscript{5}RBI (2007) Task Force on Empowering RRB Boards for Operational Efficiency
fortnightly basis, with effect from April 1, 2008. The Statement of Structural Liquidity should be placed before the bank’s Board in its subsequent meeting. Tolerance levels for various maturities may be fixed by the bank’s Top Management depending on the bank’s asset-liability profile, extent of stable deposit base, the nature of cash flows, etc. In respect of mismatches in cash flows for the 1-14 days bucket and 15-28 days bucket, it should be the endeavour of the bank’s management to keep the cash flow mismatches at the minimum levels. The Task Force is of the view that to start with, the mismatches (negative gap) during 1-14 days and 15-28 days, in the normal course, may not exceed 20 per cent each of the cash outflows during these time buckets. If a bank, in view of its structural mismatches, needs a higher limit, it could operate with higher limit with the approval of its Board, giving specific reasons on the need for such higher limit. The Task Force recommends that the NABARD/RBI may like to enforce the tolerance levels strictly with effect from April 1, 2008. It further suggests that in the Statement of Interest Rate Sensitivity, only rupee assets, liabilities and off balance sheet positions should be reported. The statement should be prepared as on the last reporting Friday of March/June/September/December and submitted to the ALCO / Top Management within a month from the last reporting Friday. It should also be placed before the bank’s Board in its next meeting. The banks are expected to move over to monthly reporting system with effect from April 1, 2008. The information collected in the statement would provide useful feedback on the interest rate risk faced by the bank and the Top Management/Board would have to formulate corrective measures and devise suitable strategies wherever needed.
6. In order to enable the banks to monitor their liquidity on a dynamic basis over a time horizon spanning 1-90 days, an indicative format has been prescribed by the Task Force. This statement of Short-term Dynamic Liquidity should be prepared as on each reporting Friday and put up to the ALCO /Top Management within 2/3 days from the close of the reporting Friday.

With the backdrop of need and significance of ALM for RRBs, the present chapter has examined the asset liability management of MRB on the basis of balance sheet variables. This chapter has been categorised into two sections. First section deals with the asset liability management guidelines for RRBs and second section analysed progress of MRB with regard to balance sheet indicators.

Section-I

2. Asset-Liability Management Guidelines for RRBs:

The guidelines relating to ALM of RRBs are explained clearly in the following paragraphs.

1. Considering the structure of RRBs, balance sheet profile and skill levels of personnel of RRBs, RBI and NABARD found it necessary to provide technical support for putting in place an effective ALM framework. These Guidelines lay down broad framework for measuring liquidity, interest rates and forex risks. The initial focus of the ALM function would be to enforce the risk management discipline viz. Managing business after assessing the risks involved. The objective of good bank management is to provide strategic tools for effective risk management systems.
2. RRBs need to address the market risk in a systematic manner by adopting necessary sector-specific ALM practices than has been done hitherto. ALM, among other functions, also provides a dynamic framework for measuring, monitoring and managing liquidity, interest rate and foreign exchange (forex) risks. It involves assessment of various types of risks and altering balance sheet (assets and liabilities) items in a dynamic manner to manage risks.

3. The ALM process rests on three pillars:
   - ALM Information Systems
     - Management Information Systems (MIS)
     - Information availability, accuracy, adequacy and expediency
   - ALM Organisation
     - Structure and responsibilities
     - Level of top management involvement
   - ALM Process
     - Risk parameters
     - Risk identification
     - Risk measurement
     - Risk management
     - Risk policies and procedures, prudential limits and auditing, reporting and review.

A) ALM Information Systems:
ALM has to be supported by a management philosophy which clearly specifies the risk policies and procedures and prudential limits. This framework needs to be built on sound methodology with necessary information system as backup.
Thus, Information is the key to the ALM process. It is, however, recognised that varied business and customer profiles of RRBs do not make the adoption of a uniform ALM system for all banks feasible. There are various methods prevalent world-wide for measuring risks. These range from easy-to-comprehend and simple ‘Gap analysis’ to extremely sophisticated and data-intensive ‘Simulation’ methods. However, the central element for the entire ALM exercise is the availability of timely, adequate and accurate information. The existing systems in many RRBs do not generate / information in the manner required for ALM. Collecting accurate data in a timely manner will be the biggest challenge before these banks taking full scale computerisation. However, the introduction of the essential information system for ALM has to be addressed urgently. As commercial banks have already been prescribed with ALM system and are in the process of adopting capital adequacy for market risk, it is imminent for RRBs to put in an efficient information system for initiating ALM process. Considering the customer profile and inadequate support system for collecting information required for ALM which analyses various components of assets and liabilities on the basis of residual maturity (remaining term to maturity) and behavioural pattern, it will take some time for RRBs to get the requisite information.

B) ALM Organisation:
The successful implementation of the risk management process would require strong commitment on the part of their boards and senior management. The Board should have overall responsibility for management of risks and should decide the risk management policy and procedures, set prudential limits, auditing, reporting and review mechanism in respect of liquidity, interest rate and forex risks. The Asset - Liability Committee (ALCO) consisting of the bank’s senior management including CEO should be responsible for ensuring adherence to the policies and limits set by the Board as well as for deciding the
business strategy (on the assets and liabilities sides) in line with the bank’s business and risk management objectives (Sehgal, 1999). The ALM Support Groups consisting of operating staff should be responsible for analysing, monitoring and reporting the risk profiles to the ALCO. The staff should also prepare forecasts (simulations) showing the effects of various possible changes in market conditions related to the balance sheet and recommend the action needed to adhere to bank’s internal limits. The ALCO is a decision-making unit responsible for balance sheet planning from risk-return perspective including the strategic management of liquidity, interest rate and forex risks. The business and risk management strategy of the bank should ensure that the bank operates within the limits / parameters set by the board. The business issues that an ALCO considers, inter alia, includes pricing of both deposits and advances, desired maturity profile and mix of the incremental assets and liabilities, etc. In addition to monitoring the risk levels of the bank, the ALCO should review the results of and progress in implementation of the decisions made in the previous meetings. The ALCO’s future business strategy decisions should be based on the banks views on current interest rates. In respect of the funding policy, for instance, its responsibility would be to decide on source and mix of liabilities or sale of assets. Towards this end, it will have to develop a view on future direction of interest rate movements and decide on funding mixes between fixed vs. floating rate funds, wholesale vs. retail deposits, short term vs. long term deposits etc. The size (number of members) of ALCO would depend on the size of each RRB, level of business and organisational structure.

C) ALM Process:

The scope of ALM function can be described as follows:

- Liquidity risk management

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6 Sehgal, M (1999); “Asset Liability Management of Indian Banks”, Banking Finance, (Nov) pp-12-13
• Interest rate risk management
• Trading (Price) risk management
• Funding and capital planning
• Profit planning and business projection

i. **Liquidity Risk Management**

The measuring and managing liquidity needs are vital for effective operation of RRBs. By assuring a RRB’s ability to meet its liabilities as they become due, liquidity management can reduce the probability of an adverse situation developing. The importance of liquidity problem of a RRB need not necessarily confine to itself but its impact may be felt on other RRBs / banks as well. RRBs should measure not only the liquidity positions on an ongoing basis but also examine how liquidity requirements are likely to evolve under different assumptions/ scenarios. Liquidity measurement is quite a difficult task and can be measured through stock or cash flow approaches. The stock approach uses certain liquidity ratios viz credit deposit ratio, loans to total assets, loans to core deposits, etc. While the liquidity ratios are the ideal indicators of liquidity of banks operating in developed financial markets, the ratios do not reveal the real liquidity profile of Indian banks including RRBs, which are operating generally in an illiquid market. The experience shows that assets commonly considered as liquid like government securities, other money market instruments, etc. have limited liquidity when the market and players move in one direction\(^7\). Thus, analysis of liquidity involves tracking of cash flow mismatches (flow approach). The maturity ladder is generally used as a standard tool for measuring the liquidity profile under the flow approach, at selected maturity bands.

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The maturity profile could be used for measuring the future cash flows of RRBs in different time bands. The time bands given the statutory reserve cycle of 14 days may be distributed as under:

* 1 to 14 days
* 15 to 28 days
* 29 days and up to 3 months
* Over 3 months and up to 6 months
* Over 6 months and up to 1 year
* Over 1 year and up to 3 years
* Over 3 years and up to 5 years
* Over 5 years

**ii. Currency Risk:**

The floating exchange rate arrangement has brought in its wake pronounced volatility adding a new dimension to the risk profile of banks’ balance sheets. The increased capital flows across free economies following deregulation have contributed to increase in the volume of transactions (Dash and Pathak 2009)\(^8\). Large cross border flows together with the volatility has rendered the banks’ balance sheets vulnerable to exchange rate movements. Although RRBs predominantly confined to domestic operations, in view of few RRBs being ADs in foreign exchange, it is necessary to address forex risk also.

Managing currency risk is one more dimension of ALM. Mismatched currency position besides exposing the balance sheet to movements in exchange rate also

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\(^8\) Dash, M and Pathak, R (2009); “Canonical Correlation Analysis of Asset-Liability Management of Indian Banks” (June 1). Available at SSRN: http://ssrn.com/abstract=1412739 or http://dx.doi.org/10.2139/ssrn.1412739 (visited on 5/7/11)
exposes it to country risk and settlement risk. Ever since the RBI (Exchange Control Department) introduced the concept of end of the day near square position in 1978 ADs have been setting up overnight limits and selectively undertaking active day time trading. Following the introduction of “Guidelines for Internal Control over Foreign Exchange Business” in 1981, maturity mismatches are also subject to control. Following the recommendations of (Sodhani Committee, 1995), the calculation of exchange position has been redefined and banks have been given the discretion to set up overnight limits linked to maintenance of capital to Risk-Weighted Assets Ratio of 9 per cent of open position limit.

iii. Interest Rate Risk (IRR):

The phased deregulation of interest rates and the operational flexibility given to banks in pricing most of the assets and liabilities imply the need for the banking system to hedge the Interest Rate Risk. Interest rate risk is the risk where changes in market interest rates might adversely affect a bank’s financial condition. The changes in interest rates affect banks in a larger way. The immediate impact of changes in interest rates is on bank’s profits by changing its spread Net Interest Income (NII). A long-term impact of changing interest rates is on bank’s Market Value of Equity (MVE) or Net Worth as the marked to market value of bank’s assets, liabilities and off-balance sheet positions get affected due to variation in market rates. The interest rate risk when viewed from these two perspectives is known as ‘earnings perspective’ and ‘economic value’ perspective, respectively. The risk from the earnings perspective can be measured as changes in the NII or Net Interest Margin (NIM). There are many

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10 RBI (1995): Report of Expert Group on Foreign Exchange Markets in India (headed by the then Executive Director of RBI, Mr. O.P. Sodhani) (June 1995), popularly known as Sodhani Committee
analytical tools for measurement and management of Interest Rate Risk. In the context of poor MIS, slow pace of computerisation and the absence of total deregulation, the traditional ‘Gap Analysis’ is considered as a suitable method to measure the Interest Rate Risk.

The Gap or Mismatch risk can be measured by calculating Gaps over different time intervals as at a given date. Gap analysis measures mismatches between rate sensitive liabilities and rate sensitive assets (including off-balance sheet positions). An asset or liability is normally classified as rate sensitive if:

a) within the time interval under consideration, there is a cash flow; for instance, repayment of instalments of term loans etc.

b) the interest rate resets/re-prices contractually during the interval. For instance, charges made in the interest on CC accounts, term loan accounts before maturity.

c) RBI changes the interest rates (i.e. interest rates on Savings Bank Deposits, Minimum Lending Rate (MLR), DRI advances, Refinance, CRR balance, etc.) in cases where interest rates are administered.

Section-II

3. Analysis of Balance Sheet Variables of MRB:

In the present changing competitive environment where the banks are struggling hard, the commercial banks in general and RRBs in particular should be equipped with their reasonable amount of promptness to improve profitability and efficiency. It is expected that with the greater degree of transparency in balance sheet in accordance with competitive environment, the MRB should witness some significant changes in balance sheet. This section
reviews the progress of MRB with regard to balance sheet indicators and presents the major trends observed. The purpose of the study is to identify empirically and explore the relationship between asset and liability of MRB. In this respect we have considered assets and liabilities items expressed as a proportion of total assets to eliminate the trend components and make them comparable across the years. The table-7.1 summarises position of assets and liabilities variables of MRB.

### Table-7.1

**Position of Assets and Liabilities Variables of MRB (As on March)**

<table>
<thead>
<tr>
<th>Year / Variables</th>
<th>2006</th>
<th>Per cent</th>
<th>2007</th>
<th>Per cent</th>
<th>2008</th>
<th>Per cent</th>
<th>2009</th>
<th>Per cent</th>
<th>2010</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Deposits</td>
<td>2504085</td>
<td>84.80</td>
<td>2801385</td>
<td>82.98</td>
<td>3159848</td>
<td>83.17</td>
<td>4039445</td>
<td>80.70</td>
<td>5323070</td>
<td>82.93</td>
</tr>
<tr>
<td>3. Borrowings</td>
<td>47859</td>
<td>1.62</td>
<td>103982</td>
<td>3.08</td>
<td>101058</td>
<td>2.66</td>
<td>281337</td>
<td>5.62</td>
<td>287933</td>
<td>4.49</td>
</tr>
<tr>
<td>4. Other liabilities and Provisions</td>
<td>110377</td>
<td>3.74</td>
<td>160420</td>
<td>4.75</td>
<td>186722</td>
<td>4.91</td>
<td>257548</td>
<td>5.15</td>
<td>307070</td>
<td>4.78</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>2952772</td>
<td>100</td>
<td>3376137</td>
<td>100</td>
<td>3799195</td>
<td>100</td>
<td>5005415</td>
<td>100</td>
<td>6418545</td>
<td>100</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cash &amp; Bank Balances</td>
<td>1294154</td>
<td>43.83</td>
<td>1600569</td>
<td>47.41</td>
<td>1875103</td>
<td>49.36</td>
<td>2600758</td>
<td>51.96</td>
<td>3077105</td>
<td>47.94</td>
</tr>
<tr>
<td>2. Investment</td>
<td>922999</td>
<td>31.26</td>
<td>913299</td>
<td>27.05</td>
<td>863299</td>
<td>22.72</td>
<td>973296</td>
<td>19.44</td>
<td>1415948</td>
<td>22.06</td>
</tr>
<tr>
<td>3. Advances</td>
<td>545607</td>
<td>18.48</td>
<td>701051</td>
<td>20.76</td>
<td>869269</td>
<td>22.88</td>
<td>1120535</td>
<td>22.39</td>
<td>1543938</td>
<td>24.05</td>
</tr>
<tr>
<td>4. Fixed Assets</td>
<td>3460</td>
<td>0.12</td>
<td>4211</td>
<td>0.12</td>
<td>6533</td>
<td>0.17</td>
<td>8486</td>
<td>0.17</td>
<td>14977</td>
<td>0.23</td>
</tr>
<tr>
<td>5. Other Assets</td>
<td>186552</td>
<td>6.32</td>
<td>157007</td>
<td>4.65</td>
<td>184991</td>
<td>4.87</td>
<td>302340</td>
<td>6.04</td>
<td>366577</td>
<td>5.71</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>2952772</td>
<td>100</td>
<td>3376137</td>
<td>100</td>
<td>3799195</td>
<td>100</td>
<td>5005415</td>
<td>100</td>
<td>6418545</td>
<td>100</td>
</tr>
</tbody>
</table>

**Source:** Annual Report of Meghalaya Rural Bank, Various Issues

In March 2006, 9.8 per cent of total assets constituted the total capital which declined to 7.8 per cent in March 2010. This declining trend indicates that MRB is not in a position to maintain its capital adequacy norms stipulated from time to time. During the year March 2010, the MRB is not in a position to uphold its minimum norms of 9 per cent capital adequacy. The deposits on the other hand
have picked its momentum in the entire period. In March 2006, deposits contributed 84.80 per cent which slightly reduced and reached to 82.93 per cent in March 2010. However, borrowing portfolio (short term borrowings plus long term borrowings) showed a significant improvement from 1.62 per cent to 4.49 per cent over the period. Similarly, other liabilities as per cent of total liabilities have improved to 4.78 per cent from 3.74 per cent.

On the asset side, the cash and bank balances showed an improvement in percentage share from 43.83 per cent to 47.94 per cent during 2006 to 2010. Over the same period, there is decreased of investment portfolio of the MRB from 31.26 per cent to 22.06 per cent. Similarly in case of advances, the percentage share has augmented from 18.48 per cent to 24.05 per cent. Similarly, a negligible fraction of assets constituted the fixed assets, the contribution of which has increased from 0.12 per cent to 0.23 per cent. However, the percentage point of other assets has declined from 6.32 per cent to 5.71 per cent over the years.

3.1. Interrelationship of Balance Sheet Variables:
The inter-relationship among the variables of assets and liabilities of MRB has been assessed with correlation coefficient analysis of individual items. The results of the correlation are displayed in table - 7.2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Capital</th>
<th>Deposit</th>
<th>Borrowings</th>
<th>Other liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Bank</td>
<td>-0.54</td>
<td>-0.94*</td>
<td>0.82</td>
<td>0.94*</td>
</tr>
<tr>
<td>Investment</td>
<td>0.76</td>
<td>0.87*</td>
<td>-0.87*</td>
<td>-0.91*</td>
</tr>
<tr>
<td>Advances</td>
<td>-0.85</td>
<td>-0.58</td>
<td>0.68</td>
<td>0.81</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>-0.89*</td>
<td>-0.36</td>
<td>0.61</td>
<td>0.50</td>
</tr>
<tr>
<td>Other Assets</td>
<td>-0.05</td>
<td>0.03</td>
<td>0.15</td>
<td>-0.44</td>
</tr>
</tbody>
</table>

Source: Self calculation on the basis of table-7.1
The cash and bank item of MRB are negatively associated with deposits (-0.94). The high negative ‘r’ value is statistically significant indicates that the cash items which include statutory reserve in banks should have little correlations with these variables. The capital on the liability side has associated negatively with cash and banks. In case of investment, it is observed that the deposits have significantly associated (0.87) and capital is positively related (0.76). This indicates that there is a tendency to invest in more deposits and securities. Hence the investment pattern in MRB has undergone a significant change over the years.

The total borrowings however, are negatively and significantly associated with investment (-0.87). It shows that MRB has experienced borrowing contraction over the years and changes in pattern of investment. This reveals the sign of mismatches between assets (investment) and liabilities (deposits).

It may be observed that balance sheet items of MRB are more or less properly matched except a few items. Thus the restructuring strategies adopted by RRBs in post merger period have made a special dent on this aspect. The sizeable portion of capital is invested in various securities over the years by MRB due to increase in capital base after the introduction of capital adequacy norms.