2.1 Background:

2.1.1 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 Regional Rural Banks (R.R.B.s)\(^7\)

2.1.2 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.\(^8\) Few amendments to this directive were made by in the year 2008.\(^9\)

2.1.3 In the year 2008, the scope of it was further enhanced to cover all tier-II Urban Co-operative Banks.\(^10\)

2.1.4 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).\(^11\)

2.1.5 NABARD in the year 2008 made those concepts applicable to State Co-operative Banks (Excepting 5 cases).\(^12\)

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7 R.B.I. directive, circular no. DBOD.No.BP.BC.94/21.04.098/98 Dated 10\(^{th}\) September 1998,
8 R.B.I. directive circular no. POT.SUCB.CIR.9/09.120.00/2001-02 Dated 2\(^{nd}\) April 2002, p. 1 to 22.
9 R.B.I. directive circular no. RBI/2008-09/176, UBD.PCB.Cir. no.3/12.05.001/08-09 Dated 17\(^{th}\) September 2008, p. 1 to 4.
10 R.B.I. directive circular no. RBI/2008-09/175, UBD.PCB.Cir. No. 13/12.05.001/2008-09, Dated 17\(^{th}\) September 2008, p1 to 11.
11 NABARD directive no. NB.DoS.HO.POL/1323/P-108/2008-09 Circular No. 111/DOS-24/2008 Dated 30\(^{th}\) June 2008 to All Regional Rural Banks in the country (excepting 12 cases) p. 1 to 15.
2.1.6 NABARD in the year 2008 also made it applicable to all 31 District Central Co-operative Banks in the state of Maharashtra.\\(^{13}\)

2.2. **Introduction to Asset-Liability Management:**

2.2.1 Asset-Liability Management is the most discussed and debated topic in all industries. Its importance grows multifold when it is studied specifically with reference to the financial institutions.

2.2.2 In the year 1991-92, India opened up its economy and started initiating various steps towards liberalization. Over the period of time reforms in various fields were undertaken. Reforms related to the financial sector, telecommunication and capital markets changed the face of Indian Banking Industry. These reforms resulted in growing competition among banks in all sectors in India. This competition, on one hand, pressurized the banks to do its business on lower interest spread resulting in reduction in profits and on the other hand improving customer services by using latest technology involving higher costs. To balance between these two the banks started designing various products to suit the requirements of targeted class of customers, adopting various new methods to attract the customers and to increase its market share in business. All these developments started putting lot of pressure on profitability of the banks in India. Many of the nationalized sector banks reported losses during the period 1992 to 1999. As a whole there was unrest in Indian banking industry due to changed environment.

2.2.3 Profit is essential element for any organization. Banks cannot be exception to it. This profit helps the banks to grow. It also helps the banks to improve its financial position. Long term viability depends on the financial position. Thus, the existence of banks depend largely on its capacity to generate profit. The Reserve

\(^{13}\) NABARD directive circular no. NB.DoS.HO.POL/1655/P-108/2008-09 Circular No. 127/DOS-26/2008 Dated 30th July 2008, p. 1 to 22
Bank of India time and again insisted that here after if the banks in India wish to survive in the highly competitive environment, they will have to grow by size and become financially strong.

2.2.4 Asset-Liability Management aims at maintaining good balance among spread, profitability and long term viability\textsuperscript{14}. The logic is very simple. If UCB maintains good spread i.e. ‘Net Interest Margin’ (NIM) it will always be profitable in the business. This ability to generate profits will ensure the long term viability of the UCB. For that matter, it is supported by analysis of existing performance, setting up goals and targets for long term (Five years) with strategic plans, drawing up short term (one year) plan, Monitoring of performance v/s projections on quarterly basis and taking necessary steps accordingly. The Asset-Liability Management helps in reducing the mismatches in various time buckets. Keeping in mind the Risk Return perspective and by making planned changes either on asset side or on liability side or on both the sides of balance sheet, the banks can achieve desired goals. Or in other words, the Asset-Liability Management expects the bank to make effective changes either on asset side or on liability side or on both sides of balance sheet in time to achieve the targeted goals.

2.2.5 In one way or another, it has always been the function or responsibility of Treasury and other financial strategic departments. In some banks, concept of ‘Unified Treasury’ is adopted. The Unified Treasury is expected to undertake following functions\textsuperscript{15}:

1. To analyze the mix of items on asset side and liability side of the balance sheet and to observe the changes in it.

\textsuperscript{14} R.B.I. directive, circular no. DBOD.No.BP.BC.94/21.04.098/98 Dated 10\textsuperscript{th} September 1998, p. 3.

\textsuperscript{15} Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan p. 90
2. To analyze the pricing of various items on asset side and liability side of the balance sheet and to observe the changes in it.

3. To monitor the balance sheet based on the various time buckets and observe flow of funds on ongoing basis.

4. Effective management of cash in hand, bank balances and foreign currency (if applicable) and to keep cost of liquidity at low level.

5. To invest surplus funds of the bank in such way that will reduce the mismatches in various time buckets and earn reasonable returns.

6. To recommend the action to overcome the situation of liquidity shortage in such way that will reduce the mismatches in various time buckets at reasonable cost.

7. To help in maintaining credibility and goodwill of the bank and to ensure long term viability of the bank.

2.2.6 All items appearing either on asset side or on liability side of the balance sheet of the UCB have its own cost. Many times cost of capital, reserves and surplus, cash and bank balance etc. is neglected. However, hereafter considering the global competition and pressure on net interest margins it would not be possible for any bank to do so. Hence, all the items appearing on balance sheet should be skillfully managed in such way that they would enhance the profitability of the bank.

2.2.7 Now as per the directives of the Reserve Bank of India, UCBs have established special committee for the purpose. These committees are popularly called as ‘ALCO’. The careful study of the directives issued by the Reserve Bank
India reveals that the ‘ALCO’ is vested with extraordinary powers regarding the product mix, product pricing and match of assets and liabilities. It is also empowered to wind up activities which are not contributing to the income of the bank.\textsuperscript{16}

### 2.2.1 Composition of Balance Sheet:

2.2.1.1 Though the items appearing on the Balance Sheet of any UCB are similar to that of balance sheet of any other organization, it deserves special attention as 85% to 90% of the total size of the balance sheet is related to liquidity and interest rate sensitivity. Hence, the balance sheets of UCBs are more vulnerable to the liquidity situation in the economy and changes in the interest rates, as compared to others. It is therefore necessary to become familiar with the composition of assets and liabilities appearing on UCBs balance sheet. This will help in understanding various aspects of Assets-Liability Management in much easier way.

2.2.1.2 As mentioned earlier, like balance sheet of any other organization, the bank’s balance sheet also comprises of sources and uses of funds. Liabilities and net worth form the sources of bank funds, whereas assets represent uses of funds to generate revenue for the bank.\textsuperscript{17}

### 2.2.2 Liabilities side of the Balance Sheet:

2.2.2.1 The important items appearing on the liability side of the balance sheet can be broadly classified in to six categories as stated below.

\textsuperscript{16} R.B.I. directive, circular no. DBOD.No.BP.BC.94/21.04.098/98 Dated 10\textsuperscript{th} September 1998, p. 3

\textsuperscript{17} Risk Management, Indian Institute of Banking and Finance, Macmillan, 2005, p. 4.
These liabilities are the various sources of funds for UCBs to conduct its business of lending and investments.

1. Capital
2. Reserves and Surplus
3. Deposits
4. Borrowings
5. Other liabilities and provisions
6. Contingent liabilities

1. CAPITAL:

Capital consists of share capital of the UCB. It serves as a cushion for depositors and creditors in case of losses. Like any other business raising capital is the prime requirement of any UCB. Private sector banks raise the share capital by approaching equity markets. Foreign sector banks raise the share capital in their country of origin and by way of private placement of equity shares. UCBs raise the share capital by approaching the investors in their area of operation. Strong capital base is obviously considered as higher capacity to sustain risks associated with banking business. Presently, the regulator has stipulated minimum capital adequacy norms at 9% for all banks in India.

2. RESERVES AND SURPLUS:

The reserves and surplus represents the set aside portion of profits earned over the period. Banking system of the country is always considered as an important activity for the economy of that particular country. In India, the Regulator has time and again reiterated that the Indian banking system

should be on sound financial footing. For this purpose it has come out with various directives and guidelines making it necessary for the banks in India to keep aside certain amount of profit every year. Usually, the reserves are created for two purposes. One is specific and another is general. Building Fund, Reserves for Standard Assets, Reserves for Non Performing Assets, Reserve for Depreciation in Investments etc are specific reserves whereas General Reserves, provisions for contingencies etc are general reserves. reserves and surplus, being funds available for UCBs at any time, is considered as tier – II capital for the purpose of capital adequacy norms. General reserves are statutory in nature while the specific reserves are non statutory in nature.

3. **DEPOSITS:**

Alike other Banks, accepting deposits is main function of UCBs as stated in the definition of banking. UCBs float various deposit schemes to attract customers. Deposits are the main source of working capital for any UCB. Hence, higher the deposit means higher the working capital and higher the business turnover. Higher turnover should usually result in higher profits. It is observed that 85% to 90% of the total liabilities constitute deposits. This indicates its importance. UCBs do not pay any interest on Current Deposits. Interest rates on Savings Bank deposits in India are administered by the Regulator. These two types of deposits are popularly called as ‘CASA’ i.e. Current Account and Savings Bank Account. Interest rates on Term Deposits are now deregulated in India. The Board of respective UCB is empowered to decide its own interest rate structure for term deposit component. Obviously, lower the CASA deposits lower the cost of fund. Due to this UCBs now a days are prompted to increase their current and savings bank deposits.
The composition of term deposit is very important aspect from profit point of view of any UCBs. Type, Time and Price are three important parameters that management of UCBs should consider at the time of pricing its products i.e. fixing rate of interest. In earlier days, investors use to park their savings in the term deposits of UCBs. In today’s competitive banking environment, investors are having lot of choice for investments. Now with the overall developments in financial markets new financial instruments have emerged as competitors for term deposits of UCB. Investment in equity shares, non convertible debentures, insurance linked investments plan, units of mutual funds, etc. Mobilizing additional deposits is essential for UCBs to grow. Due to this UCBs are now forced to bring in technology oriented innovative products. However, these new technology oriented products needs higher investments that results in higher cost of funds. UCBs can mobilize higher deposits by paying higher interest but that increases the cost of fund. Higher cost of fund means higher interest rates on lending. Obviously, borrowers with strong financial position would not like to borrow at higher cost. Further, the borrowers who agree to borrow at higher rate of interest always risks the UCBs with the risk of quality of assets. Thus, the deployment of funds generated at high cost is always problem for UCBs. Hence, the UCBs would have to be very careful in fixing interest rates on term deposits.

Another problem for the UCBs is related to the duration of these term deposits. In today’s competitive environment it has become very difficult to predict the interest rate scenario. Till December 2007, the Indian economy was doing very good on growth front. Foreign funds were coming to India in big way. But due to problems in United States, United Kingdom and other developed countries the situation changed dramatically. In 2008 India witnessed large out flow of foreign funds and its growth rate has crashed from 9% to 7%. Interest rates on advances shot up from 8% to 14% in just one year. Inflation rate shot up from 4% to almost 13% in just one year. In
short, due to these uncertain situations UCBs are afraid to take any long term call on interest rates. If adequate care is not taken at the time of fixing of term deposit rates then the UCB would be exposed to Interest Rate risk. The situation may arise that the UCBs have anticipated increasing interest rate scenario and accordingly accepted long term deposits with higher rate of interest. However, in short period of time the interest rate started declining. Then it would be impossible for the UCBs to rectify earlier decision. The UCBs would be forced to carry the higher interest rate burden for the longer time. The UCBs existence would be at stake. It has happened in India in 2000. Especially, the UCBs who were not having awareness of interest rate risk accepted term deposits at about 15% interest rate for the period of 60 months. Many of these UCBs failed in subsequent period of time as they were unable to service these high cost deposits.

Further, the UCBs would have to consider the mismatch in the various time buckets at the time of determining interest rates on term deposits. The interest rate should be used as a tool to rectify these mismatches. The cost of this rectification should be as low as possible. Thus, determining the interest rate on term deposits is very skillful job. In case of UCBs it is observed that almost 80% to 85% of the total size of deposits is in the form of term deposits. These deposits are sensitive to change in interest rates. This gives the indication to what extent the UCBs balance sheet is vulnerable to interest rate sensitivity and how important is this item on UCBs Balance Sheet for the purpose of Asset-Liability Management.

4. **BORROWINGS:**

Borrowing is also one of the important sources of fund for the UCBs. Prima facie it sounds odd. Generally, customers feel that they should go to the UCBs for the purpose of borrowings. Why UCBs should borrow from
others? But it is misconception. There is similarity in accepting deposits and borrowings. Both the things bring in flow of funds for the UCBs. Like deposits, type, time and price of borrowings play very important role. Sometimes UCBs may run short of liquidity. The time frame could be short, medium or long in nature. To overcome this shortage of liquidity, sometimes it is preferred to borrow the funds. It would vary from time to time and case to case basis. For example, if the liquidity position is negative for short period and interest scenario in the market is upwards, then the UCBs need not accept the deposits by increasing interest rates on deposits. The other option available for the UCBs is to borrow either from the Regulator against its investment in Government Securities and bonds or to borrow against its deposits with other banks. Both these options would help the bank to cut down its cost of fund. If the liquidity position is negative in longer term period and interest scenario in the market is upwards, in this case the UCBs could consider option of longer term refinance. Refinance against the advances portfolio of small industries is available from SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA (SIDBI). Refinance against the advances portfolio of agriculture is available from NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD). Refinance against the portfolio of housing loan is available from NATIONAL HOUSING BANK (NHB). All these institutions are specifically established for this purpose. They lend support to the UCBs by providing long term liquidity and at concessional rate of interest. By availing refinance UCBs could overcome the problem of long term liquidity at low cost19. Therefore, borrowings by the UCB should not be considered as negative aspect. However, the decision of UCBs to borrow should be assessed on the type, time and price parameters. Considering the availability of alternatives if the borrowing option is justified then the UCBs should definitely go for it.

5. **OTHER LIABILITIES AND PROVISIONS:**

Generally, liabilities such as Bills payable, Interest payable, Dividend payable etc. created during the course of business appear under Liability column. Similarly, provisions required for running the business appear under the same column. I.e. Provision for outstanding telephone bills, outstanding electricity bills, outstanding rent etc. The contribution of these liabilities and provisions to the total of the Balance Sheet is very low.

6. **CONTINGENT LIABILITIES: (off Balance Sheet Item):**

Bank’s obligations under issuance of letter of credit, guarantees and acceptance on behalf of constituents and bills accepted by banks on behalf of its customers are reflected in contingent liabilities. As the title suggests these liabilities are of the nature of contingent. These liabilities may or may not arise. These liabilities are not taken in books of accounts but are shown by way of foot note in the financial statement. UCBs undertake business of Bank Guarantees, Letter of Credit etc. The main understanding in this type of business is the customers of UCBs on whose behalf the bank guarantee or letter of credit is issued, would honor the commitment. However, in case of failure of customers to honor the commitment, then the concerned UCBs are liable to make the payments. When the customer fails in honoring the commitment and the respective UCBs make the payment on behalf of customer then the transaction automatically gets converted from fee based business to fund based business. In the event of actual parting of funds in the transaction the amount will automatically appear on the balance sheet.

Therefore, the information of contingent liabilities is very important. This gives idea that to what extent the UCBs are exposed to risk? if the customers make default.

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2.2.3 Asset Side of the Balance Sheet:

2.2.3.1 The UCBs are expected to deploy the funds mobilized through the various sources in most profitable way. This deployment of funds generates various assets for the UCB. The asset side represents application of funds. This application can be broadly classified into six categories as stated below. These assets are generated through two important functions of UCBs i.e. lending and investment.

1. Cash and balance with R.B.I.
2. Balance with banks and Money at Call and Short Notice
3. Investments
4. Advances
5. Fixed assets
6. Other assets

1. CASH AND BALANCE WITH R.B.I.:

The UCBs are always expected to maintain some component of mobilized sources in form of currency i.e. Cash. The Regulator stipulates this percentage by way of Cash Reserve Ratio (CRR). This cash in hand is required by the UCBs for carrying out day to day transactions. Currency maintained at various branch levels and at centralized cash department is considered. Similarly, In India all ‘Scheduled Banks’ are required to maintain their current account with the Reserve Bank of India.\(^{21}\) The balance in this account is available to the UCB for disposal at any point of time. It is as good as maintaining currency in UCBs.

\(^{21}\) Professional’s, The Reserve Bank of India Act, 1934, Bare Act, Sec. 42, 2008, p. 36
2. **BALANCE WITH OTHER BANKS AND MONEY AT CALL AND SHORT NOTICE:**

The Reserve Bank of India is having its offices only at the capital of all states in India. For rest part of the country, the Reserve Bank of India has allowed State Bank of India, country’s largest commercial bank, to act on behalf of Reserve Bank of India. Apart from this, there are number of other nationalized banks, private banks, foreign banks and co-operative banks operating in India. A Bank needs to open its bank account with some other bank for two reasons. One is mandatory and other is to provide service to its customers. In case of Non Scheduled Banks, the Reserve Bank of India has allowed them to open current account with any of the designated banks for the purpose of maintaining Cash Reserve ratio. This is mandatory requirement. It is impossible for all banks to open branches in all parts of India. Thus, there is need to have tie up arrangements among the banks for the locations where banks do not have own branch. Transfer of funds from one location to other location, collection of outstation cheques, Issuance of Demand Drafts etc are the most required services by the customer of any bank. To offer these services to customers force UCBs to open an account with other banks.

The money market in India is not evenly developed throughout the country. Mumbai being financial capital of the country, most of the money market activities are concentrated in Mumbai only. Liquidity has its own cost. Keeping excess liquidity puts pressure on profits of UCBs. The UCBs are trying to recover part of the cost of this liquidity by deploying it in Money at Call and Short Notice. Overnight lending or borrowing among the banks is called as ‘Money at Call’. Whereas lending or borrowing up to a period of 14 days is called as ‘Money at Short Notice’. For undertaking operations in Call money market UCBs should have its branch in Mumbai. UCBs who do not have branch at Mumbai can participate in this market by opening an
account with other bank that have branch in Mumbai. The best example of this is The Maharashtra State Co-operative Bank Ltd. Mumbai. There are number of District Central Co-operative Banks and UCBs in Maharashtra, who do not have branch in Mumbai. Considering this, the Maharashtra State Co-operative Bank Ltd., has tied up with most of these banks and provides the opportunity to participate in Money Market transactions.

3. INVESTMENTS:

Alike other bank, Investment is one of the basic functions of any UCB as stated in the definition of banking. UCBs mobilizes good amount of money during the course of business. Once the amount is mobilized the interest cost of it starts accumulating with immediate effect. Though, the prime function of any UCB is lending, it is not always possible to deploy all the mobilized resources immediately. Getting good quality borrowers is very challenging in competitive environment. Hence, UCBs park these funds through the route of Investments and try to reduce the cost of mobilized funds. This is one reason why UCBs invest money.

The other reason for investment is mandatory requirement. To ensure that the banks in India are liquid enough to honor their commitments at any point of time during the course of business, the Regulator stipulates certain percentage of amount to be invested in liquid securities. This is known as ‘STATUTORY LIQUIDITY RATIO’ (S.L.R.) in banking field. Presently, UCBs are required to maintain S.L.R. at 25 per cent of Net Demand and Time Liabilities (N.D.T.L.) of the bank. The Regulator prescribe the securities that qualify for S.L.R. investments. Usually, these securities

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22 Professional’s, The Banking Regulation Act, 1949, Bare Act, Sec. 24, 2008, p. 33
include dated securities of Government of India, dated securities of various State Governments, Projects of national importance that require high funding on long term basis because of its long gestation period, investments in other designated banks etc.

Generally, the rate of return on the investment portfolio of UCB is low as compared to that of lending portfolio. In order to meet Statutory requirement and non availability of good customers for lending force the UCBs to invest more money in qualified and trustee securities. Many times sizable amount is blocked in these investments. This automatically puts pressure on profitability of the UCB. For last four years beginning from 2003 to 2007 the Indian economy was growing at almost 9%. However, in the year 2008-09 India witnessed big fall in growth. Economist had projected average growth rate of 7% for financial year 2008-09. This growth rate of 7% is not at all bad, considering the growth rate of developed economies. But the thinking of Indian banks has now changed dramatically. Banks in India now prefer to invest surplus funds in Government Securities and bonds, though they have adequate liquidity. The reason behind this is fear of further slowing down of economy and industrial recession. The confidence level of banks in India has gone down to such extent that banks are not even lending against the security of mortgage of land and building. They are opting to park the funds at low rate of return as the element of safety is overriding the usual risk taking element of the banks. Financial environment is very dynamic. Therefore, the Treasury Managers in India would have to invest these surplus funds in such way that it would not cost more to the bank and at the same time as the economic conditions improve and level of confidence is back, this surplus money becomes available to the banks immediately for further lending. Therefore, it is in fact a very skillful job of treasury to invest the surplus funds of bank.
Recognizing the need of accurate disclosure of investment portfolio, the Reserve Bank of India has directed all the UCBs to show correct valuation of this portfolio in the Balance Sheet. Now the entire portfolio has to be classified into three categories such as:

- Held to maturity
- Held for trading purpose
- Available for sale

Most of the dated securities and bonds are traded in Whole Sale Debt Market. It is easy to find out the exact market valuation of the investment portfolio of UCBs based on market quotes. The Reserve Bank of India has therefore, directed the UCBs to follow ‘Marked to Market’ principle while valuating the investment portfolio. Dated securities and bonds are usually of long term nature. i.e. 10 to 25 years. Though there is assurance that the UCB would get amount equivalent to the face value of instrument it is likely that in the interim period the market value of the instrument may go down. This clearly indicates erosion in the amount invested. The Regulator has therefore, made it mandatory for the UCBs to provide depreciation in the market value of investment portfolio. Off course, these provisions are applicable to only those securities which are held by the UCBs under ‘held for trading purpose’ and ‘available for sale’ category.

There is no need to mark the securities to market value if it is held under ‘held to maturity’ category. The obvious logic behind this is very clear. The UCB has categorically expressed its intention to hold these securities till the date of maturity and hence the interim devaluation would not affect its financial position.

----------------- R.B.I. Master circular on investments on web site
The norms to display the investment portfolio in the Balance Sheet have also standardized by the Regulator. Investments in approved and trustee securities are to be shown separately and investments in other securities are to be shown separately. Further, the amounts invested in the securities which are not traded in Whole Sale Debt Market are to be indicated separately. While showing total investments portfolio UCBs will have to show investment at book value and market value of same separately. This would enable the investors to know the exact present market value of the investment portfolio of the UCBs. This directive has brought transparency and uniformity in the Balance Sheet of UCBs.

Like any other items appearing on the Balance Sheet, the Investment portfolio of UCBs also needs to be assessed on the parameters of Type, Time and Price.

4. ADVANCES:

Lending is prime function of any UCB. Lending is popularly referred as advances or credit in banking industry. Funds mobilized by various means are deployed by the UCBs in form of advances to the customers. UCB earns interest on these advances. Hence, interest on advances is the main source of income for any UCB. Higher the advances, higher the income is. The rate of return on advances is much more as compared to the Investments. Due to this the UCBs usually try hard to increase this component. In earliest days, C/D ratio (ratio of Credit / Deposits) was considered to assess the overall performance of UCB. In short, to what extent the resources are deployed by the UCBs is assessed in terms of percentage by this ratio.
Now the whole scenario has changed. Like any other item on the Balance Sheet, advances are also assessed on the basis of type, time and price parameters. However, this item on the Balance Sheet is the most important item amongst all. There are two reasons for it. The first one has direct bearing on the profit of UCBs. The second one is measured size wise and is very big. Thus, it can create impact on the financial health of the UCBs.

Traditionally, UCBs sanction credit limits for short and medium term nature. Short term advance is the advance that is sanctioned for a period up to 15 months and medium term advance is the advance that is sanctioned for a period of 60 months. The logic behind this is very simple. Most part of the working capital of the UCBs is contributed by the deposits mobilized by these banks. These deposits are mobilized for the short to medium period. i.e. 15 days to 60 months. Though UCBs are allowed to accept deposits up to 120 months period but no UCB accepts for such a long period. Hence, to have the balance between source of money and deployment of money, UCBs prefer to advance for the short to medium term. Traditionally, UCBs also prefer to operate at credit / deposit ratio of 65%.

An illustration of sources and deployment of funds of UCBs is presented in table 2.1
Table 2.1
Sources and deployment of fund

<table>
<thead>
<tr>
<th>Source of Fund</th>
<th>Deployment of Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits</td>
<td>Cash Reserve Ratio</td>
</tr>
<tr>
<td></td>
<td>6/=</td>
</tr>
<tr>
<td></td>
<td>Statutory Liquidity Ratio</td>
</tr>
<tr>
<td></td>
<td>25/=</td>
</tr>
<tr>
<td></td>
<td>Margin of Safety</td>
</tr>
<tr>
<td></td>
<td>4/=</td>
</tr>
<tr>
<td></td>
<td>Advances</td>
</tr>
<tr>
<td></td>
<td>65/=</td>
</tr>
<tr>
<td>Total</td>
<td>100/=</td>
</tr>
<tr>
<td>Total</td>
<td>100/=</td>
</tr>
</tbody>
</table>

Table 2.1 shows the reasoning behind the comfort level of UCBs at 65% C/D ratio. This was some sort of Asset-Liability Management which UCBs use to do earlier.

After the opening of economy, things have changed. Now lot of importance is being given to different aspects of advances based on the parameters of type, time and price. As mentioned earlier in para 3, this item appears on the Balance Sheet is size wise very big and very sensitive. It can build the bank or destroy the bank. Hence, lot of proper attention is needed on the composition of this portfolio in today’s competitive banking environment.

Though, technically the entire portfolio of advances of UCBs is on demand, practically it is not so. UCBs always keep their right reserved to call back advance any moment. However, practically it is impossible to get back the amount advanced immediately. With the new trends it has now become essential to deploy the funds for the period for which they are sourced. This
helps UCBs to match the inflow and outflow of funds on the basis of time factor.

A specimen of balanced Balance Sheet on time factor has been presented in table 2.2

<table>
<thead>
<tr>
<th>Time factor</th>
<th>Time factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term sources</td>
<td>should be equal to</td>
</tr>
<tr>
<td>Medium term sources</td>
<td>should be equal to</td>
</tr>
<tr>
<td>Long term sources</td>
<td>should be equal to</td>
</tr>
<tr>
<td>Total sources</td>
<td>Total uses</td>
</tr>
</tbody>
</table>

Table 2.2 indicates matching of inflows and outflows of funds on the basis of time factor. If the inflows and outflows are matched on the parameter of time factor, is called as Balanced Balance Sheet. If the short term uses are restricted to the equal level of short term sources, medium term uses are restricted to the equal level of medium term sources and long term uses are restricted to the equal level of long term sources, the chances of failure of bank due to liquidity mismatch would be low. In short, the thinking behind this type of matching is that UCBs would be always in a position to honor their commitment. For this purpose not only deposits but all other sources of funds i.e. capital, reserves and surplus, borrowings are considered.

The competition in the banking field had forced UCBs to offer various products of loan to attract the customers. Apart from the traditional term loans, banks are now aggressively marketing the unsecured loans, business loans, housing loans, car loans, SME packages etc. This has facilitated the
customers with wide range of products to suit their requirements. The earlier restriction of sanctioning advances for the time period of five years has also changed. Now UCBs are sanctioning mortgage loans for the longer period up to 15 years. Further, the advances portfolio needs to be assessed on the basis of this composition.

On the pricing front also UCBs have changed their mindset to a large extent. Earlier rate of interest on advances were linked with the size of amount. Now the interest rates are linked with quantum and tenure. After the deregulation of interest rates, presently the Board of the UCBs is empowered to price these products as per their own calculations. The only valid restriction is once the price of the product (Interest rate) is finalized it has to be same for all borrowers. It means UCBs cannot change the interest rate depending on individual case. The purpose of this restriction is UCBs should not differentiate between the customers. UCBs have now introduced the ‘Rating System’ for the borrowers. This facilitates the UCBs to assess the risk involved with that customer. Based on marks scored in the rating system, the rate of interest is decided. If the borrower scores higher marks in rating system it indicates that the risk associated with that borrower is low. In that case the UCBs can advance the money at its Prime Lending Rate. This helps the borrowers with strong fundamentals to access money at lower interest rate, as UCBs are carrying lower risk by advancing money to these types of borrowers. Similarly, where the marks scored by borrowers are low but within the comfort level in that case UCBs can charge P.L.R. plus some additional percentage of interest. This additional percentage of interest is the cost for the additional risk UCBs are taking by advancing money to these types of borrowers.

Over the period of time another interesting development has taken place in relation with this important loans and advances item appearing on the Balance Sheet of UCBs. The transparency of Balance Sheet, especially,
advances portfolio of UCBs has gained lot of importance. The Regulator, by introducing norms for ‘Income Recognition and Asset Classification’ (IRAC) popularly known as N.P.A. norms, has standardized the accounting treatment while finalizing the Balance Sheet of UCBs.

Presently, the interest on advances, which is the main source of income for UCBs, has to be accounted only on prescribed norms of the Regulator. Earlier UCBs used to debit the interest to borrowers account and used to take similar credit to its income side in Profit and Loss Account. UCBs were least bothered to confirm whether the interest debited earlier was actually recovered from the concerned borrower or not? This means the profit disclosed by the UCBs was not correct to the extent of unrecovered interest. Now with the introduction of stringent norms for income recognition, banks cannot take interest income to the credit side of Profit and Loss Account statement if it is not recovered in next 90 days time.24 This has helped investors to judge the revenue status of UCBs more accurately.

Recognizing the importance of the quality of asset, these norms now forced the UCBs to classify the assets into two categories. The first one is Performing Assets and another one is Non Performing Assets. Performing asset means where the quality of asset is good. Interest and installments on the amount advanced to the borrower are recovered within 90 days from the due date. Whereas, Non Performing Assets means where either interest or Installment or both is not recovered within 90 days from the due date.25 Considering the risks associated with the banking business the Regulator has time to time increased the percentage of provision on standard assets (performing assets) also. Though the borrower is making payment of interest and installment on time, still UCBs are asked to provide certain

24 R.B.I. master circular on Income Recognition and Asset Classification Norms on web site
25 R.B.I. master circular on Income Recognition and Asset Classification Norms on web site
percentage from its profit as provision for standard assets. In case of Non Performing Assets, the age of default is given importance. If the borrower fails to pay either interest or installment with in the period of 90 days from date on which it becomes due then the account of said borrower is to be classified as Non Performing Asset. UCBs are prohibited to charge interest to these accounts from the date it becomes Non- Performing Asset. These assets need to be further classified into Sub standard, Doubtful and Loss asset categories. As the time passes and no recovery comes to UCBs, the age of default increases. Starting from 90 days to maximum of 60 months the borrowers account goes through Sub standard, Doubtful and Loss Asset categories. Here, the interesting fact is on one hand UCBs cannot debit interest to these accounts that results in no income on money advanced and on other hand depending upon the age of N.P.A. accounts the UCBs have to make provision for outstanding in these accounts from its profit. The category wise required rate of provisioning has been depicted in table 2.3

Table 2.3
Category wise rate of NPA provision

<table>
<thead>
<tr>
<th>Category</th>
<th>Tier – I UCBs</th>
<th>Other UCBs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substandard</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Doubtful – 1</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Doubtful – 2</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Doubtful – 3</td>
<td>50% by 31.03.2010, 60% by 31.03.2011, 75% by 31.03.2012, 100% by 31.03.2013</td>
<td>50% by 31.03.2007, 60% by 31.03.2008, 75% by 31.03.2009, 100% by 31.03.2010</td>
</tr>
<tr>
<td>Loss</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

(Source: Web site of The Reserve Bank of India)
Table 2.3 shows the applicable rates at which the provisions have to be made by the UCBs in each category. Tier – I UCBs means Bank with deposits base of Rs. 100.00 crores or less. It is observed from the table that the Regulator wants to remove the earlier category of ‘Loss Assets’ (5 years from the date of becoming N.P.A.). The Regulator desires UCBs to make 100% provision for the outstanding amount in N.P.A. accounts by 31.03.2010 (in case of all other UCBs) and by 31.03.2013 (in case of Tier – I UCBs)

With the introduction of these new norms UCBs are affected in two ways. On one hand they cannot debit the interest to N.P.A. accounts that affects the income side and on other hand provisions have to be made for the outstanding amount in such accounts out of profit earned that further reduces the profit.

It is mandatory to display performing assets and non performing assets separately in the advances portfolio in the Balance Sheet of UCBs. This helps the investor to judge the quality of advances portfolio and overall financial position of UCBs.

This is the reason why Indian Banks are considered as much stronger banks in the world.

5. **FIXED ASSETS:**

This item on the Balance Sheet displays the deployment of funds by UCBs in the various fixed assets. These fixed assets are required by the UCB to carry its business. Mostly, Buildings, premises, furniture fixtures and fittings, vehicles, Investments made for computerization etc are accounted
here. The amount of these deployments is usually very small as compared to the total size of the Balance Sheet.

6. OTHER ASSETS:

This item on the Balance Sheet displays the deployment of funds by the UCBs purely based on accounting principles. Rent paid in Advance, Salary and festival advance paid to staff members, Deposits with various authorities for getting services such as telephone, electricity etc. are included in this group. The amount of these deployments is usually very small as compared to the total size of the Balance Sheet.

2.2.4 NEED FOR ASSET LIABILITY MANAGEMENT

2.2.4.1 The important items appearing on the Asset side and Liability side of the Balance Sheet are discussed in detail. After 1992, when banking industry went through various reforms that changed the working environment, banks felt the need for having some integrated system and process to suit the new environment. Earlier banks used to draw Profit and Loss Account and Balance Sheet at the end of the year. Subsequently, discussion and debate on various aspects of these statements were made and draw plans for next year. In short, all this exercise was as good as post mortem. In the changed environment, the Regulator and the banks realized that hereafter earlier approach of looking at these important financial statements needs to be changed. It would be preferable to study the revenue and financial position on an ongoing basis. This would facilitate the banks to take corrective steps with sufficient time available in the particular financial year. It would also facilitate the banks to plan these important financial statements in much better way. During the financial year, if the bank is running short on any front then it would be easy for the bank to take corrective steps and try to get its targeted figure or near to that by the close of
financial year. Need for an ongoing monitoring of Net Interest Margin would take care of profitability of the bank and its long term viability in intensely competitive environment, was key driver behind introduction of Asset-Liability Management by the Regulator.

2.2.4.2 Traditionally, in India, the price of assets and liabilities were used to be regulated by the Reserve Bank of India.\(^{26}\) This was the period of administered interest rate regime. Over the period the regulator slowly pushed the Indian banks towards deregulated environment. At the same time lot of low cost foreign funds started flowing in to Indian economy. Availability of low cost funds and intense competition to lend the money brought down the interest rates on advances. It also narrowed the spread of banks. This has forced the banks to opt for different pricing of various products based on time, type and price factor. It also forced the banks to match the maturities of assets and liabilities for improving net interest margins. These changes in the profile of the sources and uses of funds are reflected in the borrower’s profile, the industry profile and the exposure limit for the same, interest rate structure of deposits and advances etc.

2.2.4.3 Banks are known as risk taking agencies. By virtue of its business these banks are exposed to various risks. Asset-Liability Management is concerned with strategic Balance Sheet management involving risk caused by changes in interest rates, exchange rates, credit risk and liquidity risk. With profit becoming key factor, it has now become imperative for a bank to move away from partial asset management (credit and Non Performing assets) and partial liability management, towards an integrated Balance Sheet management where all components of Balance Sheet and its different maturity mix will be looked at profit angle of the bank. It has been seen that the asset side of the Balance

Sheet indicates the deployment of funds i.e. outflow of funds and liability side of the Balance Sheet indicates the sources of funds i.e. inflow of funds. In changed environment it becomes important to manage these inflows and outflows of funds in efficient way. Asset-Liability Management (ALM) is a function of planning, acquiring and directing the flow of funds within the bank. The ultimate objective of this process is to maintain Net Interest Margin that is required by the bank to grow and have long term viability. This has to be done by taking reasonable and calculated business risks.

Asset-Liability Management is therefore, the management of Net Interest Margin (NIM) to ensure that its level and riskiness are compatible with risk/return objectives of the bank\textsuperscript{27}. Hence, the scope of Asset-Liability Management is more than just managing individual assets and liabilities appearing on the Balance Sheet of bank. It is an integrated approach to bank’s financial management requiring simultaneous monitoring of the types, mix and amount of inflows and outflows. In addition Asset-Liability Management requires an understanding of the market area in which the bank operates and its sensitivity to interest rate changes.

The strategy of activity managing the composition and mix of assets and liabilities portfolios is called Balance Sheet restructuring\textsuperscript{28}. In this approach, bank should make efforts to adjust and realign their different portfolios in response to bank’s objectives, financial position and future interest rate scenario to prevent undesirable imbalance between asset and liability maturities.

\textsuperscript{27} Risk Management, Indian Institute of Banking and Finance, Macmillan, 2005, p. 11.

\textsuperscript{28} Risk Management, Indian Institute of Banking and Finance, Macmillan, 2005, p. 11.
2.2.5 Significance of Asset-Liability Management:

2.2.5.1 Many a times a question is being asked, why all of a sudden the Regulator has started making the concept of Asset-Liability Management and Risk Management mandatory? Many of the UCBs in India are more than 100 years old. These banks are doing the same business and are in existence for last 100 years. Under such circumstances whether this is really required? Or India is just copying the concept from developed countries?

2.2.5.2 One has to keep in mind the most important point that there has been lot of changes in the environment in which UCBs were operating earlier and now. UCBs follow double entry book keeping system for maintaining their books of accounts. In double entry book system effect of any transaction is given on both the sides i.e. Assets Side and Liabilities Side. Hence, at any point of time the total of trial balance is always tallied. But presently under the changed scenario it has become very important to balance both the sides of Balance Sheet on the basis of Inflow of Funds and Outflow of Funds in short, medium and long period of time. As a whole, it appears from Balance sheet that UCBs have enough assets to pay off its liabilities. However, correctness of this aspect has to be ascertained. Assume that UCBs have accepted deposit of Rs. 100/= for a period of 2 years and has lent that loan of Rs. 70/= for a period of 5 years. Apparently, UCBs have comfortable liquidity position as the margin of safety is Rs. 30/= But what would happen on maturity of deposits? Or if the depositor comes to UCBs with a request to withdraw the deposit before maturity? UCBs cannot force the borrowers to prepay the amount borrowed before time. It would be more embarrassing to UCBs to ask the borrower to prepay the amount if the borrower is regular in paying interest and installment on the borrowed amount. Further, it is likely that assuming the time frame of 5 years borrowers could have invested the borrowed money in acquiring some fixed assets. In that case, it would be very difficult for borrowers to liquidate assets and pay off UCBs. In short, during the course of business the situation may
arise that UCBs have enough assets, but it might not have liquidity and it might be exposed to the liquidity risk for some period of time.

2.2.5.3 UCBs by virtue of business are exposed to many direct and indirect risks. (Details of this aspect has been discussed in next Chapter of Risk Management at para 2.3.2) Thus, Asset-Liability Management requires matching of the assets and liabilities on an ongoing basis. UCBs hereafter will have to ensure that for every maturing liability (Outflow of Fund) there is equal amount of maturing asset (Inflow of Fund). Asset-Liability Management enables UCBs to minimize these mismatches on the basis of amount and tenure that results in better Risk Management. Liquidity position is a very dynamic factor. It gets affected with every transaction that UCBs undertake at branch level. Practically, it is very difficult for UCBs to exactly match the inflows and outflows of funds every time. Hence, it is necessary to keep these mismatches under tolerance level and keep monitoring the position of inflows and outflows of fund on an ongoing basis. Asset-Liability Management is an ongoing process in banking industry.

2.2.5.4 Alike liquidity, the scenario of interest rate change is also dynamic. It is very difficult to predict. In the year 2006 and 2007, the liquidity position in the India was very comfortable resulting in lower interest rate regime. But the situation dramatically changed in 2008. Interest rate on housing loan suddenly shot up from 8% to almost 13% within a time span of just one year. No one could have imagined this upswing in the interest rate scenario in 2006 or 2007. This volatility in the interest rate affects the profit and loss position of UCBs directly. Therefore, it becomes very important for the UCBs to predict the interest rate scenario more accurately and then try to match its assets and liabilities. UCBs should always keep in mind this important factor that, even if the maturity of asset and liabilities is matched to a large extent, the interest rates can change during the period thereby affecting the interest income from assets and interest expense on liabilities. Depending upon the movement of interest rates the Net Interest Margin may
increase or decrease resulting in corresponding increase or decrease in profit during certain period.

2.2.5.5 Therefore, Asset-Liability Management has become one of the very important aspects considering the dynamics of liquidity position and unpredictable interest rate scenario in banking industry. It has become integral part of process of the Management. It helps in planning the Profit and Balance Sheet of the UCB on an ongoing basis.

2.2.5.6 To summarize, following are some of reasons for growing significance of Asset-Liability Management: 29

1. Directives from Regulator: The Reserve Bank of India has issued its first directive on this subject in the year 1999 to the Scheduled Commercial Banks. Thereafter in last 10 years, it has extended the scope of it to all other banks. As on date even if the bank is a single unit bank, it is mandatory for them to have Asset liability Management in place. As the regulator has made it mandatory the UCBs in India have no option but to follow the directives.

2. Recognition by the Management: During the period of reforms the banks in India had undergone some of the worst experiences. Some of the old and reputed banks have failed to survive and were merged with other entities. As the Regulator started implementing the recommendations of Narsimhan – I and Narsimhan – II committees, restructuring of banks especially banks from nationalized banking sector, changed the mental frame work of the management. Increasing awareness in the top management is noticed for

getting itself adjusted in the changed environment. Deregulated interest rate regime, severe competition, technology based new products etc. forced the management to give serious thought to the subject. Few years back, growth in Deposits and Advances was considered as parameter to judge the bank but now in changed environment Profitability and Long Term Viability are considered as more important parameters. Over the period of time the management of banks in India realized that efficient management of assets and liabilities is need of the hour.

3. Volatility in financial markets: Deregulation of interest rate changed the dynamics of financial markets. The vagaries of such free economic environment are reflected in interest rate structures, money supply and the overall credit position of the market, the exchange rate and price levels. For a business, which involves trading in money, rate fluctuations invariably affect the market value, yield / costs of assets – liabilities, which further affect the market value of the bank and its net interest income (NII)

4. Product Innovation: The Indian banking industry experienced the reforms in financial sectors at very high pace. Increasing inflows of low cost funds, introduction of advance technology, higher expectations of customers forced the banks to introduce new products to attract the customers. This was also necessary for survival of the banks. Banks started designing various new products and marketing these products aggressively. This has also called for effective system of Asset-Liability Management.
2.2.6 Objectives of Asset-Liability Management:

The objectives of Asset-Liability Management are as follows 30:

1. To maintain good balance among interest spread, profitability and long term viability.

2. To base business decisions on a dynamic and integrated risk management system and process, driven by corporate strategy.

3. To use this tool initially for enforcing risk management discipline.

4. To plan the Balance Sheet from the risk return perspective.

5. To reduce the mismatch or to keep the mismatch within the tolerance limit.

6. Predicting interest rate scenarios and accordingly arrange for working capital at minimum cost.

2.2.6.1 The objectives of Unified Treasury. The same objectives are served by the technique of Asset-Liability Management but in much broader way.

2.2.6.2 An effective Asset-Liability Management technique aims at managing the volume, mix, maturity, rate sensitivity, quality and liquidity of assets and liabilities as a whole so as to attain a predetermined acceptable risk/reward ratio. Thus, purpose of Asset-Liability Management is to enhance the asset quality, quantify risks associated with the assets and liabilities and further manage them. 31

30 Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2 ed. 2006, p. 103
2.2.6.3 The Asset-Liability Management technique so designed has to manage various risks primarily aim at ensuring a sufficient interest rate spread, profits, and long term viability. Hence, it has direct relationship with the Profit and Loss Account and Balance Sheet of the UCBs. The performance of UCBs and their financial position is judged on the basis of two important statements. The first one is Profit and Loss Account and the other one is Balance Sheet. Profit and Loss Account deals with the revenue position of the bank. The income earned by UCBs during the particular financial year is reflected in this statement whereas Balance sheet deals with the financial position of the UCBs as on particular date.

2.2.7 Profit and Loss Account and Asset Liability Management:

2.2.7.1 One of the main objectives of Asset Liability Management is to maintain good amount of interest spread. This part is related with the Profit and Loss Account.

2.2.7.2 It is very much essential to analyze the calculations of Net Interest Income and Net Interest Margin (popularly called as NII and NIM in banking industry) to understand the concept of Interest Rate spread.

2.2.7.3 Net Interest Income:

As the title suggest it is net income earned by the bank on account of Interest. The formula to calculate Net Interest Income is as follows:

\[ n = (i - e) \]  

\[ \text{where, } n = \text{net interest income, } i = \text{interest income, } e = \text{interest expenses.} \]
The impact of volatility on the short term profit is measured by Net Interest Income.\textsuperscript{32} Therefore, to stabilize short term profits, UCBs have to minimize fluctuations in the Net Interest Income. Net Interest Income is always expressed in actual terms.

\textbf{2.2.7.4 Net Interest Margin:}

As the title suggest, it is the expression of margin earned by UCBs on account of interest. The formula to calculate Net Interest Margin is as follows:

\[
\frac{n}{m} = \frac{n}{a} \quad \text{................................. (2)}
\]

where, \(m\) = net interest margin, \(n\) = net interest income, \(a\) = average total assets

\textbf{2.2.7.5 Calculation of Profit of the bank:}

Profit = interest income – interest expenses – provision for loan loss – marked to market loss on investments + non interest revenue – non interest expenses – taxes

The net income of banks comes mostly from the difference (spread) maintained between total interest income and total interest expenses. The higher the spread the more will be the Net Interest Income. There exist a direct correlation between risk and return. As a result, greater spread only imply enhanced risk exposure. Since any business is conducted with the objective of making profit and achieving higher profitability is the target, it is the management of risks that holds key to success.

It is expected that UCBs should have strategic plan to deal with interest spread and for that purpose banks should have detailed policy document on following aspects:

Spread management
Generating fee income and service charges
Control of noninterest operating expenses
Tax management

2.2.8 Balance Sheet and Asset-Liability Management:

2.2.8.1 In Para 2.2, in Introduction to Asset-Liability Management, it is revealed that one of the main objectives of ALM is to maintain long term viability of UCBs.

2.2.8.2 From various items appearing on the asset and liability side of the balance sheet it is required that there should be matching of inflows and outflows of funds on the parameter of time and at reasonable cost.

The asset side management of the balance sheet has the following items:

Management of Cash and Bank Balances
Management of Investments / securities
Management of Advances / lending
Management of Fixed Assets

The liability side management of the balance sheet has the following items:

Management of Capital adequacy
Management of Reserves & surplus position
Management of various products of deposits
Management of borrowed funds, if any
Management of other liabilities / commitments
2.2.8.3 It is expected that UCBs should have a strategic plan to deal with each and every item appears in the balance sheet. Top Management / Board would have to formulate corrective measures and devise suitable strategies wherever needed.  

2.3. Introduction to Risk Management:

2.3.1 No business can be done without taking risks but when it comes to banking business its importance grows multifold. Many times banks are also referred as risk taking agencies. UCBs take risk on behalf of its shareholders, depositors, borrowers, staff members etc. Hence, taking risk is built in tendency of the banking business. It has been observed that UCBs Balance Sheet is more vulnerable due to various risks associated with the business that UCBs undertake.

2.3.2 Co-operative banking has a long history of more than 100 years. There is no change in basic business activity. Prior to 1992, these UCBs were managing these risks at various departments. For example, the advances department used to manage risks arising out of function of lending. The Investment department used to manage risks arising out of function of investment. It means, the function and risks related with that function were managed by the respective department with same set of peoples. The scope and function of Risk Management was limited or restricted to that concerned department.

2.3.3 After 1992, when banking industry went through various reforms that changed the working environment, the banks felt the need for having some integrated system and process to suit the new environment. The Regulator and the Top Management of banks felt that the earlier staggered approach of managing various risks would not be sufficient. Recognizing the need of changing time, the Regulator finally made it mandatory for all banks to have one integrated policy

33 R.B.I. directive circular no. POT.SUCB.CIR.9/09.120.00/2001-02 Dated 2nd April 2002, p. 33.
document of ‘Risk Management’ in place. This document is to cover identification of risks associated with the business, designing separate system for its measurement, designing separate procedure for its management and further immunizing the bank from all risks. Risk Management is now recognized as specialized independent function of the bank.

2.4. **What is ‘Risk’ for the bank:**

2.4.1 The meaning of the word ‘RISK’ can be understood and also can be felt but it is very difficult to define and express it in words. In most cases it has been observed that there is deviation in what has been achieved from what had been planned or what had been expected. This unpredictability of future is due to uncertainties associated with the steps that are undertaken in the process or various external factors that influence the process that are necessary to achieve planned objective. Risk can be defined as uncertainties resulting in adverse outcome, adverse in relation to planned objective or expectations. Therefore, risk for the banks could be defined as:

‘Any Act or incidence that will create negative impact on Profit, Profitability, Financial Position or Goodwill of the Bank.’

There are three parts to it.

First part indicates action: i.e. some act has to be performed or some incidence has to take place,

Second part indicates effect: i.e. negative impact

Third part indicates the parameters: i.e. Profit, Profitability, Financial Position or Goodwill.

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2.4.2. Every business is established with the motive to earn profit, UCBs are not exception to it. Making profit is essential for growth. Any negative impact on profit would affect the growth and hence, it is risk to UCBs. Profitability represents the ability of UCBs to generate profit. Therefore, any negative impact arising out of any act or incidence would affect the ability to generate profit of UCBs. Therefore, it is risk to UCBs. Financial position indicates the sustainability of UCBs. Therefore, any negative impact arising out of any act or incidence would have negative impact on the long term viability of UCBs. UCBs being part of service industry, the goodwill becomes very important factor. Therefore, any negative impact arising out of any act or incidence would result in damaging the reputation/image of UCBs is called as risk.

2.4.3 The profit or loss of UCBs depend upon the net result of all cash inflows and cash outflows. Uncertainties in cash inflow and/or outflows also create uncertainties in net cash flow or profits. Factors that are responsible for creating uncertainties in cash outflows and inflows are the risk elements.35

2.4.4. Uncertainties associated with risk elements impact the net cash flow of any business or investment. Under the impact of uncertainties, variation in net cash flow takes place. This could be favorable as well as unfavorable. The possible unfavorable impact is the risk of the business.36

2.4.5 Lower risk implies lower variability in net cash flow with lower upside and downside potential. Higher risk would imply higher upside and higher downside potential.37 Zero risk would imply no variation in net cash flow. Return on Zero risk investment would be as low as compared to other opportunities available in the market.38

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2.4.6 The deposits on Liability side and Advances as well as Investments on Assets side are the volume wise bigger items. Interestingly, all the three items are interest rate sensitive also. This makes Balance Sheet of UCBs more vulnerable to Interest Rates. For example, assume that one UCB has accepted a deposit of 3 years at 10% p.a. and has deployed these funds to provide a 90 days bill discounting facility to the borrower. After one year interest rates started declining and by second year let us assume that the UCB is no longer able to charge over 8% on the bills discounting facility. Clearly there are negative earnings for the UCB as the fixed deposit has a fixed rate of interest, while the bills discounting facility is to be reprised every 90 days.

2.4.7 The housing loans disbursed by UCBs in the housing boom period of three years back have now created problems for UCBs. The average deposits of the UCB are of three years maturity, whereas average maturity of housing loans is exceeding 10 years. Now UCBs have started facing liquidity problem because the large deposits which are due for payment. Under the situation, the UCBs would have to accept fresh deposits or borrow from interbank market at current rates to meet such obligations. Current interest rates are higher than the contracted fixed rate on the housing loans.

2.4.8 The risk arises due to mismatch of assets and liabilities of UCBs. Asset-Liability Management is managing such Balance Sheet risks on the parameters of time, type and price. Asset-Liability Management is therefore, defined as a tool for Risk Management for UCBs.

2.5 Type of the risks:

Various risks faced by UCBs could be divided in to two categories such as:
1. Direct Risks:
A direct risk means the risk that can be managed by the Board of Directors of UCBs by taking appropriate decisions.

2. Indirect Risks:
An indirect risk means the risk that cannot be managed by the Board of Directors of UCBs. These risks are beyond the control of the Board of Directors.

2.5.1 Types of Direct Risks:

1. Credit Risks:

Lending is very important function for UCBs. Distribution of credit among borrowers generates income for UCBs. UCBs financial position and long term viability depends on this income. Hence, it is very important for UCBs to ensure that the money deployed by way of credit is in safe hands and it will come back to UCBs as per the agreed terms and conditions. Advances / Credit occupy major area on the asset side of the Balance Sheet. Usually, UCBs try to operate at 60% to 65% of Credit / Deposit ratio (C/D ratio) to maximize profits.

While credit risk of UCBs is obvious and is managed conventionally through effective credit supervision, what is not so obvious is the market risk, which is manifest as liquidity risk and interest rate risk in banking operations. Therefore, Market Risks are not considered separately. However, it would be worth mentioning that BASEL-II norms have given lot of importance to market risks.\(^39\)

\(^{39}\) Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2 ed., 2006 p. 278.
Various sub risks associated with the credit are as under:

a. Risk of asset quality:

The existence of UCBs depends largely on the quality of asset portfolio. Getting good quality borrower has become very difficult for UCBs in today’s competitive environment. Borrowers with strong financial position expect to borrow money at low interest rate. Further, with the developments in financial markets these borrowers now have lot of choice for raising money. UCBs basically depend on depositors for its working capital requirements. These depositors expect higher interest on their deposits. If UCBs collect deposits at higher rate than obviously the cost of funds go up. In that case, it would be very difficult for UCBs to get good quality borrower. If UCBs put efforts to control cost of funds by lowering interest rates on deposits, then in that case it would not be able to garner sufficient working capital funds that are required for growth. This problem of pricing the product has intensified especially after the deregulation of interest rates. The quality of the advances folio largely depends on how successfully UCBs manage to keep its cost of fund at low level. UCBs have now designed the ‘Rating System’ for the borrowers. The borrower who scores higher marks in the rating system gets money at lower interest rate. Borrowers with less marks but within the comfort zone of UCBs get money at higher interest rates.\(^{40}\) The assessment of the credit requirements of the borrowers and assessment of the security offered by the borrowers also plays important role in deciding the quality of advances portfolio of UCBs.

In short, quality of the advances portfolio depends on the quality of the assessment of the proposal, security and rating of the borrower. It is important for UCBs to design and develop effective system for the rating of borrower, assessment of the proposal and valuation of security offered.

b. Risk of Non Performing Asset:

The Regulator wants Indian banks to be on strong financial footings and for that purpose it has taken many steps. Introduction of Income Recognition and Asset Classification norms is one of the important steps in this direction. This ensures that if there is default in repayment of interest or installment the borrowers account automatically get shifted to Non Performing Asset category. As a result of borrower account becoming non performing asset UCBs loose interest income and at the same time has to make provision out of remaining profit. This has direct impact on the income of UCBs. Hence, it is important for UCBs to design and develop effective systems to monitor borrowers account after disbursement of loans.

c. Risk of pre-payment:

Usually, prepayment of advance is done by good quality customers. UCBs get affected in two ways when borrowers prepay the amount advanced to them. First, UCBs loose good quality customers and second UCBs assume certain income over the period to come from those borrowers at the time of sanction of advance. When borrowers prepay the amount advanced to them it affect UCBs assumption about future income. Further, getting another good quality customer in short period of time is very difficult in competitive environment. Till that time the money remains in some investment that attracts low return.
2. **Investment Related risks:**

Investment is another very important function for UCBs. The UCBs invest money for two reasons. First, to take care of statutory liquidity ratio and second is for parking of surplus funds. The rate of return on investment is low as compared to advances. This affects the income of UCBs. Hence, the management of UCB should ensure that investments are made only to the extent of statutory requirements. Surplus funds are deployed by way of advances to the maximum possible extent. The Regulator has now made it mandatory for all UCBs to have ‘Investment Policy’ in place. The Regulator expects the UCBs to manage all risks related to the investment through this policy. UCBs will have to take care about the quality of instrument in which investment are to be made. Like advances, UCBs will have to ensure that the money invested in various instruments are safe and it will come back to UCBs as per the agreed terms and conditions. With introduction of ‘Marked to Market’ concept UCBs are now required to make provision for the depreciation in investment portfolio. This affects the profit of UCBs directly. Success of UCBs depends on this portfolio because it occupies large area on the asset side of the Balance Sheet. The Statutory Liquidity ratio as on date is at 25% of Net Demand and Time Liability of the UCBs.\(^{41}\) This becomes sizable amount for any UCB. Various sub risks associated with the credit are as under:

a. **Risk of quality of instruments in portfolio:**

Usually, UCBs invest money in dated securities of Central Government of India, various State Governments and trustee securities as approved by the Regulator. These instruments are usually considered as safe instruments barring few incidences where some of the states instead of making payments on due dates issued fresh securities. But by and large

\(^{41}\) BANCO, Diary, 2006, p. 1
these instruments are safe as they are backed by the Government Guarantee. The tenure of these dated securities is long. The assurance of getting money back is on the date of maturity. It is likely that in the interim period the dated security may trade below the face value. If it happens with the larger component of the invested portfolio then UCBs will be forced to make provision for the depreciation in the value for the interim period. This will affect the profit of UCBs in that particular financial year.

It is expected that the management will direct the administration on these aspects through the Investment Policy.

b. **Risk of concentration of portfolio:**

It is always preferable to keep investment portfolio staggered. Investment in any particular instrument carries lot of risk. Assume that UCBs have invested entire investments in single instrument and due to change in the interest rate scenario the said instrument becomes unpopular in the whole sale debt market. In that case UCBs would find it difficult to sell the instrument in the market.

Failure has happened in past many times. Failure of Madhavpura Bank in state of Gujrat has resulted in failure of many small UCBs in state of Gujrat because these small UCBs invested majority of their portfolio in the Fixed Deposits instrument of Madhavpura Bank.

Hence, it is expected that the Board of Directors will direct the administration of UCBs through proper Investment Policy by stipulating ceiling on instruments and thereby avoiding concentration of portfolio in instruments.  

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42 Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2 ed., 2006 p. 158.
c. **Risk of large scale transactions:**

Prior to 2002, there was no ceiling on amount of transaction to be undertaken with single investment broker. Many UCBs suffered due to this. Small UCBs who were not having expertise and were not exposed to investment transactions were cheated by the market intermediaries. Such incidences forced regulator to issue directive regarding approval of Brokers Panel, Ceiling of 10% of transaction though one broker etc.

3. **Interest Rate risks:**

Deposits, Advances and Investments are the three major constituents of Balance Sheet of UCBs. The amount involved in these three items of the Balance Sheet is sizable. The common feature of all these three is that they are interest rate sensitive. This feature of these three items makes the entire Balance Sheet vulnerable to changes in interest rate. If the movement in the interest rate is positive in that case UCBs would be immensely benefited. But if it is negative in that case, the existence of UCBs would be a questionable. Prediction of interest rate is very difficult function. With the developments in technology the world has become very small. Economies of various countries are now closely integrated. Impact of change in interest rate by the Central Bank of one country can be felt by other countries in the world with no time lag. This has made interest rate prediction further complicated. No one in India imagined in January 2008, that the interest rate will harden to such extent by January 2009. The prime lending rate has climbed up from 8% to almost 12.50% in just 12 months time period. Due to this interest rate risk has become very important for the banking industry. Various areas of sub risks associated with the Interest Rate risks are as follows:
a. **Risk of Interest Rate Spread:**

The profitability of UCBs depend on the Net Interest Margin. Volatility in the interest rates affect the profit of UCBs. This in turn affects the long term viability and existence of UCBs. Therefore, it becomes important for UCBs to ensure that the interest rate spread is always maintained at pre decided levels as per the policy of UCBs. This needs continuous monitoring. The Regulator in India has directed UCBs to use tools of Gap Analysis for the purpose.

b. **Risk of Pre-payment:**

The fact that getting good borrowers by UCBs is a very difficult task and requires enormous efforts. Further, good quality borrowers making pre payment is by and large a hard some task. However, pre payment by a good quality borrower affects the projected profit of UCBs.

c. **Risk of Product Pricing:**

The Reserve Bank of India has now deregulated the interest rates. The Board of Directors of UCBs are now empowered to decide its own interest rate structure. UCBs do not have the expertise in this area. Further, the competition in banking field has made it more difficult. Pricing of various products should be always linked with type, time and cost. Wrong judgment on any of the parameters would result in to financial loss.
d. Risk of Interest Rate Volatility:

In the deregulated environment, the interest rates are decided by the market forces. The demand and the supply are two important factors. UCBs cannot keep itself away from this risk. Therefore, it has become more important for UCBs to judge the interest rate scenario. The Regulator expects UCBs to study and predict the changes in the interest rate scenario in short, medium and long term basis. Further, it is also expected that UCBs should do it on an ongoing basis.

4. Liquidity Risk:

This is very important risk from the point of view of bankers. It is noticed that the Reserve Bank of India, in all its directives has given more weightage for this risk. In the directive issued to tier – II banks i.e. small UCBs on the subject of Risk Management, the Regulator has specifically mentioned that many UCBs have failed in recent time due to failure in managing liquidity risk. The Regulator has made it mandatory for all UCBs to submit the returns related to the Structural Liquidity position every quarter.

Liquidity has its own cost. No funds come to UCBs free of cost. Keeping surplus liquidity means pressure on profit and keeping short liquidity means exposing UCB to the risk. Hence, the UCBs should keep adequate liquidity. Theoretically it appears very easy but in practice it is very difficult to maintain adequate liquidity. The liquidity is a very dynamic aspect and it gets changed with every transaction that takes place in UCBs. It would be impossible for any UCB to perfectly match all inflows and all

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out flows at all the time. The Regulator therefore, has directed the UCBs to
use the tool of ‘GAP ANALYSIS’ for the purpose.\textsuperscript{44} In this UCBs would be
able to know to what extent there is mismatch in inflows and outflows of
funds in particular time bucket. Once this position is assessed then it would
be easier for UCBs to keep it at minimum level.

However, the Regulator has specifically directed that under no
circumstances it should exceed 20%. In case, if it exceeds 20 per cent then
the matter has to be reported immediately to the Regulator with
rectification plan approved by the Board of Directors.\textsuperscript{45}

5. **Risk of Capital Inadequacy:**

Banking is one of the business activities where Capital Gearing ratio is very
high. UCBs undertake much higher business turnover as compared to the
capital employed. There is always a possibility that small mistake in
judgment could result in wiping out the entire capital base of these UCBs.
The Regulators all over the world have now become more serious to this
subject. With the recommendations of Bank for International Settlement
(BIS) Regulators all over the world are now pushing the banks to enlarge
their capital base.

In India, the Reserve Bank of India has also enhanced this ratio from 7% to
9% in last few years. It is expected in the Risk Management policy that the
Board of Directors of UCBs allocate adequate capital for each and every

\textsuperscript{44} R.B.I. directive circular no. RBI/2008-09/175, UBD.PCB.Cir. No. 13/12.05.001/2008-09, Dated
17\textsuperscript{th} September 2008, p.2.

\textsuperscript{45} R.B.I. directive circular no. POT.SUCB.CIR.9/09.120.00/2001-02 Dated 2\textsuperscript{nd} April 2002, p. 1 to
22.
risk that is identified. The allocation of capital for particular risk would vary from bank to bank and would largely depend on the ‘Risk Return perspective’ of that particular bank. However, as a whole the Regulator has stipulated capital adequacy at 9%. It is not easy to meet these norms. Many banks from nationalized sector depend on budgetary allocation by the Government of India for this purpose as the Government of India is the largest shareholder in these banks. UCBs are finding it difficult because the shareholders of these UCBs are common civilians. However, the Regulator has taken very serious view in this matter and has been down grading UCBs if any bank fails to achieve stipulated capital adequacy. Down gradation of UCBs exposes to the risk of loss of Goodwill which ultimately results in loss of confidence.

In short, it is the responsibility of Board of Directors to ensure that while they expect these UCBs to grow by size they should ensure that adequate level of capital is always maintained as stipulated by the Regulator.

6. **Risks related to the Foreign Exchange:**

Foreign Exchange Department is very important department for any bank. It is seen that the banks who run Foreign Exchange department efficiently reports higher profits. In the Urban co-operative banking sector there are very few banks that are granted full fledged license called ‘AUTHORISED DEALER’. The Reserve Bank of India is very particular about granting of this license as the business of foreign exchange is reckoned as high risk business. Some of the risks associated with foreign exchange business are:
a. Risk of Exchange Rate Volatility:

The banks having license as Authorized Dealer are permitted to undertake all transactions related to the Foreign Exchange. There are many currencies in the world. Except the Europe where the Euro is now common currency, in rest part of the world each nation has its own currency. Some currencies are partially convertible and some are fully convertible. Till EURO came in existence, US$ was the major currency in which most of transactions were done in the world. The parity between the currency of particular country and US$ is influenced by many factors. In short, the conversion rate at which that particular currency would be converted in to US$ depend on market forces. Therefore, this rate of conversion is dynamic.

In today’s technologically integrated world the volatility between the conversion rate has increased in a big way. Incidence took place in one country could affect other country negatively. Further, the transaction that involves cross currencies becomes very complicated. Even in the event of the trade which has taken place between India and Japan it is to be settled in US$. It means the parties to the transactions will have to consider the movements in changes between Indian Rupee and US$ as well as Japanese Yen and US$.

It would be worth mentioning that some the large international financial agencies may become victim of the exchange rate volatility in recent time.
b. Risk of Open Position of Currency:

Banks having license category of ‘AUTHORIZED DEALER’ are supposed to maintain currency of all countries. The nation wise and currency wise limits are approved by the Reserve Bank of India while granting license. Maintaining physical currency of other countries is very risky. Due to the change in the conversion rate with Indian Rupee the valuation of these currencies could get impacted overnight. If the movement is favorable the bank might get advantage but if it is unfavorable then the bank might lose money overnight. To minimize these types of risks the banks should always get themselves adequately hedged.\textsuperscript{46}

The Regulator expects that the UCBs should design and develop hedging systems and should clearly document it through Risk Management Policy.

Risks related to Technologies:

Increased use of latest technology and high degree of computerization has changed the face of Indian banking system after 1992. Undoubtedly, these technologies have improved customer service offered by the banks but it has also exposed the banks to various related risks. Private sector banks and foreign sector banks operate on Centralized Data system. This means that there is only one server in which transactions punched all over the bank are stored. This system is also called as Centralized Banking Solution. Various branches and departments irrespective of their locations are attached to one common server. There are some advantages and disadvantages of it. Banks

\textsuperscript{46} Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2\textsuperscript{nd} ed., p. 165.
from nationalized sector are now slowly shifting to this. UCBs are lagging behind in this regard due to inadequate capital and lack of expertise. These banks are operating on Distributed Data Base system. It means, the computers at particular location are attached to the server of that location. Each Branch and Department has separate server. The data punched at branch or department will be stored at server placed at branch or department. In this case, compilation of information becomes very difficult. Whenever the data is asked by Head Office, it is copied on some external device and forwarded to Head Office. Many UCBs are following this practice as it is cheap option of computerization. Some of the risks related to the technology and computerization could be stated as under:

a. **Risk of System Failure:**

Many times it is observed that system fails due to various reasons. Sometimes it is related to computer such as speed, capacity, compatibility with other devices, software problems etc. Sometimes it is related to the connectivity such as overburdened centralized server, poor telephone lines etc. Non availability of centralized server literally stops all functioning at concern branch or department. This creates anger among the customers who needs urgent service and spoils image of the UCB.

b. **Risk of Incorrect programming and data input:**

Computerized system follows the chain or orders as per the designed program. These programs are usually designed by people who possess the knowledge of software designing but not necessarily possess banking knowledge. This creates lot of problems. If there is mistake in the basic designing of program obviously the result would be wrong. Similarly, when the data itself is wrong obviously the result would be
wrong. Board of Directors of the UCBs therefore, should get the programs duly certified by some system auditor who is Chartered Accountant by profession.

c. **Risk of Fast Changing Technology:**

This is major problem observed in UCBs. Basically, the Members of the Board do not possess the technical knowledge and the speed at which technology changes is very high. Further, there is constraint of capital. All these factors together expose these banks to technological risks. Many times the Board of Directors collect the information about the technology used by other banks in that area and blindly follows it. The Board of Directors therefore, should appoint expert agency and ask them to recommend technological platform and software to be used after detail discussion about their ideas and UCBs future requirement.

7. **Risks related with Staff Members:**

Banking is a service industry. Services offered by various banks are same in nature. Therefore, good customer service is the main criterion for the customer for selecting a particular UCB. The role of staff members plays very important role in developing any UCB. These human assets are very sensitive to job satisfaction and salary package. Some of the risks related to staff members could be as under:

a. **Risk of Frauds:**

One of the basic reasons for frauds in UCBs is non existence of efficient internal control systems. In many of the UCBs systems and
procedures are lacking. Incidence of fraud results in financial loss to UCBs and spoils the image also. Detailed job card or Manual of Instructions could act as protection.

b. **Risk of Inadequate Staff:**

Many times it is observed that UCBs are under staffed. The misconception is minimum the staff, minimum is the pay bill. Inadequate staff number puts additional pressure on present staff members. Under these circumstances the staff members either commit mistakes or unable to render good quality customer services. This spoils reputation of UCB in long run.

c. **Risk of Lack of Expertise:**

Treasury Department, Foreign Exchange Department, Technology Department are some of the important departments in the UCBs that needs expertise in the respective field. The pay scales offered by the UCBs are low as compared to the average of banking industry. This is one of the reasons why the experts shy away from these banks. Further, the freedom to work and job satisfaction is the other reasons that the Board of Directors should consider. However, leading UCBs are taking care of these problems by designing suitable ‘Staff Policy’.

8. **Administrative Risks:**

The Board of Directors of UCBs are elected by the shareholders of the bank. These Directors are usually respected individuals in the area of operation of UCBs. They need not be professionals or having
commerce background. In 2002, the Regulator issued directive to have at least two expert Directors having degree of Chartered Accountant or having experience as practical banker. Therefore, the role of Administration becomes very important in actual running of bank. Some of the risks related with the Administration are as follows:

a. **Risk of Exceeding Delegated Powers:**

To survive in competitive environment, some UCBs have delegated powers to the administration for various purposes. This move is very good. However, it is very important to design internal control system to check and control the actual utilization of all these delegated powers. In the absence of such system it is likely that some of the administrative staff members might misuse the delegated powers.

b. **Risk of incorrect handling of Information and Technology:**

If the internal control system is not efficient then there is always a chance of misusing the information for personal benefits. Same is also applicable to the technology. Most of the UCBs are now using computers. It is general tendency to assume that the computerized work is correct. Very few people cross check the actual output manually. Hence, there is always possibility of incorrect handling of information and technology. The option available with the Board of Directors is control these risks by designing equally strong internal control system of supervision.

These are some of the examples of direct risks to which UCBs are exposed. These risks are called as direct risk because the Board of Directors of UCBs could control
it by framing various policies, implementing various procedures, initiating various internal control systems etc. It is expected in the Risk Management that UCBs should have overall ‘Risk Management Policy’ in place and all systems and procedures should form part of it.

2.5.2 Types of Indirect Risks:

An indirect risk means the risk that cannot be managed by the Board of Directors of UCBs. These types of risks are beyond the control of the Board of Directors.

All entities engaged in the business activities are to face it. Though there is not much in the hands of management of individual organizations, a brief mention of all these risks is given as under.

1. **Risk of Change in Regulatory Authority:**

Decisions related to the economy are taken by the respective Government of that country. As the Government changes it is likely that the thinking might also change. This change in the regulatory authority exposes the organizations to the risk. Banks have no role to play in this regard.

2. **Risk of Change in Laws:**

Many times the changes in the law affect the business organizations in the country. Earlier the Indian economy was protected one. Hence manufacturing of lot of items was reserved for the small Scale Industries. For example, activity to manufacture small pumps was in protected list for the Small Scale Industries but the Government changed its policies and placed these pumps in
‘Open General’ category. Because of this change in law, the traders in India started importing pumps from China. The small pumps manufacturers in India were exposed to the risk overnight.

3. **Risk of Natural Calamities:**

Floods, excessive rainfall, draught conditions, tsunamis, earthquakes are some of the natural calamities. Such calamities disturb the business environment in that area. These conditions are beyond the control of Board of Directors of any business organization.

4. **Risk of War:**

Like natural calamities war also disturbs the business environment in big way. The recent war between Pakistan and India on Kargil front is good example. Though for the rest of world it was a local war, the trade between India and Pakistan affected because of it.

5. **Risk of Country Rating:**

The international rating of the country is very important. Inflow of foreign funds depends on this rating. Especially, in case of developing economies these inflows of funds are very important as they help country to develop. Recently, the Moody’s have shown concern over growing fiscal deficit in India and has expressed its intension to down grade the country from Stable to Negative. If it happens really, then India would find it very difficult to get low cost foreign funds and its growth would be affected.
6. **Risk of Geographical Position:**

Some countries or some part of a country becomes riskier because of its geographical position. Business organizations have to consider the risk associated with these parts of the world. For example, Bermuda Triangle, lot of Planes and ships have disappeared in this geographical location, but not every time. Konkan Railway of Maharashtra State is another example of it. In rainy reason traveling in Konkan area exposes the travelers to the risk of landslides but again not every time. These are some of the indirect risks that every business organization has to keep in mind. Although they can do very little about it and these matters are out of control of its management, it is fact that the business organization is exposed to these risks.

2.6 **ASSET-LIABILITY COMMITTEE**

2.6.1 Under the changed business environment Asset-Liability Management and Risk Management have become very important for the survival of UCBs. Both these functions need an ongoing supervision. For this purpose as per R.B.I. directives a separate committee is formed in UCBs 47. In banking terminology it is popularly called as ‘ALCO’.

2.6.2 **Objectives of Asset-Liability Committee:**

The objectives of Asset-Liability Committee are as under: 48

48 Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2nd ed., p. 103.
1. To maintain good balance among interest spread, profitability and long term viability.

2. To make business decisions on a dynamic and integrated risk management system and process, driven by corporate strategy.

3. To use this tool initially for enforcing Risk Management discipline.

4. To plan the Balance Sheet from the ‘Risk Return Perspective’.

5. To reduce the mismatch or to keep the mismatch within the tolerance limit.

6. To Predict interest rate scenarios and accordingly arrange for working capital at minimum cost.

2.6.2.1 At macro level, Asset-Liability Management leads to the formulation of critical business policies, efficient allocation of capital and designing of products with appropriate pricing strategies. And at micro level, the objectives of Asset-Liability Management are two folds. It aims at profitability through price matching while ensuring liquidity by means of maturity matching.

2.6.3 Composition of Asset-Liability Committee:

The Regulator has very specifically mentioned in its directives that the size (number of members) of ALCO would depend on the size of each UCB, level of business and organizational structure. To ensure commitment of Top Management and timely response to the market dynamics, the CEO or the Secretary should head the committee. The Chief of Investment / Treasury department including Forex, Credit, Planning etc. can be member of the committee. In addition, Head of the Information technology Division, if a separate division exists should also be invitees for building up of Management Information System (MIS) and related IT
network. UCBs may at their discretion even have sub committees and support groups.  

2.6.4 Meetings of Asset-Liability Committee:

Like any other subcommittee the meeting of ALCO should be called once a month. Due notice of it should be given. Agenda of it should be circulated. Minutes of the meeting should be recorded in separate minute book and should be confirmed in the next meeting.

2.6.5 Expectations from Asset-Liability Committee:

The agenda for the meeting of ALCO should be prepared in such a way to cover following subjects. The expectations are:

1. To manage the mismatch in flow of funds in various time buckets and try to keep it in tolerance level.
2. To ensure that the interest spread is always maintained.
3. To ensure that the statutory compliance is done.
4. To study the interest rate changes in the money market.
5. To study assess and manage the liquidity.
6. To ensure rate of return.
7. To ensure that the financial position of the bank is sound.
8. To study and find new ways to improve the profitability of the bank.
9. To design and develop various systems and procedures.
10. To rectify the deficiencies in the various systems and procedures.
11. To take annual review of the Risk Management policy.

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50 Umesh Inamdar, Jindagi-Deyata Vyavasthapan Aani Jokhim Vyavasthapan, 2nd ed., p. 119.
12. To ensure that the Risk Management functions is being carried out efficiently at various levels through the ‘Risk Management Group’.

2.7 Risk Management: a function:

Today, the Risk Management has evolved as more scientific approach for managing various risks. UCBs are presently exposed to many direct and indirect risks. The long term viability depends on the effective Risk Management. The ALCO through the Risk Management Group should undertake this function. The framing of main ‘Risk Management Policy’ for the bank is the priority for UCBs. This ‘Risk Management Policy’ document should take care of each and every direct risk faced by the UCB. The policy document should have enough clarity and no overlapping. The purpose of this policy document is to develop mechanism that UCBs would not be exposed to any risk. If in case, it is exposed to any of the risks, the administration should have clear guidelines for the actions to be taken. This being very important policy document it should be drafted very carefully and skillfully. The policy should contain clear and specific instructions for each of the risk and should be drafted on following stages to make the function more meaningful.

a. Identification of Risk:

The first stage is to identify the risk associated with activity of business. The ALCO should study all the risks associated with the business of banking and should clearly mention it in the policy. The location of the Bank and its area of operation, Business volume, Type of business undertaken are some of the important factors that ALCO should consider while identifying various risks.
b. **Measurement of Risk:**

The next logical stage would be measuring the intensity of the risks. The ALCO should design and develop method for measuring various risks as identified in earlier stage. Various formats as recommended by the Regulator such as ‘Structural Liquidity Statement’, ‘Gap Analysis’ etc would help the ALCO in measuring the risks.\(^{51}\)

c. **Management of Risk:**

The third logical stage would be management of risk. The ALCO should design and develop such systems and procedure that would act as a tool in managing various risks. For example, Drafting of Investment policy would be a sub policy of main Risk Management Policy. The Investment policy would take care of managing all risks arising out of function of Investment. Similarly, Advances policy or Loan Rules would guide staff members working at branch level for better management of risks arising out of function of lending.

d. **Immunization of Risk:**

The fourth and last stage of would be immunization of risk. The ALCO should on an ongoing basis to study the deficiencies noticed in earlier policies and should make necessary changes immediately. No bank would be 100% successful in managing risks all the times. As the banking scenario is very dynamic, ongoing supervision and changes are required. The ALCO by acting in this direction would succeed in immunizing the bank for future.

\(^{51}\) R.B.I. directive circular no. POT.SUCB.CIR.9/09.120.00/2001-02 Dated 2nd April 2002, p. 16.
2.8. Pricing of Product:

2.8.1 Present Scenario:

2.8.1.1 The growing rate of failure of UCBs especially, after the deregulation of interest rate by the Reserve Bank of India, indicates the concern over pricing of product by these banks. Earlier, in the study we have seen that prior to 1992 when the Regulator was administering the maximum interest rate and after 1992 till the concept of Prime Lending rate came to existence, the Regulator was administering minimum rate, the rate of failure of UCBs was not alarming. It has also been seen that almost 30 UCBs were delicensed by the Regulator in last 19 months (from 01.07.2007 to 31.01.2009) and various reasons assigned by the failed UCBs are unacceptable. One of the likely reasons that failed UCBs do not refer to could be its policy to price the products of advances and deposits. The Regulator has also cautioned the Tier – II Small UCBs about the unscientific or ad-hoc pricing of products. Therefore, it needs to understand how the pricing of product is done in UCBs.

2.8.1.2 The concept of ‘Social Banking’ followed by these UCBs earlier has now changed. These UCBs have now realized that banks being financial organization need to earn profit. The profit is needed for long term viability, survival and growth. During the interviews and discussions with office bearers of selected UCBs it is observed that these banks are still in confused state of mind as far as the pricing of product is concerned. The scenario is similar to that in 1999 when it happened with the nationalized sector banks. It is the expectation of the Regulator that these banks should react immediately to Regulator’s policy directives and make necessary changes in the interest rate structure. It is observed that in 1999 after the announcement of credit policy by the Regulator, banks from nationalized sector used to wait till announcement of interest rate changes is made by the State.

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Bank of India. On the next day all other banks from nationalized sector announced their changes in the rate of interest. This episode continued for more than one year because these banks were not confident about their pricing of products. In other words many of the nationalized sector banks used to copy the structure of interest rate of the State Bank of India by making small changes here and there. Over the period, other banks realized that the quarterly profits reported by the State Bank of India were far more and this forced other nationalized sector banks to have re-look at their pricing mechanism. The UCBs are presently going through the similar conditions. Due to lack of expertise and non availability of proven Asset-Liability Management system in place, many of the UCBs are just following the interest rate structure offered by other banks of similar size in the locality. There is no scientific approach or logical working of the pricing of products. It is unfortunate fact that many of the small UCBs in rural area were not knowing cost of funds till 2002, when the Registrar of Co-operative Societies of Government of Maharashtra made it mandatory to mention it in the Annual Report. The Board of Directors of these UCBs are not professionals and many times they get surprised that with the similar structure of rate of interest how the competitor UCBs of similar size have reported higher or lower profits? These UCBs are now slowly realizing that just copying the rate of interest of similar size UCBs in the area would not be sufficient to take care of this aspect. Neither the management nor the administrations have required skills and courage to declare its own interest rate structure and stick to it. It is high time that these UCBs should switch from this copying method to more scientific or logical method, keeping aside the fear of losing business in the competitive environment. These UCBs should give preference to what interest rates their bank can afford.

2.8.2 Factor influencing Pricing of Products:

2.8.2.1 Pricing of products is a very complex function. It needs to consider several factors. The pricing of products used for collecting working capital funds (basically deposits) would depend largely on the position of demand and supply of
money. If the bank wants to collect funds it has to price these products at the rate prevailing in the competitive market. The target of the bank should be to collect working capital funds at the lowest cost possible. Though, the price of fund depends on the demand and supply position in the market, the combination or mix based on type, time and volume are the three main factors that influence overall cost of fund for the bank. Whereas, the pricing of the products used for lending would largely depend on ‘cost of fund’. This makes the prediction of interest rate scenario more important in the entire process of pricing of products.

2.8.2.2 The factors that influence the pricing of product are: 53

1. **Cost of deployable funds:**

The large component of the working capital of UCBs comes by way of deposits accepted. The deposits of UCBs could be classified into three categories. A. Current Deposits B. Saving Deposits and C. Term Deposits. Out of these, current deposit comes to the bank absolutely free of cost. UCBs do not pay any interest on these current deposits due to its nature. The depositor can any time withdraw the balance available in the Current Account. The rate of interest on the Savings deposits is administered in India. The present rate is at 3.50%. Technically speaking these two types of deposits form ‘CASA’ deposits. The cost of funds associated with ‘CASA’ is very low. Now day’s managements of all banks insist in increasing this ‘CASA’ component in total deposits of the UCBs. The rate of interest to be paid on the Term Deposit is totally deregulated. The powers to decide the rate of interest is vested with the Board of Directors. The cost at which UCBs raise these term deposits is very crucial in determining the overall pricing of product. Time and Volume are the two important aspects of these deposits. The overall cost of deposit come down if the ‘CASA’ component

is more. Cost of funds represents the rate at which the UCB have raised their deposits. Obviously, lower the cost of fund means lower the price of various advances. This could result in getting good quality borrowers and survival of UCBs in competitive environment.

Further, the deployable funds get reduced to the extent of ‘Cash Reserve Ratio’. This is statutory ratio and attracts no interest. The cost of deployable funds increases to that extent. Similarly, ‘Statutory Liquidity Ratio’ is another mandatory ratio. To ensure liquidity position of the banks the regulator stipulates it. The banks can invest amount equivalent to ‘Statutory Liquidity ratio’ in form of Government Dated Securities and other approved trustee securities.

The balances maintained in the Current Account with other approved banks are also considered for this purpose. This type of investment attracts low interest and the cost of deployable funds goes up to that extent.

The UCBs are now aware of these factors and have started giving due importance to it at the time of pricing of various products.

2. **Operating Expenses:**

Operating expenses indicates the cost incurred for running the UCB. It includes variable cost and fixed cost. The most important factor of variable costs is interest paid on deposits and other includes administrative expenses such as postage, telephones, electricity, advertisement etc. Whereas the fixed cost includes Salaries and allowances paid to the employees, rent for the premises, depreciation etc. Lower operating cost helps the management
of banks to keep the cost of fund low. These costs need to be recovered through pricing of products.

3. **Loss probabilities:**

UCBs are known as risk taking agencies because of its nature of business. Lot of uncertainties is associated with the lending and investment functions. With the introduction of ‘Income Recognition and Asset Classification norms’, the banks are now required to classify the Non Performing Assets. UCBs are not allowed to charge the interest to non performing asset and at the same time they are required to make adequate provision depending upon the age of the non performing assets out of remaining profit. This affects the banks in two ways. Therefore, the volume of Non Performing Assets plays very important role in deciding the cost of funds. Obviously, higher the amount of Non Performing Assets higher is the cost of funds. Similarly, with introduction of ‘Marked to Market’ concept for the investment portfolio, the banks are now required to make provision for the depreciation in the value of investment portfolio. This further brings down the profit for the year and upsets the budgets. The UCBs should consider these costs while pricing their products.

4. **Capital charge:**

It is observed that cost of Share Capital, Reserves and Surplus are generally neglected by the UCBs while pricing the products. However, it is important for these UCBs to keep in mind that no funds come to bank without the cost. Share Capital is provided by the shareholders with expectation of dividend returns. Reserve and Surplus are created out of net profits earned by the UCBs in earlier years. In other words, it is the undistributed component of profits or ploughing back of capital to that extent by the
shareholders. Hence, it carries the cost equivalent to the dividend. These costs needs to be considered for the purpose of calculation of cost of funds and needs to be recovered through pricing of products.

It would be worth mentioning here that cost of funds should be corresponding to the term for which it is deployed. This is because five year funds may have a different cost than one year fund due to time value of money.

2.9 Profit Planning:

2.9.1 Background:

In the year 1969 the then Government of India Nationalized 14 leading private banks in the country. The then government wanted to channelize its many schemes of ‘social welfare’ through these banks. In this period the bankers were doing exercise of ‘Performance Budgeting’. The performance of these banks were judged on the basis of growth in business i.e. deposits + advances and the number of branches. The objective behind this was more the number of branches, more is the reach of the bank and obviously, more utility of the bank for implementing government aided schemes of ‘social welfare’. The government being the largest shareholder in these banks was never interested in knowing whether the branches are in profits? The Break Even Point (BEP) of the branch was never worked out and the business targets were restricted only to deposits and advances. Due to this the focus of these banks was more on ‘Social Banking’ than the profit earning. This dilemma continued till 1990s. However, with the opening of economy and entry of private sector banks and foreign sector banks the focus of these nationalized sector banks once again stared shifting to profit. With the introduction of new capital adequacy norms and the inability of the government to pump in

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additional money as capital (being the largest shareholder) in all these banks also forced these banks to focus more on the profit.

2.9.1.2 Urban Co-operative banking since beginning was never profit focused activity. In fact, it was expected that these banks should function on the basis of ‘No Profit - No Loss’. These UCBs were never managed on the line of commercial banks. Due to this, these UCBs were not interested in drawing long term plans, yearly budgets, setting up business targets, monitoring the profit etc. However, with the liberalization process initiated in 1990s these banks also felt the need to earn profit. These UCBs also realized that if they were to survive in new competitive environment they will have to change the thinking and will have to focus on profit.

2.9.2 Important Factors of Profit Planning:

Fortunately, UCBs have now realized that they are also commercial organizations. They have to earn profits and provide good returns to the equity holders. Planning of profit itself is a big exercise. Profit is a measure of performance of the bank. It is the sign of vitality and success in competitive scenario. It not only ensures survival but also growth and long term viability. Once the cost of deployable funds is arrived after considering all factors then the bankers would have add its profit margin as planned by the Management to arrive at Pricing of products of advances. This would ensure the profit earned during the process of pricing of products.

The profit planning could be done by taking necessary steps on the both sides of Profit and Loss Account. The profit could be maximized by two ways i.e. by increasing ‘Income side’ and by reducing ‘Expenses side’.

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The first part which deals with Income side includes three variables as under:
   a. Interest income
   b. Fee based income
   c. Other income

And the second part that deals with Expenses side includes four variables as under:
   a. Interest expenses
   b. Staff expenses
   c. Other operating expenses
   d. Provisioning

Therefore, these seven variables need attention in profit planning. Maximization of first three variables and minimization of the last four variables are requisites to maximize profits. Interestingly, all these factors are interrelated and achieving the optimum level is a challenge.

**Part - I**

**a. Increasing Interest Income:**

The interest received on advances and investment is the main source of income for UCB. It is the outcome of lending and investment function. Therefore, it depends on how efficiently banks are performing these two functions. Prima facie, it appears that bank could increase the interest income simply by increasing interest rates on advances based products or investing money in instruments carrying higher interest rates. But in practical banking it is not so easy. With the introduction of ‘Income Recognition and Asset Classification’ norms, banks are always exposed to the quality of its advances portfolio and investment portfolio. The UCBs face this risk in larger degree as their rate of interest on advances is high. Due to this the borrower who’s Financial Position is not strong come to these banks and the chances of these borrowers becoming defaults increases. Similarly,
due to lack of expertise and lack of operational access to Mumbai (financial capital of the country), the instruments in which these banks invest money, carry higher risk of default. Therefore, these banks should develop the skills to increase interest income by balancing between the interest earnings and maintenance of quality of assets.

b. Fee based Income:

Other banks are strong in enhancing their income from fee based activities. The UCBs are lagging much behind in this area. Fee based income is basically generated from non fund based advances and new technology driven products. Bank Guarantees and Letter of Credit are some of the examples of non fund based advances. The Bank Guarantees and Letters of Credit are issued by the small UCBs are not accepted by other leading banks as these UCBs are financially not strong and their presence is restricted to only local areas. Similarly, new technology driven products need higher capital investment which these banks always starve. These banks are not capable of issuing own credit / debit cards, ATM cards, Electronic transfer of Funds etc. Banks charge fees to the customers for providing these technology driven services. The UCBs by having tie up arrangements with bigger banks could provide these types of services to their customers and could also share the fees.

c. Other income:

Traditionally, Commission and Exchange earned by banks used to be accounted under this head. However, traditional products such as issuance of demand drafts, telegraphic transfer of funds, collection of bills etc. do not have any relevance in today’s technology driven banking. These products have become outdated. However, other income is still one of the important factors because of trading activities undertaken by the banks. Trading in Government and other approved
securities generates substantial revenues for banks. Cross selling of products of
other institutions is also another area. Now day’s banks are using its network of
branches and customer base for cross selling of related products such as products
of Insurance companies, products of Mutual funds etc. The UCBs need to give
serious thought and work on these lines to improve profits. All these three
variables are connected to the income side of the Profit and Loss Account of Bank
and need lot of attention while planning profits.

Part – II

a. **Interest expenses:**

Interest paid is the most sizable item on the expenses side of Profit and Loss
Account. It is very important for UCBs to price their deposit products in such
way that the cost of it would be lower. The UCBs should attempt to bring down
the cost of deposits by increasing its ‘CASA’ deposits. Further, the unscientific
and ad-hoc pricing of the term deposits should be avoided. Therefore, the
payment of interest on the various schemes of deposits used for garnering the
working capital becomes very important factor for profit planning.

b. **Staff expenses:**

This is another sizable item on the expenses side of Profit and Loss Account.
Expenses made by the bank on salaries and allowances should be linked with
working capital of the bank. The UCBs should consider this factor very
seriously because they are caught in vicious circle. Time and again it has been
argued that these banks are unable to employ qualified and skilled staff
members that results in poor customer services to the customers and denial of

56 R.B.I. directive circular no. RBI/2008-09/175, UBD.PCB.Cir. No. 13/12.05.001/2008-09, Dated 17th
higher earnings from specialized departments such as Treasury, Foreign Exchange and Computer etc. However, management of these banks claim that they are unable to employ qualified and skill staff members because they do not have adequate profit. Therefore, UCBs should design such human resource development policy which would provide incentives such as fast promotions, additional increments etc. to the employees working in specialized departments. The cost of these specialized employees should be compared with the contribution in profit made by these specialized employees.

c. **Other operating expenses:**

Controlling of cost always plays important role in planning profits. These other operating expenses include depreciation, rent, utilities, legal expenses, traveling expenses, postage, telecommunication charges, stationery etc. However, it should be always kept in mind that over squeezing of operating expenses or over controlling of these items put the reputation of the bank at stake. For example, controlling of electricity bills is a good idea. Switching off electrical instruments when not needed helps in controlling costs but providing inadequate lighting arrangement during the working hours results in spoiling image of the bank. It would be worth mentioning that studies on this subject has proved that controlling operating expenses definitely helps in improving profits but its contribution to the total profits is always very low. Hence, preference should be given to increase income than controlling operating expenses.

d. **Provisioning:**

The UCBs are required to make various provisions. Some provisions are mandatory whereas some are non statutory and made by the bankers as prudence. Mandatory provisions such as provision for standard assets,
provision for non performing assets, provision for depreciation in the market value of investment etc. are related with the performance of the bank. These provisions affect the net profit of the bank for that particular year but these provisions also helps the bank in building strong financial position which is required for long term viability. Considering the nature of business of banks the regulator has directed these banks to make provision for standard assets also. This provision is made for the purpose of some unseen risks. Though the quality of assets are good still banks are required to make this provision at the rate of 0.40 per cent. However, provision for the Non Performing Asset and Provision for depreciation in the market value of investments represents the misjudgment by the bank. Higher the amount of these provisions means higher the degree of misjudgment. Therefore, proper assessment or scrutiny of the advances proposals and proper forecast of interest rate scenario is needed to reduce these provisions. Though there is no financial outflow on account of these provisions they become important for profit planning because it affects the distributable funds of shareholders in that particular year. It also affects the goodwill of the bank. Other provisions such as transfer to Reserve Fund, Building Fund etc. are not directly linked with the performance of the bank. While planning profit of the bank UCBs need to consider all these provisions.

2.10 Risk – Return Perspective:

While planning profit banks would have to consider the ‘Risk – Return perspective’ also. Profit planning in a bank essentially involves Balance Sheet Management. Covering advances, investment and non fund based income. The bank’s income generally arises from three sources viz. interest income on advances and investments, fee based income and other income. Interest income on advances is generated by taking various risks related to the lending. Similarly, interest income on investments is generated by treasury by taking various risks related to the investments. Fee based income represents income derived from off balance sheet items and technology driven products. However, these non fund based
activities could result in fund based activities if default is made by the borrower. In addition, risk would have a cost also. Therefore, comparing the return on lending / investment may not lead to a correct conclusion as risks associated with these functions may differ. It would be desirable to account for risk as well. Returns net of risk would be proper basis of comparing parameter. In other words, the cost of risk associated with any transaction is to be netted out against the return from it. This approach is called ‘Risk Adjusted Return on Capital’ (RAROC).\(^{57}\) The UCBs should therefore keep in mind that this ‘Risk Adjusted Return on Capital’ needs to be improved while planning profits. Higher the RAROC, higher is the reward to the investors/shareholders. Both the capital requirements and RAROC are risk dependent, risk management and play a critical role in the management of Banks. This is the area where lots of small UCBs are lagging behind. Presently, it would depend on the individual Board of Directors to decide what type of risks they would like to take? and at what cost? Accordingly, they would have to minimize or maximize the composition of portfolios. However, this planning of portfolios should be done after assessing the level of risk of the bank.

2.11 Formula for profitability calculations:

The Regulator has also directed small UCBs to follow more logical and scientific way while pricing its products. However, it has not recommended any formula for it\(^ {58}\). The reason for it could be non availability of any such standard formula for the purpose. There could not be a common formula for this purpose because of the difference in the business mix, area of operations, level of computerization, availability of skills and expertise etc. of these banks.

\(^{57}\) Risk Management, Indian Institute of Banking and Finance, Macmilln, 2005, p. 112.

\(^{58}\) R.B.I. directive circular no. RBI/2008-09/175, UBD.PCB.Cir. No. 13/12.05.001/2008-09, Dated 17th September 2008, p1.
Following are some of the formula that are being used by the different bankers in practice as guiding principles as they consist of some deficiencies.

1. Dr. Varsha Varde and Dr. Sampat Pal Singh in their paper in 1983 on the topic of Profitability of Commercial Banks’ have presented at the National Institute of Bank Management, Pune,\(^{59}\) proposed following framework:

\[
P = S - B
\]

Where \(S\) = Total Spread  
\(B\) = Total Burden.

2. Mr. D.Ghosh Roy has further split the \(S\) and \(B\) as mentioned above.

\[
S = R - K
\]

and

\[
B = (M + O) - C
\]

Where \(R\) = Total interest earned  
\(K\) = Total interest paid  
\(M\) = Total Manpower Expenses  
\(O\) = Total operational expenses  
\(C\) = Total non interest income.

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He has tried to establish the formula as under:

\[ P = ( R - K ) - (( M + O ) - C ) \]  \hspace{1cm} \text{----------------------------- (3)}

The absolute measure in equation (1) can, therefore be, converted into relative measures by dividing throughout by V i.e. the sum total of assets and liabilities of a bank (working funds). He has arrived at following equation:

\[ P = ( r - k ) - [( m + o ) - c ] \]  \hspace{1cm} \text{----------------------------- (4)}

The m has been broken up further into two ratios m1 and m2, where m1 represents manpower expenses per employee, such that m = m1/m2. If m2 increases i.e. by increasing the volume of working funds per employee, m declines.\(^60\) This framework has been helpful to banks in formulating long term planning exercise. The same framework can be made applicable at the branch level.

3. On the other hand the Indian Institute of Banking and Finance has given more importance to the Net Interest Income (NII) and Net Interest Margin (NIM).

The authors have proposed the calculation in the following manner:

1. Net Interest Income (NII) has to be arrived for assessing the impact of volatility on the short term profit. In order to stabilize short term profits, UCBs have to minimize fluctuations in the NII.

\(^{60}\) Bank Branch as Profit Centre, D. Ghosh Roy, BDP Publishers, 1997, p. 11.
Net Interest Income = Interest income – interest expenses.\textsuperscript{61}

2. Net Interest Margin (NIM) is to be arrived as under for ensuring margin.
Net Interest Income is to be divided by average total assets for the purpose.

Net Interest Margin = Net interest income / average total assets.\textsuperscript{62}

The net income of banks comes mostly from spread maintained between total interest income and total interest expenses. The higher the spread the more will be the NIM. There exist a direct correlation between risk and return. As a result, greater spreads only imply enhanced risk exposure. But since banking is conducted with the objective of making profits, achieving higher profitability is the target. Therefore, it is the management of risks that holds key to the success and not risk elimination.

\textbf{2.12 Interest Rate Sensitivity:}

2.12.1 Amount wise the major items on the liability side of the balance sheet are ‘Deposits’ and in some cases ‘Borrowings’. Similarly, on the assets side, amount wise major items are ‘Advances’ and ‘Investments’. It is observed that amount wise 80\% to 90\% of the total of the balance sheet consists of these items. Interesting characteristic of all these items is they are rate sensitive. Therefore, the balance sheet of the bank automatically becomes very sensitive to the change in the interest rates. If the changes are in favor of the bank, the bank would be immensely benefitted. However, if the changes are unfavorable then the bank might suffer heavy losses. As on date the interest rates in India are deregulated to certain extent. Interest rates on Savings Bank deposits, Interest rates on advances schemes which


get budgetary support in form of subsidy etc are still administered by the regulator in India. Whereas interest rates on term deposits, borrowings, advances and investments are deregulated to the larger extent. Due to this the balance sheet of the bank is always exposed to the Interest Rate Risk (IRR).

2.12.2 The changes in the interest rates affect the bank in larger way. The immediate impact of changes in interest rates is on bank’s profit by changing its Net Interest Income (NII) or Net Interest Margin (NIM). 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. Interest rate risk when viewed from these two perspectives is known as ‘earning perspective’ and ‘economic value perspective’, respectively. 63

2.12.3 Due to increased use of advance technology in the field of communication the physical distance between the countries has become meaningless. The entire world has become very small place and the reaction to the decision of change in the interest rate structure of any country is immediately responded by the others. This has further added fuel in the Interest Rate Risk. Proposed interest rate change by the Federal Reserve of USA or European Central Bank is carefully watched by all the countries and reaction to it is also very swift. Interest rates in India are also subject to the global changes in the interest rate. World over the interest rates are decided by the market based on the position of demand and supply. Thus, the banks in India needs to keep close watch on the interest rates prevailing in the different parts of the world and fast enough to calculate its impact on the bank. Due to this the IRR has become very important risk in the banking industry worldwide.

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2.12.4 In the context of poor MIS, slow pace of computerization and absence of total deregulation of Interest Rates the regulator in India has prescribed the traditional tool of ‘Gap Analysis’ to the UCBs to counter the IRR in the beginning. The regulator has permitted the UCBs to use advance modules if they want. However, as on date the returns which are required to be submitted to the regulator are in form of Gap Analysis.

2.12.5 The Gap or Mismatch 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. The regulator has asked the UCBs to classify an asset or liability as rate sensitive if:

1. Within the time interval under consideration, there is a cash flow. For instance repayment of installments of term loans etc.
2. The interest rate resets/ reprices contractually during the interval. For instance, changes made in the interest on CC accounts, term loan accounts before maturity.
3. RBI changes the interest rates. (I.e. Interest rate on Savings bank Deposits, Minimum Lending Rate (MLR), Refinance, CRR balance etc.)

2.12.6 UCBs would not face any problems till this stage and would be able to transform the balance sheet of given date on the basis of residual maturity, in to the format prescribed by the regulator. Presently, the regulator has prescribed gaps as under:

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1. Up to 3 months
2. Over 3 months and up to 6 months
3. Over 6 months and up to 1 year
4. Over 1 year and up to 3 years
5. Over 3 years and up to 5 years
6. Over 5 years
7. Non-Sensitive

2.12.7 Obviously from this format the UCBs would come to know the Gap. The gap is difference between Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL) in each time band. Positive gap indicates that it has more RSAs than RSLs whereas the negative gap indicates that it has more RSLs than RSAs. The gap report indicate whether the UCB is in a position to benefit from rising interest rates by having positive gap (RSA > RSL) or whether it is in a position to benefit from declining interest rates by a negative gap (RSL > RSA). The gap can, therefore, be used as a measure of interest rate sensitivity.

2.12.8 Apart from the first directive issued in the year 2002 to the Scheduled UCBs, the regulator issued another directive in the year 2008 and made the concepts of ALM and Risk Management mandatory for all UCBs. The regulator in the said directive has also asked the UCBs to place this Gap Analysis report before the Board of Director. The practical difficulty of the UCBs starts at this point. They are able to comply with the preparation of Gap Analysis report and place it before Board of Directors. However, they do not have the expertise to read and understand the meaning of it. They do not have any idea of implementing it in practical use. The regulator expects that the UCBs should use this tool for the purpose of countering the IRR and make the necessary changes in the interest rate structure of the bank swiftly. This would ensure that the bank is affected due to changes in the interest rates. Thus, the tool is for countering the risk through taking corrective measures by way of product pricing.

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