CHAPTER SEVEN

ASSET-LIABILITY MANAGEMENT –AN ANALYSIS

CHAPTER NO. 07

ASSET-LIABLITY MAGEMENT- AN ANALYSIS

7.0   INTRODUCTION:

Asset-Liability Management (ALM) is a relatively recent phenomenon that has assumed greater importance after the deregulation of bank interest rates. Prior to deregulation, banks funds were obtained from relatively stable demand deposits and from time deposits. Interest rate ceilings limited the extent to which banks could compete for funds. Therefore, in order to attract fresh deposits, opening more branches or committing more resources to increase deposits was the only way to attract more funds. As a result, most sources of funds were core deposits, which were quite impervious (inaccessible) to interest rate movements. We can say that the volatility of interest rates was quite small and banks were almost assured of these funds. In such situations, bank fund management was principally asset management. But with deregulation the situations have changed, there are a number of institutions competing with the banks for the funds. The banks' ability to grow will be hampered if they do not have access to the funds by borrowing form all available fronts. So, as they tap different sources of funds, there is an increased need for liability management and it becomes important part of their financial management.

With liability management banks now have two sources of funds – Prime deposits and Market funds. Prime deposits are relatively insensitive to changes in interest rate levels and for the management they offer the advantage of stability. However, if a bank experiences a sizeable increase in loan demand, it cannot expect the prime deposits to increase in the same proportion. For market funds, the banks can obtain all the funds at any time if it is willing to pay market-determined rates.

"The banks can be thought of as a price taker in the market funds whereas in the prime deposit market in can be viewed as a price setter".[1]

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[1] Vasant C. Joshi and Vinay V. Joshi, Asset-Liability Management- Managing Indian Banks the Challenges – A head, 2nd edition, p 229

The market funds give complete flexibility in terms of the volumes and timing of the availability of funds. However, if market perceives the banks' assets to be poor quality, it will not have any funds for purchase, which may cause liquidity crises.

Asset-Liability Management basically deals in helping the board of management to know on an ongoing basis mis-matches in maturities- periods wise and interest wise and with that knowledge to manage banks resources. To understand better, it can be compared broadly with to a cash budget, which tells the owner the positions of cash surplus, and cash deficits at pre-decided intervals and advice him what steps need to be taken to deploy or raise cash required for running the business.

As the maturity dates of both assets and liabilities often do not match so the gap become inevitable and ALM becomes imperative (obligatory) to ensure that timely arrangements are made to meet deficits for matching the assets or deployment of surplus. From the cost point of view we can say that ALM is also an effective method of cost control.

The best way to understand to role of asset-liability management is to view it within the context of the over all sources and uses of funds at bank. Banks funds are obtained form variety of sources including current deposits, savings deposits, fixed deposits, short-term borrowings and capital. The mix of sources chosen by the banks' management determines the average cost of funds and their stability. From this pool of funds, the bank must make choice about acquiring assets that serve its needs for meeting legal requirements, earning income and providing liquidity. Reserve requirement imposed by RBI must of course be met before purchasing earning assets. The funds available after meeting reserve requirement can then be invested to produce an income for the banks. The flexibility of managing the sources and uses of funds varies considerably depending on the time. In short run, the number of resource and their use that may be changed are relatively limited. However, over a more extended period, the flexibility increases so the work of ALM is more crucial in short run than long run.

Asset –liability management (ALM) is also an integral part of planning process of banks. In fact, ALM may be considered as one of the three main component of a planning system. The three components are:

1.   ALM, which focuses primarily on the day-to-day balance sheet of management necessary to achieve short-term financial goals.

2. Annual profit planning and controls, which focus on slightly longer-term goals and look at a detailed financial plan over a period of time.

3. Strategic planning which focuses on the long-run financial and non-financial aspects of a bank's performance.

Strategic planning and annual planning provide a framework for the formulation and implementation of short-term ALM.

A critical aspect of ALM is risk management. Risk is defined, as "Uncertainty as to the outcome of an even when two or more should possibilities exists". Efficient ALM procedures should enable a bank to control and limit risks associated with maturing mismatch, interest rate gaps and so on. The aim of ALM is to manage risk in such a manner that they are kept with in the acceptable levels and at the same time help to generate income and maintain profitability.

In nutshell we can say, "ALM is a part of the overall risk management system in the banks. It implies examinations of all the assets and liabilities simultaneously on a continuous basis with a view to ensuring a proper balance between fund mobilization and their deployment with respect to their maturity including product pricing for deposits as well as advances, and the desired maturity profile of assets and liabilities".[2]

On a technical basis the need of ALM or Gap management arise in a deregulated environment as both short term assets and liabilities have become interest sensitive making the price exercise complicated and so it becomes necessary to keep close eye on interest rate movement. That is nothing but an effort to minimize interest rate risk.

7.1   INTEREST RATE RISK:

The phased deregulation of interest rates and the operational flexibility given to bank in pricing most of the assets and liabilities have exposed the banking system to Interest Rate Risk. Interest rate risk is the risk where changes in market interest rates might adversely affect a banks' financial condition. Changes in interest rates affect both the current earnings as also the net worth of the bank. The risk from the earnings perspective can be measured as changes in the Net Interest Margin (NIM).

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[2] R S Raghavan, Risk Management as over view, IBA Bulletin, November 2002, p 17

In order to save bank profits against adverse interest rate change, management of the bank should try to hold bank's Net Interest Margin fixed and plan for business volumes and mixes which would help stabilize the Net Interest Income (NII) and there by help the projected level of net profits and return on assets.

Net Interest Margin (NIM) can be calculated in form of a following formula

Net Interest Margin =	(Interest Income from Bank loans and advances) _ (Interest Expenses on deposits and other borrowed funds) -- Total Earning Assets

Source: Bank financial Management, Indian institute of banking and finance, Taxmanns publication p 75

We have seen in the earlier chapters that

Net Interest Income	=	Interest Income from Bank loans and Advances	-	Interest Expenses on deposits and other borrowed funds

The banks NII comes under stress because of deregulation of interest rate and competitive pricing. We know that NII do not represent bank's profit as we do not considered non-interest income or expenses that have to be substantially met out of NIM. When we deduct non-interest expenses also, there remains hardly any margin. So to save NII against interest rate risk becomes important.

Generally there are four principal approaches/ methods used to measure the interest rate risk:

Methods used to measure Interest Rate Risk			
Gap Method	Duration Gap method	Simulation method	Value at Risk Method

7.1.1 Gap Method:

"This method tells us about the rate sensitivity of assets and liabilities. The gap is the difference between the existing rate sensitive assets (RSA) and rate sensitive liabilities (RSL) in a particular time period. It ignores the time when, in the chosen period, the assets and liabilities would need to be reprised. Hence, shorter the period more sensitive is the model. Interest rate risk is minimized if the managed to near in each period".[3]

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[3] P Mohan Rao and T.K Jain, Management of Banking and Financial Institution, Deep and Deep publication, p 94

Interest sensitive Gap (ISG) means the difference between the book value of assets and liabilities repricing in a particular time basket. It is also known as Repricing Gap. It is the most popular method used by the bank management to protect the bank balance sheet from interest rate risk.

$$ISG = RSA - RSL$$

Now, this method can be given two dimensions.

Gap methods
(1)Traditional Gap method •   Interest Sensitive Gap •   Relative Interest Sensitive Gap •   Interest Sensitive Ratio
(2) Weighted Gap method

7.1.1.1 <u>Traditional Gap method</u> – It is a method which tells the bank position on a particular day with reference to the existing interest sensitiveness of the bank by analyzing and managing the bank's interest sensitive assets, liabilities and off-balance sheet items. It is worked out on a daily basis by projecting the business over a given period of time. In this method, on a particular date, the assets and liabilities are grouped as per the repricing maturities under different time span popularly known as Time Baskets. The length and number of such time baskets depends upon nature and size of activities of any bank. However RBI has prescribed eight time baskets as follows:

1.   1 to 14 days

2.   15 to 28 days

3.   29 days and upto 3 months

4.   Over 3 months and upto 6 months

5.   Over 6 months and upto 12 months

6.   Over 1 year and upto 2 years

7.   Over 2 years and upto 5 years

8.   Over 5 years

Interest sensitive Gap (ISG) as a measure of risk, signifies the magnitude of excess of assets over liabilities or the otherwise that would get repriced at different interest rate if interest rate changes. If the authorities of a

particular bank feel that in a basket the ISG is high they should take steps to reduce it. So a bank can protect itself against interest rate change (may be on a positive or negative side) by making sure that in each time basket the number (volume) of interest sensitive assets nearly equal to the number (volume) of interest sensitive liabilities.

The Traditional Gap method is an effective attempt to analysis the impact on NII and as such is carried out for the different planning period and confined itself to the possible changes in the interest rates occurring during such time period. The negative effect of NII is generally calculated by multiplying the gaps with the expected change in interest rates. "We are in way able to calculate approximately how the bank's NII will be affected by the interest rate change from the magnitude of the cumulative gap".[4]

Approximate change in bank's NII (Earning risk)	=	Size of cumulative gap	X	Overall change interest rates

Source: Bank Financial Management, Indian Institute of banking and Finance, Taxmann's Publication, July 2004, p 79.

Another ways to calculate interest rate risk may be

- Calculating the *Relative Interest-Sensitive Gap* as a ratio of the Interest-Sensitive Gap to total interest sensitive assets

Relative Interest-Sensitive Gap = Interest-Sensitive Gap /Iinterest sensitive assets

If the Relative Interest-Sensitive Gap is greater than ZERO (positive gap) it means the bank is asset sensitive but if the Relative Interest-Sensitive Gap is less than ZERO it represent negative gap that means bank is liability sensitive.

In short

Relative Interest-Sensitive Gap (+ tive) = Bank is Asset Sensitive
Relative Interest-Sensitive Gap (- tive) = Bank is Liability Sensitive

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[4] Bank Financial Management, Indian Institute of banking and Finance, Taxmann's Publication July 2004, p 79.

- Quantifying the Interest rate risk by *Interest Sensitive Ratio*. It is the ratio of rate sensitive assets (RSA) and rate sensitive liabilities (RSL)

Interest Sensitive Ratio = Rate Sensitive Assets / Rate Sensitive Liabilities

If the Asset Sensitive *Ratio* is more than ONE the bank *is* Asset Sensitive and if Interest Sensitive Ratio is less than ONE the bank is liability Sensitive.

Interest Sensitive Ratio (< 1) = Bank is Asset Sensitive.

Interest Sensitive Ratio (> 1) = Bank is Liabilities Sensitive.

Even though the traditional gap method makes an assumption that the change in interest rates will be uniform both for assets and liabilities and the movement of interest rate cannot be predicated precisely, it is an important method of ALM to find out risk, measure it and help to minimize it.

So we can say that according to traditional gap method if bank's Gap is zero its NII is saved from interest rate risk. But in real sense such gap do not completely subsidize the risk as the interest rates are attached to bank assets and liabilities and they do not change together or even in the same proportion.

To overcome above problem the Traditional Gap method is modified by Weighted Gap method

7.1.1.2 Weighted Gap method: It is a method where Gap is analyzed by weighting the classes of assets and liabilities with elasticity of interest rate unique to that class of assets or liabilities. The need of such method arises because a specific cause in the market leading to change in interest rate does not respond in the same manner. In this method the rate sensitive assets or rate sensitive liabilities are attached to find out weighted.

The difference between the Traditional Gap method and Weighted Gap method is that the Traditional Gap method address only mis-match risk where as the Weighted Gap method address basic risk also.

Although Gap method is a very commonly used approach to assessing the interest rate risk exposure, it has a number of shortcomings.

1. Gap method does not take account of variation in the characteristics of different positions within the time baskets.

2. It does not take into account any change in the timing of payments that might occur as a result of changes in the interest rate environment. So Gap analysis provides only a rough approximation to the actual change in NII, which would result from the chosen change in the pattern of interest rate.

3. Gap method fail to capture variability in non-interest income and expenses, which is a potentially important source of risk to current income.

Finally, we can say that Gap method is basically a balance sheet concept and capture only principal assets and liabilities.

Net worth is a significant aspect in any bank management. However the above methods do not aims at protecting the bank's net worth. So, to accomplish this we come to discuss another method called Duration Gap method.

7.1.2 Duration Gap method: "duration is a measure of the percentage change in the economic value of a position that will occur given a small change in the level of interest rates. In simple, it measures the change in economic value resulting from a percentage change of interest rates under the simplifying assumptions that changes in value are proportional to changes in the level of interest rates and that the timing of payment is fixed".[5]

Duration Gap method examines the impact of interest rate change on the market value of assets and liabilities. The duration of an asset or liability is calculated as the weighted average maturity of the resultant cash flows, the weights being the present value of the cash flow. Greater the value of duration gap, higher is the interest rate risk exposure of the assets / liabilities. The method is complex but flexible and how much interest rate risk a bank should assume depends upon how risk averse the bank is?

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[5] Extract from a publication of National Federation of Urban co-operative banks and credit societies Ltd New Delhi

Net worth (NW) = Assets (A) – Liabilities (L)

Therefore, Change in NW = Change in value of Assets - Change in the value of Liabilities

The impact of change in the interest rate in the value of assets and liabilities and net worth can be calculated as under.

% Change in value = –Modified Duration X (Change in Yield)

Appling this to the value of assets and liabilities,

$$\text{Change in the value of Assets} = -A \times \frac{Da}{(1+i)} \times \sigma i$$

$$\text{Similarly, Change in the value of Liabilities} = -L \times \frac{D1}{(1+I)} \times \sigma i$$

$$\text{Hence, Change in NW} = -(A\text{-}L) \times \frac{De}{(1+i)} \times \sigma I$$

Where,

Da = the portfolio duration of assets

D1 = the portfolio duration of liabilities

i = the current interest rate

σI = the change in rate over

De = duration of equity = $\dfrac{Da \times A - D1 \times L}{(A\text{-}L)}$

The impact of change in market interest rate in a bank's net worth is indicated below.

Nature of Duration Gap	Direction of Interest Rate Movement	Impact on bank's net worth
Positive [Da > D1 X L/A]	Rise Fall	Decrease Increase
Negative [Da < D1 X L/A]	Rise Fall	Increase Decrease
Zero [Da = D1 X L/A]	Rise Fall	No change No change

The bank management, which would like minimizing risk, will try to reduce the Duration Gap. A more aggressive management would be willing to take a view on the movement of interest rates and take positions to minimize the value of net worth.

Interest Rate View	Management Action	Possible outcome, if view turns right
Rates will rise	Move to Negative Duration (reduce Da and increase D1)	Net worth increases
Rates will fall	Move to Positive Duration (increase Da and reduce D1)	Net worth increases

Source: **Bank Financial Management, Indian Institute of banking and Finance, Taxmann's Publication, July 2004, p 89.**

Duration Gap method helps to arrive at portfolio durations of the assets and liabilities using the property of addition in the concept of duration. But like any coin has two sides Duration gap method is also has certain limitations.

1. This method assumes that changes in the interest rates will be uniform across all items in the balance sheet.

2. As a price sensitive measure it provides correct value only for small changes in the interest rates. Large changes in the interest rate are not considered.

All the above methods of Gap are techniques for finding out interest rate risk, measuring it and make an attempt to minimize it based on certain assumptions. However, they do not totally cover all-important aspects of interest risk management like Market value of Equity (MAV). In addition to this the Gap methods consider interest rate as only variable even though we know that the Balance sheets of all banks do not reveals the same pattern of discloser. The above problems, to an extent can be neutralized by Simulation method.

7.1.3 Simulation method:

"It involves a series of 'what if' analysis of impact of interest rate changes on the net income. It requires forecasting the asset-liability picture under different situations, finding probabilities of them and choosing the most optimum approach. The method is more dynamic and so its utility depends upon the accuracy of forecasts".[6]

Simulation is a computer based statistical tool where a financial model of the bank is developed incorporating inter-relationship of assets, liabilities, interest rate, costs and volume of transactions, mix of deposits and advances and other

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[6] Madhu Sehgal and Rajni Kher, "Asset-Liability Management in the Indian Banks", p 95

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related variables. Considering the above a future picture of possible responses is evolved, which provide the bank management a number of options to select from and take necessary actions.

Simulation can be done for net interest income, market value of equity, different risk profile and so on. Such analysis takes in to consideration profitability, capital adequacy regulatory framework and various risks that affect the bank's balance sheet. Even though it in an important measure for over all risk management its accuracy depends upon :

- Availability of information and statistical data.
- Quality of data available.
- Strength of the financial model that is developed considering various financial aspects.
- The type and validity of assumptions made for such analysis.

This method of minimize the risk can have two dimension.

Simulation Methods	
Static Simulation method	Dynamic simulation method

7.1.3.1 <u>Static Simulation method:</u> Here, the cash flows arising solely from the bank's current on and off-balance sheet position are assessed. For assessing the exposure of earnings, simulation estimating the cash flows and resulting earnings streams over a specific period are conducted based on one or more assumed interest rate situations. Typically, although not always, these simulations shows relatively straight forward shifts or change of spreads between interest rates. When the resulting cash flows are simulated over the entire expected lines of the bank's holdings and discounted back to their present values, an estimate of the change in the bank's economic value is calculated and analyzed.

7.1.3.2 <u>Dynamic simulation method:</u> In this approach, the simulation builds in more detailed assumptions about the future course of interest rates and the expected changes in a bank's business activity over that time. Such assumption can be about a bank's strategy for changing administered interest rates on saving deposits about the behaviour of the bank's

customers and or about the future stream of business like loan or other transactions that the bank will encounter. Such simulations use these assumptions about future activities and reinvestment strategies to project expected cash flows and estimate dynamic earnings and economic value outcomes.

Simulation method also suffer with some shortcomings such as

- It is a time consuming process.

- Not suitable for small banks with less investment capacity for using such a comprehensive tool.

- Simulation requires high skilled office staff to understand and analysis the various options provided by the simulation model.

The recent tool or method for asset-liability management is Value at Risk (VaR). J.P. Morgan comes out with a model called 'Risk Metrics' in October 1994 to measure the market risk. A new version of this is introduce in 1997 to be called as 'Credit Metrics especially for the measurement of credit risk.

7.1.4   Value at Risk Method:

VaR is an estimate of maximum potential loss on a given position for a given holding period at a given level of confidence. It is a projection of maximum potential loss on an asset or of trading position. It is an expected loss and not exact loss at a particular position with the time for which it will remain there related to a given level of confidence. The VaR model is based on same primary statistical concepts that are stated in brief.

- Statistics: it is a science that deals with numbers and the result obtained thereon are invariably expressed in numerically terms. Here, for risk management the expected loss is expressed in numbers.

- Average or Mean: It is the sum of all numbers divided by "n".

- Geometric Mean: It is the nth root of the product of the "n" numbers.

- Harmonic Mean: It is the reciprocal or arithmetic mean of the individual numbers.

- Standard Deviation: It is the square root of the variance of a given set of numbers.

- Probability: It is the expected number(s) of outcomes in form of result of an event.

- Normal Distribution: If we plot the various price movements of any underlying and then draw the mean of these numbers, it is said that the shape assumed of a bell and such a distribution is called Normal Distribution.

- Correlation: It is relationship between to variables when the change in the value of one variable will have an impact on the changes in the value of another.

- Covariance: It is a measure that finds whether two variables move higher of lower and also the magnitude of such movements

- Volatility: It is expressed as an annual percentage. The annual volatility is equal to the volatility for a give period multiplied by the square root of the number of such period in a year.

The above statistical concepts are also helpful in other related aspect in this study. The VaR calculation in turns may be in three forms that are as follows.

Value at Risk Methods		
Historical simulation method	Monte Carlo method	Delta Normal method

7.1.4.1 Historical simulation method: It is consist of getting historical data for some years and the applying current weights to the historical returns of assets over a time series.

7.1.4.2 Monte Carlo method: In this method we have to define a suitable process for price variables and the required parameters. Thereafter, our effort will be to generate a price by simulating the various price situations. We can mark the portfolio to market on each of the time zones created, generate a distribution of returns and compute VaR.

7.1.4.3 Delta Normal method: It is method that uses the probability distribution pattern of Normal distribution curve and the related volatility of the price movement of the underlying asset at different levels of confidence

"The method enables one to work out depreciation/appreciation in the value of assets and liabilities due to change in interest rate so as to indicate the trend in economic value of portfolio. Impact of interest rate changes on the value of off market items of balance-sheet such as loans, deposits etc., need to be calculated under different interest rate scenarios for evaluating the opportunity cost/benefit of carrying such assets/liabilities in long time frame. Although this is a new approach for quantification of risks, this is emerging as a very useful tool for calculating the new worth of the organization at a particular time so as to focus on the long-term risk implications that have already been taken".[7]

We can conclude with the note that VaR may be used as a risk measure, as a tool for fixing stop limits for trading purposes, as and effective tool for Asset Liability Management, as a measure of capital adequacy and as a simple and effective tool for the management to make quick financial decision.

7.2 ASSET-LIABILITY MANAGEMENT SYSTEM IN BANKS – RBI GUIDELINES:

These guidelines are in respect of interest rate and liquidity risk management systems in banks, which form part of the ALM function. The ALM process rests on three pillars;

7.2.1 ALM information system

Information is the key to the ALM process. Considering the large network and the lack of an adequate system to collect information required for ALM which analyses information on the basis of residual maturity and behavioural pattern, it will take time for banks in the present state to get the required information. The problem of ALM needs analyzing the behaviour of asset and liabilities product in the bank accounting for significant business and then making rational assumptions about the way in which assets and liabilities would behave in other branches. In respect of investment portfolio and money market operations, in view of the centralized nature of the functions, it would be much easier to collect reliable information. The data and assumptions can then be refined over time as the bank management gains experience of conducting business with in an ALM framework. The spread of computerization will also help banks in accessing data.

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[7] PNB Monthly Review, October-December 1998, Volume 21, No 6.

7.2.2 ALM Organisation

The board should have overall responsibility for management of risks and should decide the risk management policy of the bank and set limits for liquidity, interest rate, foreign exchange and equity price risks.

The Asset-Liability Committee (ALCO) consisting of the banks senior management should be responsible for ensuring all the limits set by the board as well as for deciding the business strategy of the bank on the assets and liabilities side in line with the banks budget and decided risk management objectives.

The ALM desk consisting of operating staff should be responsible for analyzing, monitoring and reporting the risk profiles to the ALCO. The staff should also prepare forecasts showing the effects of various possible changes in market conditions related to the balance sheet and recommend the action needed to adhere banks' internal limits.

"The ALCO is a decision-making unit responsible for balance sheet planning from risk-return perspective including the strategic management of interest rate and liquidity risks. Each bank will have to decide on the role of its ALCO, its responsibility as also the decisions to be taken by it. The business and risk management strategy of the bank should ensure that the bank operates within the limits set by the Board. The business issues that an ALCO would consider and include product pricing of both deposits and advances, desired maturity profile of the incremental assets and liabilities etc. In addition to monitoring the risk levels of the bank, the ALCO should review the results of and progress in implementation of the decisions made in the previous meetings. The ALCO would also articulate the current interest rate view of the bank and base its decisions for future business strategy on this view".[8] Towards the end, it will have to develop a view on future direction of interest rate movements and decide on a funding mix between (as given below) on an individual basis by every bank.

- Fixed verses floating rate funds
- Whole verses retail deposits.
- Money market verses capital market funds
- Domestic verses foreign currency funds

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[8] RBI Circulars complied by National Federation of Urban Co-operative Banks and Credit Societies Ltd , p 59-91.

7.2.3 Composition of ALCO

'The number of members in ALCO would depend on the size of each bank. To ensure commitment of the top management, the highest authority of the bank should chair the committee. The head of the Investment, Credit, Funds Management and Research department can be the members of the committee. In addition the head of the Information Technology division should also be an invitee for building up of Management Information System (MIS) and related computerization"[9].

7.2.4 Committee of Directors:

The bank should also constitute a professional Managerial and Supervisory Committee consisting 3 or 4 directors, which will oversee the implementation of the system and review it's functioning periodically.

7.3 ASSET-LIABILITY MANAGEMENT SYSTEM IN URBAN CO-OPERATIVE BANKS– RBI GUIDELINES:

(Reference: UBD No. POT.SUCB.CIR.9/09.0120.00 dated 05-04-2002)

"The Scheduled UCBs are required to put in place an ALM system, by 30th June 2002. The banks should set up an internal Asset Liability Committee (ALCO), headed by the CEO. The Board should oversee the implementation of the system and review it's functioning after appropriate interval of time. The Guidelines have been formulated to serve as a benchmark for those banks, which lack a formal ALM system. To begin with, banks should ensure coverage of at least 60% of their assets and liabilities. As for the remaining 40% of their assets and liabilities, banks may include the position based on their estimates. It is necessary that banks set interim targets so as to cover 100 per cent of their business by April 2, 2003. Once the ALM system stabilizes and banks gain experience, they should prepare to switch over to more sophisticated techniques like Duration Gap Analysis, Simulation and Value at Risk for interest rate risk management.

In respect of mismatch of cash flows for the 1 to 14 days basket and 15 to 28 days basket, it should be the effort of the banks management to keep the cash flow mismatches at the minimum levels. The statement should be prepared as on the last reporting Friday on March/ June/ September / December and put up to the ALCO/ Top management within a

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[9] RBI, bulletin, Guidelines on liquidity, currency and interest rate risks management, October 2000 to December 2003

month from the close of the last reporting Friday. It should also be placed before the bank's Board in its next meeting. The objective of RBI is to enforced the tolerance levels strictly with effect from April 1, 2003".[10]

We can observe that the above mention guidelines are for scheduled UCBs to be enforced from the year 2003-04. However, it does not mean that concept of ALM is not practiced by these banks. It may not be in the form as expressed by RBI or with same intensity and effect as expected by RBI and perhaps even do not provide the kind information required for such an analysis but it is not fair to say that these banks do not practice any thing of this concept of ALM.

7.4   FINANCIAL RATIO ANALYSIS:

Financial Ratio analysis is the simple way to find some related aspects of ALM. Ratios show the relationship between two items in a more meaningful way reflecting both positive and negative relations. It is easy to calculate and analysis. For the purpose of Asset Liability Management ratios can be of three types

1.   Asset Structured Ratios.

2.   Liability Structured Ratios.

3.   Profitability Structured Ratios.

7.4.1   Asset Structured Ratios

It can be further segregated in to following ratios

- Fluid resources to Deposits
- Fluid resources to Working capital
- Credit – Deposit
- Credit to Working capital
- Loan mix
  - Short term
  - Medium term
  - Long term

The Asset Structured Ratios for the Selected urban co-operative banks in Gujarat are as follows

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[10] John D'Silva, Co-operative Banker's Hand Book Cum Diary-2005, p 71

Table No.7.1 Fluid Resources to Deposits of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Bank	0.58	0.59	0 55	0.46	0 45	0 42	0 39	0 29	0.28	0.28	0.25	0 16	0 39
Bhavnagar Bank	0 48	0 46	0 45	0 46	0.45	0.54	0.60	0 69	0 68	0 64	0 61	0.62	0.56
Dahod Urban Bank	0.53	0 48	0 40	0 26	0 19	0.28	0.34	0 35	0 29	0 37	0.35	0.34	0 35
Godhara Bank	0.34	0 31	0.35	0 31	0.38	0.39	0 38	0 35	0.35	0.34	0.37	0 44	0.36
The Kalupur Bank	0.80	0 38	0.30	0.52	0 67	0 55	0 63	0.40	0.55	0.31	0.51	0.40	0.50
Mehsana Bank	0.86	0 71	0.63	0 73	0.83	0 74	0.74	0 81	0 14	0 16	0.19	0.41	0.58
The Modasa Bank	0 44	0 40	0.36	0 44	0 38	0.46	0.48	0 46	0 36	0.21	0 23	0 20	0 37
The Rajkot Bank	0.45	0 36	0 39	0 25	0 35	0.26	0 34	0.23	0 12	0 14	0 19	0.19	0 27
Sardar Bank	0.28	0 33	0 41	0.44	0.29	0.19	0 22	0 28	0 42	0.34	0 40	0 40	0.33
The Surat Bank	0 73	0 47	0.34	0 36	0 26	0.26	0 22	0 23	0.22	0.26	0 27	0.26	0 32

Source: Based on annual reports of respective UCBs

7.4.1.1 Ratio of Fluid Resources to Deposits

Fluid resources means cash balance with the bank, balance with other bank and money at call and short notice. ⁃ Table no. 7.1 shows comparison of average liquid assets and average deposits is made. Average of such proportion is highest in case of Mehsana urban co-operative bank where as it is lowest in case of Rajkot nagrik sahakari bank. The proportion of average liquid assets to average deposits indicates the proportion of amount remains in liquid form and not utilized by the bank for the purpose of advances. The above figures show that the proportion is continuously declining in case of Anyonya co-operative bank Rajkot nagrik sahakari bank and Surat People's co-operative bank with exception to last three years of study. A very abrupt change can be observed in case of Mehsana urban co-operative bank where in the year 2000-01 the proportion of average liquid assets to average deposits has suddenly came down from 0.81 to 0.14.

7.4.1.2 Ratio of Fluid Resources to Working Capital

The table no. 7.2 shows the proportion of average liquid assets to average working capital of selected urban co-operative banks in Gujarat. Bhavnagar nagrik sahakari bank ranks first with a ratio of 39 per cent followed by Anyonya co-operative bank as 31 per cent and Godhara city co-operative bank as 30 per cent. The least of such average proportion belongs to the Kalupur co-operative bank with just 17 per cent. As in case

of earlier table of proportion of average liquid assets to average deposits the above table also show that the liquid assets are continuously declining in case of Anyonya co-operative bank where as in case of Surat people's co-operative bank Rajkot nagrik sahakari bank, Meshana urban co-operative bank shows a decline up to year 2000-01 however after that there is an increase in this proportion.

Table No. 7.2   **Fluid Resources to Working Capital of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Anyonya Bank	0.45	0 46	0 45	0 37	0.37	0 35	0 33	0 23	0 21	0.20	0.17	0.10	0.31
Bhavnagar Bank	0.30	0 27	0 27	0.28	0 27	0 33	0 35	0 38	0 48	0.45	0.69	0.67	0 39
Dahod Urban Bank	0.39	0.32	0 26	0 19	0 15	0 22	0 26	0 27	0.22	0.29	0 28	0 30	0.26
Godhara Bank	0 28	0 24	0.27	0.25	0.32	0 32	0 32	0 30	0.30	0.29	0.31	0 35	0 30
The Kalupur Bank	0.20	0 14	0 10	0 11	0 20	0 19	0 21	0 18	0 18	0.13	0 21	0 18	0.17
Mehsana Bank	0 35	0 25	0 26	0 29	0.26	0 20	0 20	0 19	0 13	0.11	0.12	0 26	0.22
The Modasa Bank	0.38	0 34	0 31	0 38	0 34	0 40	0.43	0 41	0 32	0.18	0 20	0 17	0 32
The Rajkot Bank	0 36	0 29	0.31	0 20	0 28	0 21	0 27	0.19	0 10	0 10	0 14	0.14	0.21
Sardar Bank	0 20	0 24	0.31	0.33	0.21	0 14	0 16	0.22	0 31	0.27	0 32	0.31	0.25
The Surat Bank	0.51	0.33	0 24	0 25	0 19	0 18	0.16	0 16	0 16	0 19	0 20	0 19	0 23

Table No. 7.3   **Credit – Deposit Ratio of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Anyonya Bank	0 57	0 52	0.50	0 51	0 51	0 50	0.55	0 60	0.61	0.69	0.73	0.74	0 59
Bhavnagar Bank	0 85	0 81	0.80	0 76	0 74	0.66	0 56	0 49	0.47	0.52	0.53	0.52	0.64
Dahod Urban Bank	0 73	0.72	0.75	0 79	0 74	0.64	0 53	0.52	0.50	0 49	0.55	0 49	0 62
Godhara Bank	0 80	0.80	0.73	0 78	0 73	0.67	0.54	0.58	0.56	0 58	0 56	0.55	0 66
The Kalupur Bank	1 73	1.17	1 62	3 24	1 68	1 22	1 30	0 83	1.40	0 99	0 90	0 74	1 40
Mehsana Bank	1 32	1 92	1 59	1 42	1 86	2.46	2 43	2.82	0 74	0.85	0.95	0.78	1 60
The Modasa Bank	0.83	0.82	0 87	0 78	0.79	0 70	0 58	0.51	0 63	0.63	0.59	0.67	0 70
The Rajkot Bank	0.82	0 78	0 78	0.86	0 76	0 71	0 63	0 71	0 69	0 72	0 68	0.53	0 72
Sardar Bank	0.72	0.66	0 62	0 61	0 66	0 68	0 62	0 61	0 76	0 66	0 58	0 52	0 64
The Surat Bank	0.52	0.53	0 61	0 59	0 43	0 54	0 53	0.50	0 44	0.46	0 52	0 46	0 51

7.4.1.3 Ratio of Credit to Deposit

In table no. 7.3 the loans and advances are compared with the deposits on the other side of the balance sheet that is popularly known as Credit Deposits (C/D) Ratio. In case of urban co-operative bank a C/D ratio of 60 to70 percent is appropriate. In the table given above that shows the C/D ratio of all ten selected UCBs for the period of twelve years from 1992-93 to 2003-04 based on

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average advances and average deposits for the same period. The C/D ratio of Kalupur commercial co-operative bank and Meshana urban co-operative bank is more then twice as compare to what is required. Even if we take individual UCB, except Surat people's co-operative bank all other banks have the C/D ratio, which is between 60 to 70 per cent. This is one of the criteria of strength that is full filled by the UCBs under study.

Table No. 7.4 **Credit to Working Capital of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Anyonya Bank	0.45	0.41	0 40	0 42	0 43	0 42	0 46	0 46	0 45	0 48	0.50	0 44	0 44
Bhavnagar Bank	0 54	0 48	0 48	0 46	0 45	0 40	0.32	0 27	0 34	0 37	0.36	0.34	0.40
Dahod Urban Bank	0 53	0 48	0 49	0.57	0.57	0 51	0.41	0.40	0 39	0.38	0 44	0 42	0.47
Godhara Bank	0.65	0 62	0 57	0 63	0.60	0.55	0.46	0 50	0 49	0 49	0 47	0.43	0 54
The Kalupur Bank	0.43	0 44	0.54	0 66	0.51	0.43	0.43	0 36	0.46	0.42	0.36	0.33	0.45
Mehsana Bank	0 54	0.67	0 65	0.56	0.59	0 66	0 65	0 66	0 66	0.63	0 63	0.50	0 62
The Modasa Bank	0 72	0.71	0 75	0 67	0 69	0 61	0 51	0 45	0 55	0 55	0.51	0.56	0 61
The Rajkot Bank	0 65	0.62	0 61	0.68	0 59	0 55	0 50	0 57	0.56	0 55	0 51	0 40	0 57
Sardar Bank	0 53	0.49	0 46	0.46	0 49	0.51	0 47	0 47	0 57	0 52	0.46	0 40	0 49
The Surat Bank	0 36	0 37	0 42	0 41	0 31	0.39	0.40	0 35	0 32	0.34	0 39	0.34	0 37

7.4.1.4 Ratio of credit to working capital

In table no.7.4 the ratio of credit to working capital indicates the extent of credit creation in any bank. If this ratio increases it will result in more credit creation and if it decreases then it will result in to less credit creation. According to the above table average ratio or advances to working capital is ₍highest₎with Mehsana urban co-operative bank followed by Modasa nagrik sahakari bank. The least of such ratio is of Surat people's co-operative bank.

7.4.1.5 Loan Mix

7.4.1.5.1 Ratio of Loan Mix – Short term loans to total loans

The table no. 7.5 shows the proportion of short-term advances to total advances is highest in case of The Kalupur co-operative bank, which is 72.69 per cent of the average total advances. It is least in case of Bhavnagar nagrik sahakari bank with only 1.87 per cent of the average total advances. It is observed from the above table that there is no set pattern of short-term advances and such advances

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are made on the basis of local need of the people in a particular area of operation. With exceptions, like for Bhavnagar nagrik sahakari bank in the years 2001-02, 2002-03 and 2003-04. Rajkot nagrik sahakari bank in the year 2002-02 and 2003-04.

Table No. 7.5 Loan Mix – Short term to total loans of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Bank	42.85	42 48	42.09	45 29	46 42	41 84	38 79	34.93	33.15	35 25	41 45	43 69	40.69
Bhavnagar Bank	1 57	2 05	2 10	2 13	2 25	2 44	1 05	1 54	2 41	0 63	0.55	3.68	1.87
Dahod Urban Bank	31 35	31 62	33 78	38 13	41.96	42.93	43.74	40 86	42 73	44.40	43.82	49.92	40 44
Godhara Bank	44 14	41.24	44 19	50 31	48.99	57 00	59.96	62 34	67 60	68 67	73 07	76 03	57 80
The Kalupur Bank	95 40	81 89	74 81	73 00	61.39	59 82	73.10	69 42	76 98	68.58	67 41	70 47	72 69
Mehsana Bank	59.37	68.21	66 96	67.43	65 29	53.42	51 33	54 96	54 46	56 19	56.92	65 93	60 04
The Modasa Bank	68.88	54 75	54.36	52 46	41.90	52 68	54.13	57 56	47.48	43.91	44.42	46.74	51 61
The Rajkot Bank	41 68	42.54	44 11	55 50	44 55	52.61	46 49	50 96	54 12	54 70	5.21	0 13	41.05
Sardar Bank	34 63	36 20	32 65	32 00	29.82	27 77	28 11	29.22	27 43	29 09	28 75	31 74	30.62
The Surat Bank	23 43	25.59	31 03	35 89	33 53	24 19	23 89	25 58	26.63	25 07	23.87	26 58	27 11

Table No. 7.6 Loan Mix – Medium term to total loans of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Bank	38 39	39.88	41.91	42 69	39.27	38.44	39.63	40.46	41 22	37 50	33 27	30 60	38.60
Bhavnagar Bank	95 11	94.81	94 95	95.67	96 32	96 60	88.16	81 83	77 33	76.45	76 15	63.95	86 44
Dahod Urban Bank	52 92	61 87	59 95	43 11	53 40	33.91	37 04	42 73	36.99	33.18	37.53	32.81	43.79
Godhara Bank	50 22	52 94	51 06	45 97	46 62	37 92	30.78	28.92	22 89	20.22	16 21	12 99	34 73
The Kalupur Bank	3 00	17 28	24.05	25 45	34 35	37 08	24 59	25 73	19.65	25 20	25.95	23.42	23 81
Mehsana Bank	39.19	30.69	29 91	26 53	20.47	5.95	3.79	3 82	13 30	11 06	22.25	15 48	18 54
The Modasa Bank	26 02	40 25	40 16	41.28	52 05	41 46	38.38	35.10	9 99	11 95	11 63	18 28	30 55
The Rajkot Bank	57 83	57.02	55.47	44.25	55.18	46 77	19.86	19 29	17 17	16.20	52 46	58 96	41.71
Sardar Bank	63 97	62.23	65.79	66 39	68.26	70 08	68.85	59.32	40 88	37 11	33.99	30 35	55 60
The Surat Bank	75.17	72 95	67 67	62.53	64 51	53 99	46 82	42 44	38 46	31 92	23 75	23 68	50 33

7.4.1.5.2 Ratio of Loan Mix – Medium term loans to total loans

During the period of study from 1992-93 to 2003-04, the proportion of medium term advances to total advances is highest for Bhavnagar nagrik sahakari bank that is 86.44 per cent average total advances and it is lowest in case of The Mehsana urban co-operative bank as 18.54 per cent of average total advances. The point attracts in the table no.7.6 is that the proportion of medium term advances to total advances has double or more in case of The

Mehsana urban co-operative bank and Rajkot nagrik sahakari bank during the year 2002-03. However, points that disturb the trends can also be observed in the above table. For example Mehsana urban co-operative bank in the years 1997-98 to 2001-02 and Rajkot nagrik sahakari bank in the years 1998-99 to 2001-02.

Table No. 7.7 Loan Mix – Long term to total loans of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Bank	18 75	17 64	15.99	12 02	14 31	19.72	21 59	24 61	25 63	27.25	25.28	25.71	20.71
Bhavnagar Bank	3 32	3 14	2 95	2.19	1 43	0.96	10.79	16.63	20 25	22.92	23.30	32.37	11.69
Dahod Urban Bank	15.73	6 52	6 27	18.77	4.64	23.16	19.22	16 41	20 28	22 42	18.65	17 27	15.78
Godhara Bank	5 64	5 82	4 75	3.72	4 39	5.08	9 26	8 74	9.51	11 11	10 73	10 98	7 48
The Kalupur Bank	1 60	0 83	.1 14	1 54	4 25	3 10	2 31	4 85	3.37	6.23	6.63	6 11	3 50
Mehsana Bank	1 43	1 10	3 12	6 03	14.24	40.62	44 88	41 21	32 24	32 75	20 83	18.59	21 42
The Modasa Bank	5 10	5 00	5.48	6 26	6 05	5 86	7 49	7.35	42.54	44.14	43 95	34 97	17 85
The Rajkot Bank	0.49	0.44	0 42	0 25	0 28	0 62	33 64	29 75	28 72	29 10	42 32	40 91	17.24
Sardar Bank	1.40	1.57	1.56	1 61	1 92	2.15	3.04	11.46	31.69	33 81	37 25	37 91	13.78
The Surat Bank	1 40	1 46	1.30	1 58	1 96	21.82	29 29	31 98	34 91	43 00	52 38	49 74	22 57

7.4.1.5.3 Ratio of Loan Mix – Long term loans to total loans

The table no. 7.7 states that the percentage of long term advances to total advances is more in case of Surat peoples' co-operative bank, which is 22.57 per cent of average total advances and least in case of The Kalupur co-operative bank i.e., 3.50 per cent during the years of study from 1993-93 to 2003-04. It is noticed that the proportion of long term advances to total advances is increasing in case of all the UCBs under the study considering the given period from the year 1992-93 to 2003-04. However, in-consistency can be observed in some banks like Modasa nagrik sahakari bank and Surat people's co-operative bank in the year 1997-98 and Rajkot nagrik sahakari bank in the year 1998-99.

Pie charts of the respective urban co-operative banks under study given below provides a clear picture of the Loan mix adopted by each bank (Chart No 7.1 to 7.10)

Chart No.7.1
Distribution of Advances of Anyonya co-operative bank
(1992-93 to 2003-04)

LONG TERM
23%

SHORT TERM
39%

MEDIUM TERM
38%
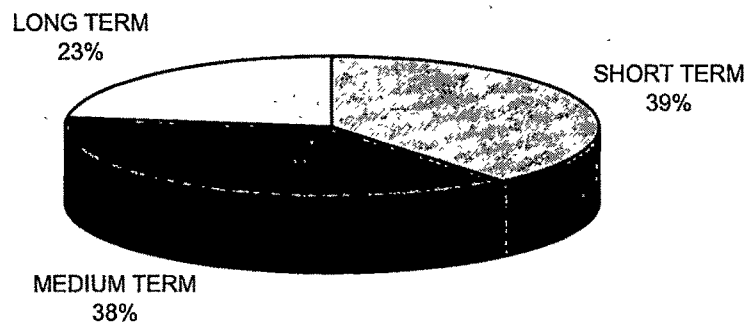
Chart No. 7.2
Distribution of Advances of Bhavnagar Nagrik Sahakari Bank
(1992-93 to 2003-04)

LONG TERM
14%

SHORT TERM
2%

MEDIUM TERM
84%

194
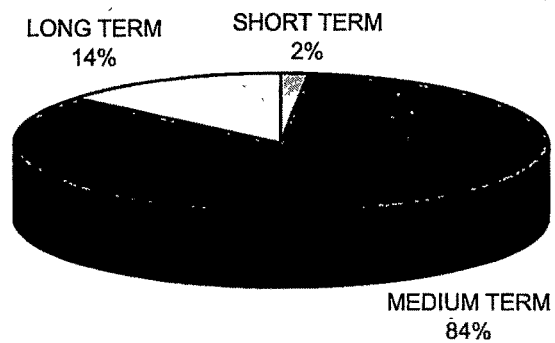
Chart No. 7.3
Distribution of Advances of Dahod Urban Co-operative Bank
(1992-93 to 2003-04)

LONG TERM
17%

SHORT TERM
41%

MEDIUM TERM
42%
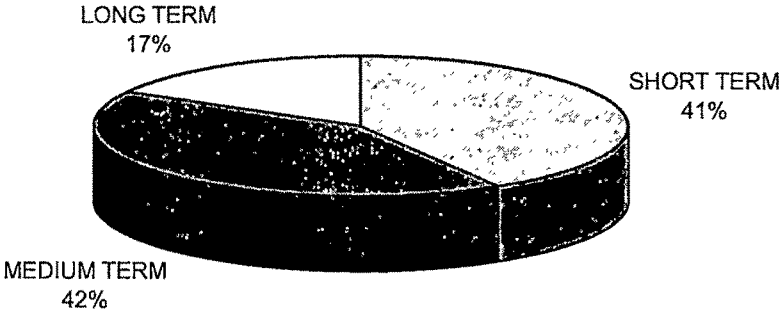
Chart No. 7.4
Distribution of Advances of Godhara City Co-operative Bank
(1992-93 to 2003-04)

☐ LONG TERM
8%

▣ MEDIUM TERM
31%

☐ SHORT TERM
61%
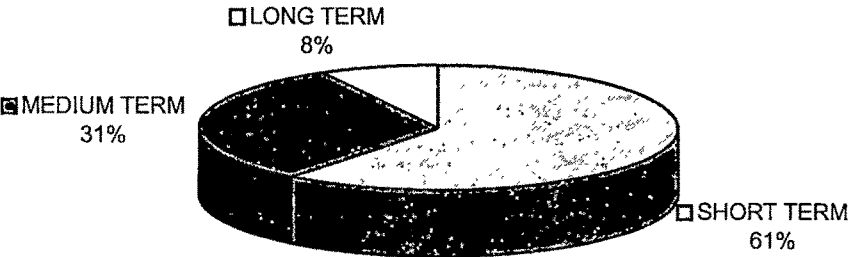
Chart No. 7.5
Distribution of Advances of Mehsana Urban Co-operative Bank
(1992-93 to 2003-04)

☐LONG TERM
31%

☐SHORT TERM
57%

⊞MEDIUM TERM
12%
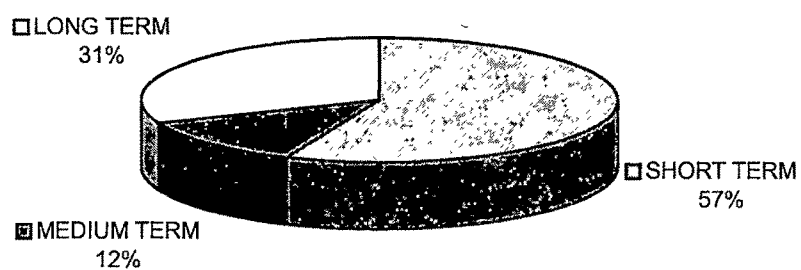
Chart No. 7.6
Distribution of Advances of Modasa Urban Co-operative Bank
(1992-93 to 2003-04)

☐LONG TERM
22%

☐SHORT TERM
50%

⊞MEDIUM TERM
28%

196
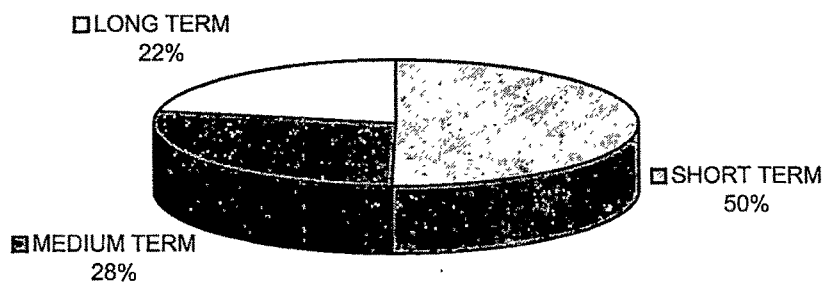
Chart No. 7.7
Distribution of Advances of Rajkot Nagrik Sahakari Bank
(1992-93 to 2003-04)

☐ LONG TERM
22%

☐ SHORT TERM
41%

■ MEDIUM TERM
37%
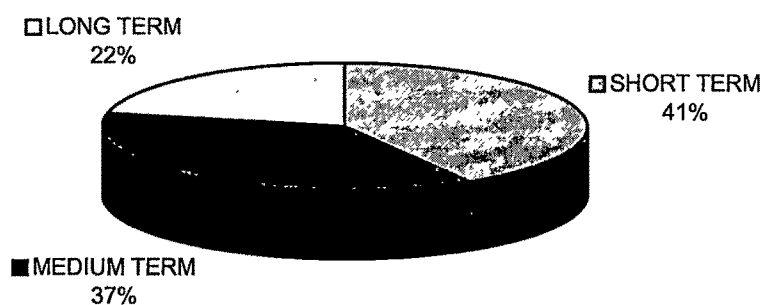
Chart No. 7.8
Distribution of Advances of Sardar Bhiladwala Pardi Peoples'
Co-operative Bank
(1992-93 to 2003-04)

☐ LONG TERM
18%

☐ SHORT TERM
30%

■ MEDIUM TERM
52%
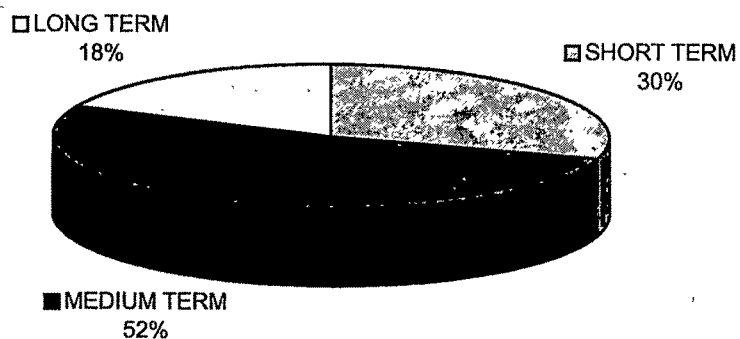
Chart No. 7.9
Distribution of Advances of Surat Peoples Co-operative Bank
(1992-93 to 2003-04)

☐LONG TERM
29%

☐SHORT TERM
26%

■MEDIUM TERM
45%
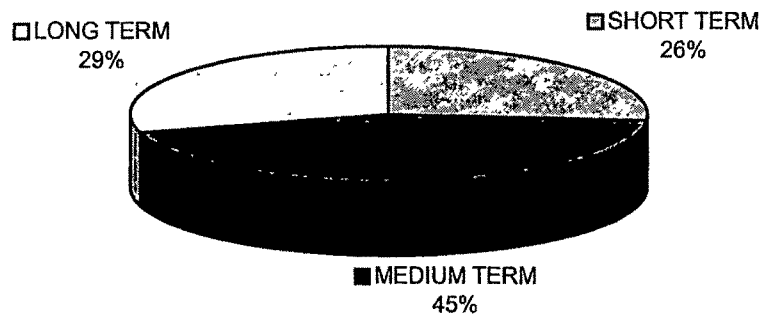
Chart No. 7.10
Distribution of Advances of Kalupur Commercial Co-operative Bank
(1992-93 to 2003-04)

☐LONG TERM
4%

■MEDIUM TERM
25%

☐SHORT TERM
71%

198
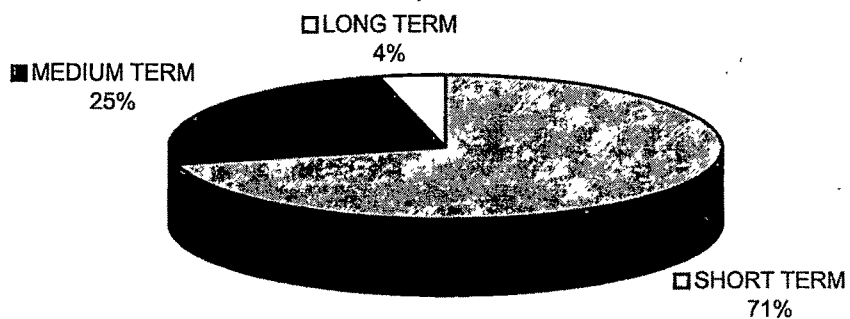
Table No. 7.8 Fixed Asset to Working Capital of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	0 003	0 008	0 006	0.010	0.015	0.021	0 017	0 017	0 019	0.019	0 012
Bhavnagar Nagrik Bank	0 010	0.008	0 008	0 007	0 006	0 006	0 007	0.004	0.003	0 002	0 007
Dahod Urban Bank	0.003	0.004	0 003	0 004	0 004	0.004	0.003	0.012	0.012	0.013	0 005
Godhara City Co-op. Bank	0.027	0.023	0.019	0.017	0 012	0 009	0 008	0 009	0 008	0 008	0.013
The Kalupur Bank	0 008	0.012	0.014	0.010	0.007	0.006	0.007	0.010	0.011	0.010	0 009
Mehsana Urban Bank	0.021	0 035	0 018	0 011	0 011	0.011	0 012	0 012	0 013	0 013	0.017
The Modasa Nagrik Bank	0 020	0.017	0.015	0 013	0.011	0 009	0 008	0 008	0 007	0 009	0.013
The Rajkot Nagrik Bank	0.010	0 009	0 009	0.008	0.006	0.006	0.014	0.013	0 013	0.013	0 010
Sardar Bhiladwala Bank	0.012	0 012	0.012	0 013	0.013	0.010	0.011	0 011	0.011	0.010	0 012
The Surat People's Bank	0.013	0.015	0 021	0 017	0 014	0.014	0 013	0 011	0.010	0 017	0.014

7.4.1.6 Ratio of Fixed Asset to Working Capital

The table no. 7.8 shows the proportion of average fixed assets to average working capital of selected UCBs in Gujarat. This proportion ranges from 0.1 to 0.2 for all the banks under study. However, the proportion of average fixed assets to average working capital is least in the case of Kalupur co-operative bank even though the average amount of furniture and fixture are highest in this bank as observed in the earlier chapter of analysis of asset management.

7.4.2 Liability Structured Ratios

It can be further segregated in to following ratios

■ Own funds to working capital

■ Deposits to working capital

■ Deposit mix-

   ■ Fixed deposits

   ■ Saving deposits

   ■ Current deposits

The Liability Structured Ratios for the selected urban co-operative banks in Gujarat are as follows.

Table No. 7.9 Own funds to Working Capital of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	0 08	0 11	0 11	0.10	0.09	0.08	0.07	0 09	0 09	0 11	0.12	0 13	0 10
Bhavnagar Nagrik Bank	0 05	0 05	0 05	0 04	0.04	0 03	0 03	0.02	0.03	0 03	0.02	0.02	0 03
Dahod Urban Bank	0 06	0 05	0 05	0.05	0 05	0 05	0.04	0.04	0.04	0.04	0.03	0 03	0 04
Godhara City Co-op Bank	0 06	0 05	0.05	0.05	0 05	0.05	0 04	0 04	0 04	0.04	0 02	0.03	0 04
The Kalupur Bank	0.21	0 15	0 18	0.19	0 22	0 18	0.13	0.14	0 16	0.28	0 34	0.34	0.21
Mehsana Urban Bank	0 08	0 09	0 13	0 10	0.07	0 06	0 05	0 05	0 05	0 08	0.13	0.15	0 09
The Modasa Nagrik Bank	0.08	0 08	0 08	0.07	0 07	0 06	0 06	0 06	0.06	0.09	0 09	0 10	0 08
The Rajkot Nagrik Bank	0 20	0 20	0 21	0.21	0.22	0 22	0 21	0.20	0 20	0.24	0 25	0 24	0.22
Sardar Bhiladwala Bank	0 14	0 14	0 14	0 14	0.15	0.16	0.15	0.14	0 15	0 18	0 18	0 20	0 16
The Surat People's Bank	0.18	0.19	0 20	0.19	0 17	0.17	0 15	0.15	0.15	0.13	0 21	0 21	0.17

7.4.2.1 Ratio of Own funds to Working Capital

As per the Co-operatives Societies Act, Own funds means share capital, statutory reserves, reserves created from net profit and excess provision made. The owned funds do not have any specific explicit cost. A higher share of owned funds minimizes the cost of funds and strengthens the buffer for the UCBs. The above table shows the proportion of average own funds to average working capital for the selected UCBs in Gujarat for the period of twelve years from 1992-93 to 2003-04. The highest of such average proportion belongs to Rajkot nagrik sahakari bank followed by Kalupur commercial co-operative bank and Surat people's co-operative bank. Bhavnagar nagrik sahakari bank is the one with least average proportion of,proportion of average own funds to average working capital. In case of all the banks under study, this ratio is increasing initially than falling down for some years and than again increases except in case of Bhavnagar nagrik sahakari bank where it is continuously going down.

Table No. 7.10 Deposits to Working Capital of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	0 79	0.78	0 81	0 81	0 84	0.84	0 84	0 77	0 73	0.70	0.68	0.60	0 76
Bhavnagar Nagrik Bank	0 63	0 59	0.60	0 61	0 61	0 60	0 58	0.54	0.72	0 70	0.69	0 67	0 63
Dahod Urban Bank	0 72	0 66	0 66	0.72	0.77	0 79	0 78	0 78	0.78	0 78	0 76	0.71	0.74
Godhara City Co-op. Bank	0 81	0 78	0.78	0 80	0.82	0 82	0 85	0 86	0.87	0.84	0 83	0 79	0 82
The Kalupur Bank	0 69	0.79	0 75	0.70	0.71	0.72	0 71	0 73	0 64	0 60	0.58	0.60	0 69
Mehsana Urban Bank	0.41	0 35	0.41	0 39	0.32	0.27	0 27	0.23	0.90	0 73	0 65	0.64	0.46
The Modasa Nagrik Bank	0 87	0.86	0.85	0.86	0 87	0 87	0 88	0.88	0 88	0.88	0 85	0 84	0.87
The Rajkot Nagrik Bank	0.80	0 80	0.79	0 79	0.78	0.78	0 79	0 80	0.80	0 76	0.75	0.76	0.78
Sardar Bhiladwala Bank	0 74	0 74	0 74	0 75	0 74	0.76	0.76	0 77	0 75	0 79	0.79	0.77	0 76
The Surat People's Bank	0.70	0.69	0.69	0 70	0 72	0 72	0 74	0.71	0 73	0 73	0 74	0.74	0.72

7.4.2.2 Ratio of Deposits to Working Capital

The table no. 7.10 reveals the proportion of average deposits to average working capital. The average deposits include fixed deposits, saving deposits, current deposits and other deposits. The proportion of average deposits to average working capital ranges from (average) 46 per cent to 87 per cent. This proportion looks more stable in case of Modasa nagrik sahakari bank. Rajkot nagrik sahakari bank, Sardar Bhiladwala Pardi people's co-operative bank and Surat people's co-operative bank. It is most instable in case of Mehsana urban co-operative bank.

7.4.2.3 Deposit Mix

Table No. 7.11 Deposit Mix- Fixed Deposits to total deposits of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	74 83	74 82	74 24	76 34	75 99	77 42	78 89	77 48	77.66	78 28	79 24	75 11	76 69
Bhavnagar Nagrik Bank	69.43	71 57	68.86	75 30	77 74	81.76	83 84	84 32	84 87	83 56	81 74	81.91	78.74
Dahod Urban Bank	76 20	76 73	73.14	79.08	82.14	83 11	82.04	80.39	81.06	78 86	78 32	78 46	79 13
Godhara City Co-op Bank	83.97	82 60	82 99	84.57	83.35	85 03	86 74	86 88	85 80	84 90	80 86	79 55	83 94
The Kalupur Bank	70 58	62 17	72 34	77.65	69 30	80 70	79.85	86.01	87 65	79 72	80 42	79 73	77 18
Mehsana Urban Bank	23 66	27 22	26 36	50.48	50.07	45 03	43 30	50 87	89 60	85.11	84 03	76.36	54.34
The Modasa Nagrik Bank	81.05	78 31	76 88	77.29	80.52	80 38	80 92	81 27	83.38	81 19	80.15	78.78	80 01
The Rajkot Nagrik Bank	56.40	55.86	50.76	52.35	55 86	56 86	56.64	58.29	62 15	75 05	78 58	77.21	61 33
Sardar Bhiladwala Bank	60 04	58 71	54 80	57 08	57 83	57 93	61.39	63.42	68.83	66.86	60.69	58.34	60.49
The Surat People's Bank	57 79	58.47	55 60	59 37	63 13	65.22	69 35	69 31	69 34	67 09	69 97	65.82	64 21

7.4.2.3.1 Ratio of Deposit Mix- Fixed Deposits to total deposits

Fixed deposits are the highest cost bearing funds but require less liquidity. In the above table the average proportion of fixed deposits to total deposits is 83.94 per cent in case of Godhara city co-operative bank, which is the highest where as The Mehsana urban co-operative bank is with the lowest proportion of 54.34 per cent. In table no. 7.11 it is worth noting that Godhara city co-operative bank with a highest average proportion of fixed deposits to total deposits falls is high-risk zone with respect to the liquidity.

Table No. 7.12 **Deposit Mix- Saving Deposits to total deposits of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	21.08	21.07	22.02	19 86	19.80	19.02	18.48	20 09	19 75	18.78	18 43	19 63	19.83
Bhavnagar Nagrik Bank	26 31	24.52	26.60	21 79	19 59	15 83	14 56	14.25	13.93	15.25	17 00	17.00	18 89
Dahod Urban Bank	21.28	20 62	23 15	18 42	15 10	14 18	14.58	15 89	15 84	17 11	18 47	17 76	17.70
Godhara City Co-op. Bank	14 11	15.53	15.57	14 18	15.18	13.90	11.74	11.25	13 01	13 68	17 15	16 48	14.31
The Kalupur Bank	11.23	6.85	9.46	10.51	10.45	8 67	6 56	7.24	5.44	9.12	9 68	11 53	8 90
Mehsana Urban Bank	45.38	39 72	45 36	30 70	21.29	22 00	18.48	22.27	5 27	7 91	8.27	11 57	23 18
The Modasa Nagrik Bank	16 68	17 48	20.37	19.04	17.01	17 24	16 93	16 73	14 74	16.79	18.35	18.83	17 52
The Rajkot Nagrik Bank	20.66	19 84	23.30	23 71	23.94	23.22	21.59	19.23	16.84	18 27	17 39	18 08	20.51
Sardar Bhiladwala Bank	27 17	28.06	29 18	28 85	28 73	27.45	25.52	24.38	22 16	21 36	24 79	26 74	26.20
The Surat People's Bank	24 60	25.62	28.99	26.47	23 72	22 99	19 67	20.96	20.83	22 10	21 31	24 48	23.48

7.4.2.3.2 Ratio of Deposit Mix- Saving Deposits to total deposits

The saving deposits are low cost bearing funds but require more liquidity. During the period of study from the year 1992-93 to 2003-04, Sardar Bhiladwala Pardi peoples' bank has the highest proportion of average saving deposits to total deposits of 26.20 per cent, where as Kalupur co-operative bank has much low proportion of 8.90 per cent. From the table no. 7.12 its is important to note that expect Kalupur co-operative bank the average proportion of saving deposits to total deposits ranges between 14.31 to 26.20. All these banks need to maintain a high degree of liquidity.

Table No. 7.13 **Deposit Mix- Current Deposits to total deposits of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	4 09	4 11	3.73	3.79	4 21	3 56	2 63	2 43	2 60	2 94	2 33	5.27	3.47
Bhavnagar Nagrik Bank	4 26	3 92	4 54	2 91	2.68	2.41	1 60	1 43	1 20	1 19	1 26	1 09	2 37
Dahod Urban Bank	2.52	2 65	3.71	2.49	2 77	2 71	3 38	3 72	3.11	4.03	3.21	3.78	3 17
Godhara City Co-op. Bank	1 92	1 87	1 43	1.24	1 46	1 07	1 52	1 87	1.19	1.41	2 00	3 97	1 75
The Kalupur Bank	18.18	30.99	18 20	11 84	20 24	10 62	13.59	6.75	6 92	11.15	9 90	8.74	13.93
Mehsana Urban Bank	30.96	33.06	28.28	18 82	28 64	32 97	38 22	26.86	5 14	6 98	7.70	12 07	22 47
The Modasa Nagrik Bank	2 27	4 20	2.75	3.67	2 47	2.39	2 16	2.00	1.88	2.02	1.50	2.39	2.47
The Rajkot Nagrik Bank	6 33	6.94	7 06	6 11	6 19	5 85	5.93	5.15	3.82	4.33	4 03	4.70	5 54
Sardar Bhiladwala Bank	12.80	13 23	16.02	14.06	13.44	14.62	13 09	12 20	9.01	11.78	14.52	14 92	13 31
The Surat People's Bank	17 61	15 91	15 41	14 16	13.14	11 79	10 98	9.73	9 83	10.81	8 71	9 71	12 32

7.4.2.3.3 Ratio of Deposit Mix- Current Deposits to total deposits

The current deposits are funds with minimum cost. During the period of study from 1992-1993 to 2003-04 the proportion of

202

average current deposits to total deposits is lowest i.e., 1.75 per cent in case of Godhara city co-operative bank and highest i.e., 22.47 per cent in case of The Mehasana urban co-operative bank.

In order to have clear picture of deposit mix the pie charts are given below. Pie Chart No. 7.11 to 7.20.

Chart No. 7.11
Distribution of Deposits of Anyonya co-operative bank
(1993-94 to 2003-04)

SAVING
20%

CURRENT
3%

FIX & OTH
77%
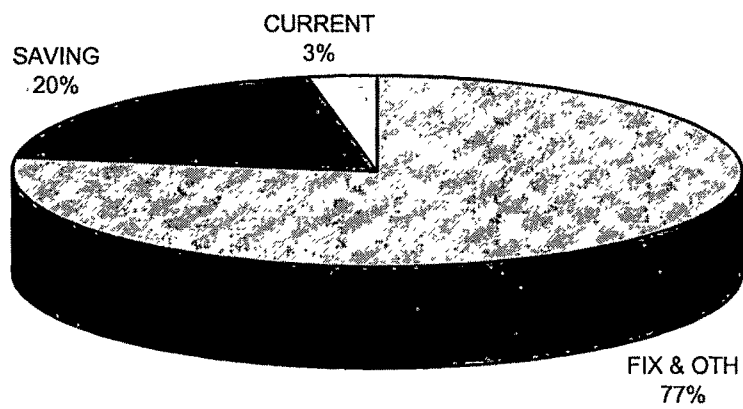
Chart No. 7.12
Distribution of Deposits of Bhavnagar Nagrik Sahakari Bank
(1992-93 to 2003-04)

SAVING
17%

CURRENT
2%

FIX & OTH
81%

204
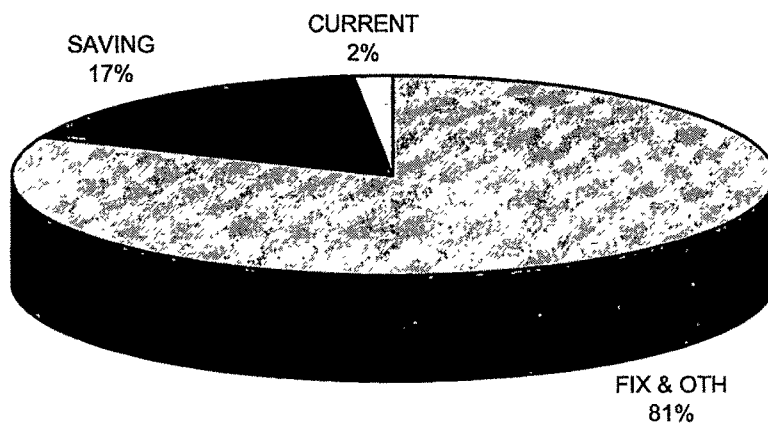
Chart No.7.13
Distribution of Deposits of Dahod Urban Co-operative Bank
(1992-93 to 2003-04)

SAVING
17%

CURRENT
3%

FIX & OTH
80%
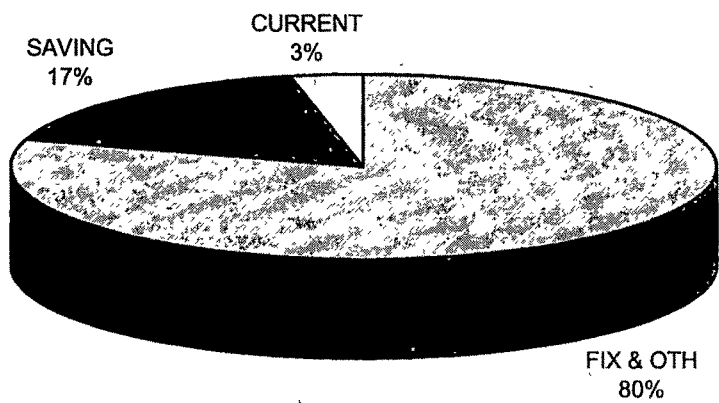
Chart No. 7.14
Distribution of Deposits of Godhara city Co-operative Bank
(1992-93 to 2003-04)

■SAVING
14%

□CURRENT
2%

□FIX & OTH
84%

205
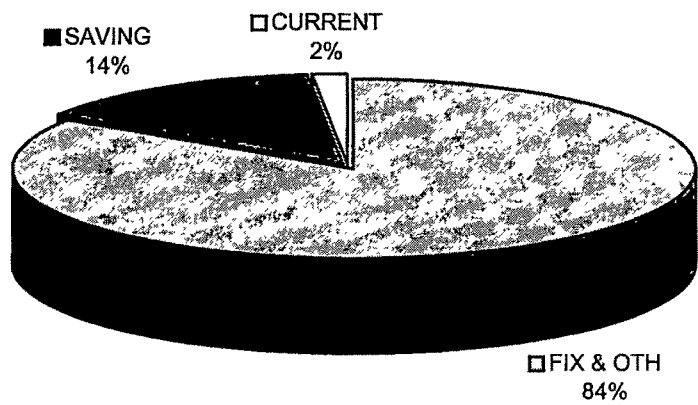
Chart No. 7.15
Distribution of Deposits of Mehsana Urban Co-operative Bank
(1992-93 to 2003-04)

CURRENT
11%

SAVING
10%

FIX & OTH
79%
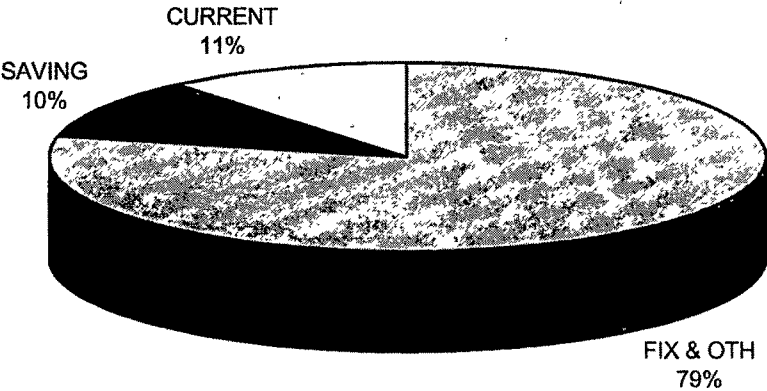
Chart No. 7.16
Distribution of Deposits of Modasa Urban Co-operative Bank
(1992-93 to 2003-04)

■SAVING
17%

□CURRENT
2%

□FIX & OTH

206
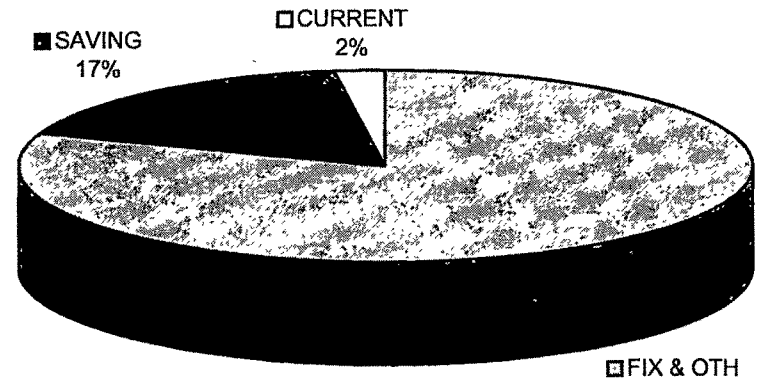
Char No. 7.17
Distribution of Deposits of Rajkot Nagrik Sahakari Bank
(1992-93 to 2003-04)

☐CURRENT
6%

■SAVING
22%

☐FIX & OTH
72%
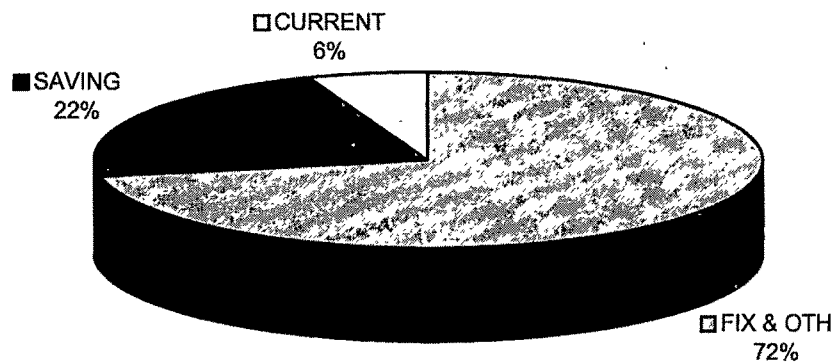
Char No. 7.18
Distribution of Deposits of Sardar Bhiladwala Pardi Peoples'
Co-operative Bank
(1992-93 to 2003-04)

☐CURRENT
13%

■SAVING
25%

☐FIX & OTH
62%
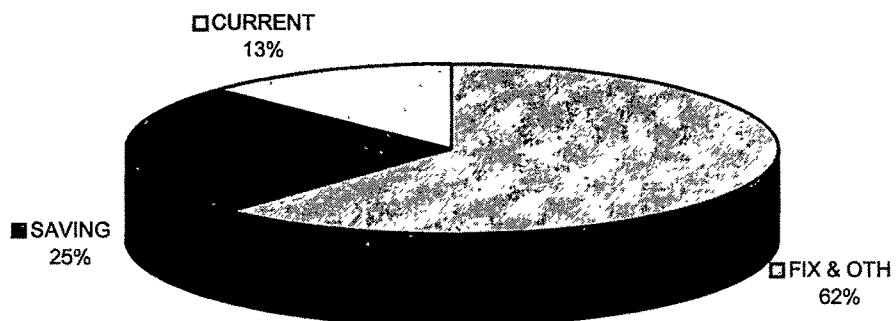
Chart No. 7.19
Distribution of Deposits of Surat Peoples Co-operative Bank
(1992-93 to 2003-04)

□CURRENT
11%

■SAVING
23%

□FIX & OTH
66%
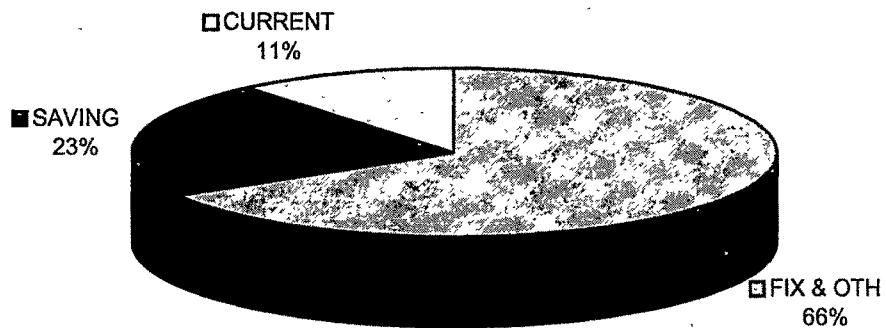
Chart No. 7.20
Distribution of Deposits of Kalupur Commercial Co-operative Bank
(1992-93 to 2003-04)

□CURRENT
12%

■SAVING
8%

□FIX & OTH
80%

208
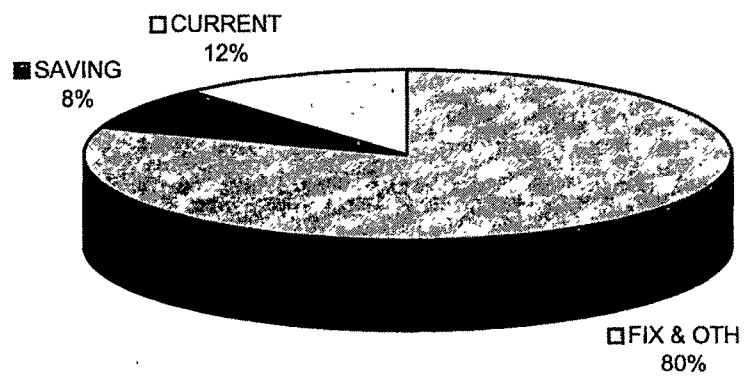
7.4.3 Profitability Structured Ratios

It can be further segregated in to following

- Return on Assets
- Cost of Funds
- Interest Margin to Working capital
- Cost of Management to Working capital

The Profitability Structured Ratios for the selected urban co-operative banks in Gujarat are as follows.

Table No. 7.14   Return on Assets of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG
Anyonya Co-operative Bank	2.20	2.06	1 85	1.32	1 49	1 01	0 43	0.57	0.23	0.40	0 00	0 00	0 96
Bhavnagar Nagrik Bank	2 19	1 87	1 99	1 61	1.33	1 26	0 96	0 81	0 76	0.94	1.02	1 02	1.31
Dahod Urban Bank	1.43	1.06	1 19	1 29	1 21	0 84	0.75	0.75	0 58	0.62	0 59	0.73	0.92
Godhara City Co-op Bank	1 20	1 05	0.68	1 13	1 38	1 24	0 99	0.82	0 81	0 62	0 69	0 76	0 95
The Kalupur Bank	0.89	0.97	1.52	1.82	1.99	1 87	1 19	1.20	1 33	1.89	1 96	1.30	1 49
Mehsana Urban Bank	3.33	3 02	3 69	2.96	1 92	1 93	1 60	1.47	1.24	1 40	0 91	0.93	2.03
The Modasa Nagrik Bank	2 97	2 98	3.21	3.20	3.69	3.37	3.02	3.10	2 82	5.22	4 99	4.11	3 56
The Rajkot Nagrik Bank	0.01	0 01	0 01	0 01	0 01	0 01	0.01	0 01	0 01	0.01	0 01	0 01	0.01
Sardar Bhiladwala Bank	3 67	1 98	2.46	3.58	4.92	4.20	2.81	2.77	1 76	0 50	0.04	1 43	2 51
The Surat People's Bank	2.49˜	2 14	2.11	2 33	2 73	1 83	1.44	1.38	0 82	0.86	1.17	1.38	1 72

7.4.3.1 Ratio of Return on Assets

The ratio of return on assets shows the efficiency of deployment of funds (fixed deposits + saving deposits + borrowings) by the bank. If the ratio increases,the more will be the deployment of funds and if it decreases less will be the deployment of funds. In the above ratio assets means cash balance with the bank, balance with the other banks, money at call and short notice, investments and advances. The above table shows ROA of selected UCBs in Gujarat for a period twelve years. It is calculated as net profit divided by assets. The table reveals that The Modasa nagrik sahakari bank has the highest average ROA followed by Modasa nagrik sahakari bank and the Surat people's co-operative bank. It can be observed that there is big increase in the ROA of Surat people's co-operative bank in the year 2002-03 where as in case of Anyonya co-operative bank and Sardar Bhiladwala Pardi people's bank it is almost reduced to zero in last 1-2 years of the study.

Cost of Funds of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG
Anyonya Co-operative Bank	13 29	12.80	11 95	12 40	13.07	12 72	13.07	13.77	13.58	14.39	15.26	17.73	13 67
Bhavnagar Nagrik Bank	14 03	15 49	13.85	14 09	15 74	15 20	17.27	17.58	13.12	13 13	12 38	11 18	14.42
Dahod Urban Bank	13 94	12 61	12 61	13 51	13 18	12.35	12 13	12 82	12.94	12 04	11.74	11 55	12 62
Godhara City Co-op. Bank	12.90	13.24	13 21	12 77	13 50	13 03	13.51	13.59	13.47	14.40	10.94	11 23	12 98
The Kalupur Bank	12 20	9.20	10 08	9 90	14 07	11.17	11.72	11.73	14 02	17 18	13 61	9.60	12 04
Mehsana Urban Bank	27.45	27.14	31 81	28.40	49 01	75 88	92.16	73 50	20.91	15 80	17 31	15 28	39.55
The Modasa Nagrik Bank	13 53	13 43	14.06	13.84	13 94	14 12	14.31	13 32	12 64	12.32	12 63	11 35	13 29
The Rajkot Nagrik Bank	14 66	14 42	14.76	14 17	13.27	14.14	13.94	12 81	15 41	11 20	10.65	9.66	13 26
Sardar Bhiladwala Bank	12.47	11.76	11 58	11.05	12.08	11.69	11 66	10 95	11 25	12.67	12.57	11.30	11 75
The Surat People's Bank	13 56	13.77	13 68	13 49	12 36	12.57	12 65	13.92	12 63	12 77	11.99	10.62	12 83

7.4.3.2 Ratio of Cost of Funds

The ratio of cost of funds indicates the efficiency of mobilization of funds. If the ratio raises it will show an effective mobilization of funds by the banks where as a decline in the ratio indicates less mobilization of funds by the bank. From the above table it is clear, except Mehsana urban co-operative bank all other UCBs are maintaining the same level of average cost of funds i.e. from 12 to 14. The efficiency of mobilization of funds is more or less same for all UCBs under study for the years from 1992-93 to 2003-04.

Table No. 7.16   Interest Margin to Working capital of Selected UCBs in Gujarat (1992-93 to 2003-04)

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG
Anyonya Co-operative Bank	0 04	0 04	0 04	0.03	0 03	0.03	0 03	0.02	0 02	0.01	0.00	-0.01	0.02
Bhavnagar Nagrik Bank	0 01	0.01	0 01	0 02	0 03	0 03	0.04	0 05	0.04	0 03	0 03	0.02	0.02
Dahod Urban Bank	0 04	0 03	0 03	0.03	0 02	0 01	0 00	0 01	0 02	0.01	0.01	0 00	0 01
Godhara City Co-op. Bank	0 04	0.03	0 02	0 03	0.03	0 04	0.03	0 03	0 03	0.03	0 04	0.03	0 03
The Kalupur Bank	0.02	0 02	0 04	0 04	0 04	0 04	0 02	0.04	0 03	0.05	0.05	0 05	0.04
Mehsana Urban Bank	0 04	0 04	0 05	0 05	0.03	0 03	0 02	0.02	0.02	0 03	0 04	0 03	0 03
The Modasa Nagrik Bank	0 06	0 05	0 06	0.06	0 06	0 05	0.05	0 04	0.04	0 07	0 06	0.05	0 05
The Rajkot Nagrik Bank	0 07	0 06	0 07	0.08	0 08	0.09	0 07	0 06	0 04	0 03	0 03	0 02	0 06
Sardar Bhiladwala Bank	0.05	0 04	0 05	0 05	0 07	0.06	0 05	0 04	0 03	0 02	0 03	0 04	0 05
The Surat People's Bank	0.06	0 05	0 05	0 06	0.07	0 05	0.05	0.04	0.03	0 04	0 05	0 05	0 05

7.4.3.3 Ratio of Interest Margin to Working capital

The ratio of interest margin to working capital shows the over all efficiency of the bank which cover the aspects like effectiveness in deployment of funds, efficiency in mobilization of funds and good

managerial ability. Interest margin is calculated by subtracting the amount of interest paid from the amount of interest received. An increase in such ratio is an indicator of increase in the efficiency of the bank and vise versa. The average of the ratio of interest margin to working capital in the table no. 7.16 reveals that Rajkot nagrik sahakari bank is the most efficient UCB under study considering the managerial ability or effective and efficient mobilization of funds followed by Surat people's bank, Sardar Bhiladwala pardi people's co-operative bank and Modasa urban co-operative bank

Table No. 7.17   **Cost of Management to Working capital of Selected UCBs in Gujarat (1992-93 to 2003-04)**

NAME OF BANK	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG
Anyonya Co-operative Bank	0 02	0 02	0 02	0 02	0.02	0 02	0 02	0.02	0 02	0 02	0.02	0 02	0.02
Bhavnagar Nagrik Bank	0 01	0.01	0.01	0.01	0 01	0 01	0 01	0.01	0.01	0 01	0.01	0.01	0 01
Dahod Urban Bank	0 02	0 02	0 02	0.02	0.02	0.02	0.02	0 01	0.01	0 01	0 01	0 02	0 02
Godhara City Co-op Bank	0 02	0 02	0 02	0.02	0.02	0.02	0.02	0.01	0 01	0.02	0.02	0.02	0 02
The Kalupur Bank	0 01	0 01	0.01	0.01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0.01	0 01
Mehsana Urban Bank	0 01	0 01	0 01	0 01	0 01	0.01	0 01	0 01	0.01	0 01	0 01	0 01	0 01
The Modasa Nagrik Bank	0.02	0.02	0 03	0.02	0 02	0 02	0.02	0 02	0.02	0 02	0 02	0 02	0 02
The Rajkot Nagrik Bank	0.01	0 01	0 01	0 01	0.01	0.01	0 01	0.01	0 01	0 01	0 01	0 01	0 01
Sardar Bhiladwala Bank	0 02	0 02	0.02	0 02	0 02	0.02	0.02	0.02	0 02	0.02	0 02	0 02	0 02
The Surat People's Bank	0.02	0 02	0 02	0.02	0 02	0 02	0 02	0 02	0 02	0.02	0 02	0 02	0 02

7.4.3.4 Ratio of Cost of Management to Working capital

Cost of management in UCBs is comprised of fixed cost like, salaries, printing and stationery, postage and telegram, depreciation, audit fees, legal charges, directors' fees, and rent. This ratio indicates the ability of the banking authorities to manage the affairs of the bank. If the ratio of cost of management to working capital increases it shows the degree of ineffectiveness of the bank to manage it business. However, if the ratio of cost of management to working capital falls it is good for the bank from the point view of managerial ability. The table no. 7.17 works out the managerial ability of the banks under study for a period of twelve years form 1992-93 to 2003-04. All the banks show more or less same level of managerial ability as the average of the ratio ranges from 0.01 to 0.02.

7.5 COST MANAGEMENT OF DEPOSITS AND ADVANCES::

The analysis of asset-liability management can be made on the cost basis. Deposits and Advances are the two major components of the balance sheet. So cost management of deposits and advances is another dimension of study and analysis of the assets and liabilities of the selected urban co-operative banks in Gujarat.

According to Bank Administrative Institute, USA, that has reported on 'Cost in Commercial Banks' in the following words.

"Costing has had its great use and development in the manufacturing field. Consequently there is a natural tendency to apply manufacturing cost concept to banks. For the proper application of the costing process to the banking field, it is necessary to understand the characteristics of the cost in banks." [11]

The cost of deposits and advances in a bank is very similar to the cost of purchase and sales in a manufacturing unit. The cost of purchases in a manufacturing unit can be similar to cost of deposits in a bank and the cost of sales can be similar to the cost of making advances by the banks. As there is a tendency in manufacturing unit to reduce the cost per unit of product produced to become more cost efficient. In the same manner, in case of bank, the interest cost forms substantial part of "cost of purchase and sale", and with the deregulation of interest rate the amount of deposits collected and advances made directly affects the cost i.e. the interest per unit of deposits and interest per unit of advances.

As we know that generally cost comprises of fixed cost and variable cost. It can be viewed in case of banks in the following manner.

7.5.1 Fixed cost: It means cost that does not directly vary with volume of the business. It varies with time rather than the volume of production. In case of UCBs such fixed cost could be in form of salaries to employees, printing and stationary, postage and telegram, rent, depreciation, audit fees, directors fees, legal fees etc.

7.5.2 Variable cost: It means cost that depends up on the volume of the business and varies directly in proportion to the volume of the business. In case of UCBs such variable cost could be in form of interest and commission.

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[11] Ellen R. Girden, Nova University ANOVA, Repeated measures 1992 Sage Publications, New Delhi, pp 1 to 25

Following are the statements of elements of cost for selected UCBs in Gujarat for the period of 1993-94 to 2003-04. All figures are average figures and in terms of rupees in lakhs.

Table No. 7.18   STATEMENT OF ELEMENTS OF COST OF ANYONYA CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost	409 10	438 68	553 10	814.05	1100.39	1419 37	1799 03	2075.57	2070.01	1900 52	1719.38	1299.92
Salaries	97.86	118 49	147.46	183.33	223 47	267 43	304 54	322 63	338 60	355.88	344 02	245 79
Printing & Stationary	4 14	4.71	9 40	10 94	11 48	14 71	13.39	12 38	11 74	12 00	11 19	10 55
Postage & Telegram	1 20	1 40	1 79	2.27	3 85	4.55	3.94	3 89	3 83	3.67	3 47	3.08
Rent	12.62	13 50	13 13	20.60	28.85	33.92	36.40	35.68	37 02	37.13	29.67	27 14
Depreciation	3 84	3 61	4 57	7.21	16.88	31 74	41.84	46 78	51 99	46.66	30 61	25 97
Audit fees	0.10	0.10	0 10	0 10	0.10	0.10	0 10	0.10	0.10	0 12	0 13	0.10
Director's fees	0.53	0 39	0 30	0.56	0.98	0 91	0 91	1.08	0 66	0.25	0.12	0 61
Legal fees	0.08	0.14	0 16	0 12	0 33	1 78	2 66	1 34	0 69	1.37	2.44	1.01
Total fixed cost	120 34	142.32	176 89	225.11	285.92	355.13	403 75	423.87	444 61	457 06	421.63	314 24
TOTAL COST	529.44	581 00	729 99	1039.16	1386 31	1774.49	2202 78	2499.44	2514.62	2357.58	2141 00	1614 16
Interest received	640 27	689.52	825.20	1153 24	1519.12	1885 85	2442 65	2819 90	2537.91	2159 24	1775 48	1677.12
Other income	11.35	15 18	27.45	36.09	36 56	32.36	35.67	48 51	59.50	73 62	88.83	42.28
TOTAL INCOME	651 62	704 70	852 65	1189 33	1555.68	1918.21	2478 32	2868 41	2597 40	2232 86	1899 54	1722 61
Reserves plus profit	122.18	123.70	122 67	150 17	169 37	143.72	275.54	368 97	82.79	-58 53	34.36	139.54
NET PROFIT / LOSS	111.02	115 48	112.74	137.43	154 40	109.05	98.81	89.12	69.66	25 50	-176.28	76.99

In the above statement the variable . cost of Anyonya co-operative bank is going down from the year 2001-02. The fixed cost declines in the year 2003-04. The major contribution in the fixed cost is of salaries to employees. In the year 2003-04 the cost of the Anyonya co-operative bank is more than its total income and thus it faces a net loss of 176.28 lakhs.

Table No. 7.19   STATEMENT OF PROPORTIONS OF ANYONYA CO-OPERATIVE BANK, VADODARA

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0 02	0 02	0 03	0.03	0 02	0 02	0.09	0.11	0 11	0 19	0 19	0 08
Interest received to total	0.98	0.98	0 97	0.97	0 98	0 98	0.91	0 89	0 89	0 81	0 81	0 92
Profit to total deposits	0.03	0 02	0 02	0.02	0 01	0 01	0.01	0 00	0 00	0 00	-0 01	0 01
Variable cost to total deposits	0.10	0 09	0 09	0.10	0 10	0 10	0.11	0.11	0.11	0 12	0 13	0 10
Fixed cost to total deposits	0 03	0 03	0 03	0 03	0 03	0.03	0 02	0 02	0.02	0 03	0 03	0.03
Total cost to total deposits	0.13	0 12	0 12	0 12	0 12	0.12	0.13	0 13	0.14	0 15	0 16	0 13
Profit to total advances	0.05	0.05	0 04	0 03	0.03	0.02	0.01	0.01	0 01	0.00	-0 02	0 02
Variable cost to total	0 18	0.18	0.18	0 19	0.19	0 19	0 19	0 18	0 17	0.17	0.18	0.18
Fixed cost to total advances	0.05	0 06	0.06	0 05	0.05	0.05	0.04	0 04	0 04	0 04	0 04	0.05
Total cost to total advances	0 23	0.23	0.23	0.24	0.25	0.24	0 23	0 22	0 21	0 21	0.22	0.23

The proportions are calculated on the basis of the statement of elements of cost of Anyonya co-operative bank. It is significant that the proportion of other income to total income has a substantial increase from the year 1999-2000. The proportion of variable cost to total cost is increasing and fixed cost to total cost is decreasing during the years of study.

Table No. 7.20   STATEMENT OF ELEMENTS OF COST OF BHAVNAGAR CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	449 28	525 27	661.56	988 04	1412 96	2071.88	2826.19	2874 56	2506 44	2296 83	2137 36	1704 58
Salaries	52.00	60 13	67 39	78 95	90.27	115 65	144 19	155 84	165.34	175.75	185.80	117 39
Printing & Stationary	4.87	3 81	4 05	6.31	6 71	7.40	8 43	8 41	8 48	6.80	6 09	6 49
Postage & Telegram	1 28	1.41	1.22	1 23	1.71	2.01	2 30	3.31	3.72	3.54	4.46	2 38
Rent	5.59	6 67	8 08	9 11	10 01	13 54	20.32	24.31	25 72	26 96	26 53	16.07
Depreciation	2 47	3.51	6.10	8 42	11 09	13.67	17.35	20 97	22.79	23.29	27 60	14 29
Audit fees	0.18	0 10	0 10	0 26	0.38	0 24	0.13	0 22	0 36	0.29	0 20	0 22
Director's fees	0 00	0.00	0 00	0 00	0 00	0 00	0 00	0.00	0.00	0 00	0.00	0 00
Legal fees	0.00	0 00	0 00	0.00	0 00	0 00	0.00	0.00	0.00	0.00	0 00	0 00
Total fixed cost	66 39	75 62	86 93	104 27	120 16	152.50	192.70	213.05	226 40	236 62	250.66	156.84
TOTAL COST	515 67	600 89	748.49	1092 31	1533 12	2224.38	3018 89	3087.60	2732 84	2533 44	2388.01	1861 42
Interest received	692.60	791 32	995 87	1393 15	1906 91	2641.71	3460.49	3546 74	3254.84	3149 23	3005 23	2258 01
Other income	5 30	7 25	8 60	10.28	11 43	12 51	14 01	31.55	89 39	160.58	224 67	52 32
TOTAL INCOME	697 89	798 57	1004 47	1403 42	1918.34	2654 22	3474.50	3578 29	3344.23	3309 81	3229 90	2310 33
Reserves plus profit	182 23	197.69	255.98	311 12	385.22	429.84	455.61	490 69	611.39	776.37	841.89	448.91
NET PROFIT / LOSS	103.85	117.93	135.33	145.96	174 19	197 19	202.87	213.99	239 85	268 79	289.39	189.94

The table no. 7.20 as statement shows the cost elements of Bhavnagar nagrik sahakari bank. In this bank it is clearly observed that there is no directors fees and legal fees as a part of fixed cost. There is a continuous decrease in the total income form the year 2001-02 because of which the net profit of the bank is declining. The average amount of other income has an exceptional increase during last two years of study.

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Table No. 7.21   STATEMENT OF PROPORTIONS OF BHAVNAGAR NAGARIK SAHAKARI BANK, BHAVNAGAR

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0 01	0 01	0.01	0.01	0 01	0 00	0 00	0 01	0 03	0.05	0 07	0 02
Interest received to total income	0.99	0 99	0 99	0.99	0.99	1.00	1 00	0 99	0.97	0.95	0 93	0 98
Profit to total deposits	0 03	0 03	0.02	0 02	0.02	0 01	0.01	0 01	0 01	0.01	0 01	0.02
Variable cost to total deposits	0.12	0 12	0 12	0 13	0 14	0.15	0 16	0 14	0 12	0.11	0 10	0.13
Fixed cost to total deposits	0.02	0 02	0 02	0.01	0.01	0 01	0 01	0 01	0.01	0.01	0.01	0 01
Total cost to total deposits	0.14	0 14	0 13	0 14	0.15	0.16	0.17	0.15	0.13	0 13	0 12	0.14
Profit to total advances	0 03	0 03	0.03	0.03	0 02	0 02	0.02	0 02	0.02	0.03	0.03	0.03
Variable cost to total advances	0.15	0 15	0 15	0.18	0 20	0 25	0 31	0.29	0 24	0 22	0.20	0.21
Fixed cost to total advances	0 02	0 02	0 02	0 02	0 02	0.02	0 02	0 02	0 02	0 02	0 02	0 02
Total cost to total advances	0 17	0.17	0 17	0 19	0 22	0.26	0.33	0 31	0 26	0.24	0 22	0 23

In the above statement the contribution of other income to total income is very less. It reduced to almost nil in the years 1998-99 and 1999-2000. The total cost to total advances is more than the total cost to total deposits and the proportion of profit to total advances is nearly stable at 3 percent.

Table No. 7.22   STATEMENT OF ELEMENTS OF COST OF DAHOD URAN CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	327 94	362 08	436 49	582 81	732 22	877 53	1043 13	1189.31	1219 28	1153.09	1007 46	811 94
Salaries	59.37	73 15	87 61	95 61	106 42	128.46	150 65	153.46	164 12	154 13	165 55	121.68
Printing & Stationary	3.76	3.70	4 75	4 43	4.65	5 52	4 89	5.29	5.27	4.92	3 54	4.61
Postage & Telegram	0.85	1.04	1.17	1.30	1.41	1 69	1.87	1.91	2 05	2.07	2 34	1 61
Rent	3 45	3.71	5 28	6.97	6 98	8 35	10 21	10.66	12 21	12.58	11 29	8 33
Depreciation	0.63	2 14	4.76	14 35	22 24	21.31	21.38	16 40	17 57	22.78	21 28	14 98
Audit fees	0.25	0 27	0 32	0 35	0.42	0.44	0.41	0 38	0 41	0.39	0 68	0 39
Director's fees	0.22	0.22	0 22	0.21	0.20	0 20	0 23	0 23	0.21	0 21	0.19	0 21
Legal fees	0 05	0 07	0.12	0.13	0 33	0 58	0 54	0.74	0 96	1.39	4 84	0.88
Total fixed cost	68 57	84.28	104.21	123.34	142.63	166 52	190 15	189 05	202 78	198 44	209.69	152.69
TOTAL COST	396.51	446 36	540 70	706.15	874 85	1044 05	1233.28	1378 36	1422.06	1351.53	1217 15	964.63
Interest received	510.72	553.40	667 41	872.69	1065.20	1233 82	1388.68	1529 42	1610.07	1569 47	1435 09	1130.54
Other income	10 15	15.61	21 07	21 64	15 91	22.90	58.10	58 54	55 83	147 43	151 95	52 65
TOTAL INCOME	520 87	569 01	688 48	894.32	1081 10	1256 72	1446 78	1587.96	1665.91	1716.90	1587 04	1183.19
Reserves plus profit	124.37	122.66	147.78	188.17	206 26	212 68	213 50	209.61	243 85	365 37	369 89	218.55
NET PROFIT / LOSS	49.75	51.75	66 00	83 00	82 50	80.00	90 00	87 50	85.00	87 50	87 50	77.32

In case of Dahod urban co-operative bank the variable cost that consist of amount of interest and commission paid is decreasing since last two years. However, the total fixed cost is increasing constantly. It is important to observe that the share of other income in case of Dahod urban co-operative bank is increasing and it showed an increase of more than double in the year 2002-03 as compare to the year 2001-02. The net profit of this bank has shown a decline in the year 2001-02 but it has recovered and again showing an increasing trend.

Table No. 7.23   STATEMENT OF PROPORTIONS OF DAHOD URBAN CO-OPERATIVE BANK, DAHOD

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0 02	0.03	0.03	0.03	0.01	0 02	0 04	0 04	0 03	0 09	0 09	0.04
Interest received to total income	0 98	0 97	0.97	0 97	0.99	0 98	0 96	0 96	0.97	0 91	0 91	0.96
Profit to total deposits	0 02	0 02	0 02	0 02	0.01	0 01	0.01	0.01	0.01	0 01	0 01	0.01
Variable cost to total deposits	0.11	0.11	0 11	0 11	0.11	0 10	0 11	0 11	0 10	0.10	0 10	0.11
Fixed cost to total deposits	0.02	0 03	0.03	0.02	0.02	0 02	0 02	0 02	0 02	0 02	0 02	0.02
Total cost to total deposits	0 14	0 14	0.14	0 14	0 13	0 12	0 13	0 13	0 12	0.12	0 12	0.13
Profit to total advances	0 02	0 02	0 02	0 02	0 02	0 02	0 02	0.02	0 01	0 01	0 01	0 02
Variable cost to total advances	0.16	0.15	0 14	0.15	0.16	0.18	0 20	0.22	0 21	0 18	0 16	0 17
Fixed cost to total advances	0.03	0.04	0 03	0 03	0 03	0.03	0 04	0.03	0.03	0 03	0.03	0 03
Total cost to total advances	0 19	0 19	0.18	0 18	0 19	0 21	0.24	0 25	0.24	0 22	0 20	0 21

In table no. 7.23 the proportions based on element of cost are calculated of Dahod urban co-operative bank. In case of Dahod urban co-operative bank it is interesting to observe that almost all ratios remain more or less stable during the entire period of study from the year 1992-94 to 2003-04.

The statement as Table No. 7.24 of element of cost is of Godhara city co-operative bank. The variable cost that includes the amount of interest and commission paid has decline after the year 2001-02. The amount of fixed cost that includes salaries, printing and stationery, postage and telegram rent etc. is increasing continuously. The amount of total income that comprises of fixed and variable cost shows steep rise in the year 1998-99 as compare to the other years in this study. The net profit of Godhara city co-operative bank shows a decline in the year 2002-03 however, it has recovered itself from the position in very next year.

Table No. 7.24   STATEMENT OF ELEMENTS OF COST OF GODHARA CITY CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG
Variable cost (interest paid)	129.63	155.73	181.64	221.81	274 09	362 41	479 58	580 08	629.37	542 99	416 03	361 21
Salaries	23 66	27 82	31.04	36.02	39 40	47 24	57 90	62 48	72 27	81.52	86 12	51.40
Printing & Stationary	2 31	2 45	2 92	3.16	3 21	2 86	2 80	3 53	3.59	3.65	3 56	3 09
Postage & Telegram	0.22	0 32	0 39	0.41	0 45	0 54	0.83	1 11	1 24	1 39	1 51	0 76
Rent	1.12	1 14	1 06	1 48	2 68	3.39	3 87	4.39	5 81	6.50	5 35	3.34
Depreciation	1.18	1 70	2 61	4.46	6 40	7.48	8 15	8 18	8.38	9.85	10 72	6.28
Audit fees	0.10	0.10	0 10	0.10	0.10	0 10	0.10	0.10	0.10	0.43	0 43	0 16
Director's fees	0 14	0 13	0.14	0.13	0 12	0 13	0 13	0 14	0.20	0 23	0.21	0.15
Legal fees	0 17	0.20	0 16	0 18	0 34	0.33	0 18	0 17	0.22	0 53	0.74	0.29
Total fixed cost	28.88	33 85	38 40	45 92	52 68	62 06	73.95	80 10	91.78	104 07	108 62	65 48
TOTAL COST	158.51	189 58	220 04	267 73	326 77	424 47	553 52	660 17	721 15	647.06	524 65	426.69
Interest received	180.61	198.91	235.65	301 55	378 09	488 89	616.70	745.56	816.00	759 68	641 94	487 60
Other income	8 24	17 63	22.43	25.71	19.01	11 41	12.07	11.69	12 29	14.80	18 35	15 78
TOTAL INCOME	188 84	216 54	258 08	327 26	397 10	500 30	628.77	757 24	828.28	774.47	660.29	503.38
Reserves plus profit	30.34	26 97	38.04	59 53	70 34	75 83	75.25	97.07	107.14	127 41	135 64	76.68
NET PROFIT / LOSS	15 92	14.07	17.85	29.50	37 00	40.00	41 38	44 38	41.50	38.50	41.00	32 83

Table No. 7.25   STATEMENT OF PROPORTIONS OF GODHARA CITY CO-OPERATIVE BANK, GODHARA

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0 04	0.08	0 09	0.08	0 05	0 02	0 02	0 02	0 01	0 02	0 03	0.04
Interest received to total income	0.96	0 92	0.91	0 92	0.95	0 98	0 98	0 98	0 99	0 98	0 97	0 96
Profit to total deposits	0 01	0 01	0 01	0 01	0 01	0.01	0 01	0.01	0 01	0 01	0 01	0 01
Variable cost to total deposits	0.10	0 11	0.11	0 11	0 11	0.11	0.12	0 12	0.12	0 10	0 09	0.11
Fixed cost to total deposits	0 02	0 02	0.02	0 02	0.02	0 02	0 02	0.02	0.02	0.02	0.02	0.02
Total cost to total deposits	0.13	0.13	0.13	0.13	0 13	0.13	0 13	0.13	0 14	0 12	0.11	0 13
Profit to total advances	0.02	0.01	0.01	0.02	0 02	0 02	0.02	0 02	0.01	0 01	0 02	0.02
Variable cost to total advances	0 13	0 14	0.14	0 14	0.16	0 19	0 21	0 21	0.21	0.18	0 15	0 17
Fixed cost to total advances	0 03	0.03	0.03	0.03	0 03	0 03	0 03	0 03	0 03	0 04	0 04	0 03
Total cost to total advances	0 16	0.17	0 17	0.17	0 19	0.22	0 24	0 23	0 24	0 22	0 19	0.20

In the above statement of proportions of Godhara city co-operative bank the proportion of other income to total income has decline over a period of time from 1995-96 to 1998-99. It remains steady for three years from 1998-99 to 2000-01. The proportion has reduced to 1 per cent in the year 2001-02 and then after started increasing again. The interesting part of above statement of proportion is that the proportion of profit to total deposits remains same through out the period of study.

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Table No. 7.26   STATEMENT OF ELEMENTS OF COST OF KALUPUR CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	1410.38	1981 27	2590.81	3446 18	4847 46	7845 07	11907.03	14811 24	13048 34	9186.18	7178.74	7113 88
Salaries	253.23	306 12	2242 75	2296 96	516.29	634 30	720 48	824.20	907.75	925 92	962 27	962 75
Printing & Stationary	12.91	15.35	23 60	25 86	30.57	34.17	32 49	35 08	35 22	35 53	42 91	29.42
Postage & Telegram	4 16	5 31	6.36	7.37	10 32	14 87	18 32	27 56	34.11	40 54	44 21	19.37
Rent	23 23	28 20	34 49	43.82	66 96	173.18	283.96	269 64	194 97	165 99	234.34	138 07
Depreciation	22 52	33 36	59 38	91.60	114 35	131 05	152 44	190.31	235 91	275.58	308 57	146 82
Audit fees	0 31	0.23	0 91	1 58	1.60	1.60	1 60	4 20	11 52	12.34	7 84	3 97
Director's fees	0 00	0 00	0.00	0.00	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
Legal fees	2 00	2.85	4 98	3.05	3.19	4 27	2 53	3.70	3.46	4.08	8 15	3.84
Total fixed cost	318.35	391 41	508 94	606 71	743 27	993.41	1211 81	1354 68	1422 92	1459 97	1608 27	965 43
TOTAL COST	1728 72	2372 68	3099.75	4052.89	5590 72	8838.48	13118.84	16165 91	14471.26	10646.15	8787 01	8079 31
Interest received	2106.93	3240.57	4449 39	5762 07	7822 32	11271.88	16728.35	20469 57	18710 96	15580 19	13895 95	10912 56
Other income	122.11	165.87	190.38	220.53	296.31	397 15	694.08	870 63	858 50	810 61	625.83	477 45
TOTAL INCOME	2229 04	3406 44	4639 76	5982 59	8118.63	11669.03	17422 43	21340 20	19569.46	16390.80	14521 78	11390.01
Reserves plus profit	500 32	1033 76	1540,02	1929 71	2527 91	2830.55	4303 59	5174.29	5098 20	5744 65	5734.77	3310 70
NET PROFIT / LOSS	260.12	505.67	784 72	1018 84	1342.56	1607.87	1846.13	2151 17	2284 59	2339.15	2085.45	1475 11

The above statement of element of cost is of The Kalupur commercial co-operative bank. In case of this co-operative bank the variable cost shows an increase till the year 2000-01 during the period of study form 1993-94 to 2003-04 but then after it is reducing. The amount of total fixed cost is continuously rising during the period of study. The amount of other income has increased by 5 times, were as the total income decreases in the last two years of study.

Table No. 7.27   STATEMENT OF PROPORTIONS OF KALUPUR CO-OPERATIVE BANK, AHEMDABAD

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0.06	0.05	0 04	0.04	0 04	0.03	0.04	0.04	0 04	0.05	0 04	0.04
Interest received to total income	0 94	0.95	0 96	0 96	0 96	0.97	0 96	0 96	0 96	0 95	0.96	0 96
Profit to total deposits	0 01	0.02	0.02	0.03	0.03	0 02	0.02	0.02	0.03	0.03	0 03	0 02
Variable cost to total deposits	0 07	0.06	0 07	0.09	0 09	0 09	0.10	0 12	0.14	0.12	0.09	0.10
Fixed cost to total deposits	0.02	0.01	0 01	0 02	0 01	0 01	0 01	0.01	0 02	0.02	0 02	0 01
Total cost to total deposits	0 08	0 07	0 09	0.10	0.11	0.11	0 11	0 13	0 15	0.14	0.11	0.11
Profit to total advances	0 02	0 02	0 03	0 03	0 04	0 03	0 03	0 03	0 04	0.05	0 04	0.03
Variable cost to total advances	0.11	0.10	0.09	0 11	0.14	0 16	0.19	0 20	0.19	0 19	0.15	0.15
Fixed cost to total advances	0.03	0.02	0 02	0.02	0 02	0.02	0 02	0 02	0.02	0 03	0 03	0 02
Total cost to total advances	0.14	0.12	0 11	0 13	0 17	0.18	0 21	0 22	0.22	0.22	0.19	0 17

In case of Kalupur co-operative bank the proportion of other incomes to total income is average 4 per cent and the remaining 96 per cent belongs to the core income of interest and commission. The proportion of total cost to total deposits and proportion of total cost to total advances has increased over a period of time and than reduces but. ˋ not similar for all the years under study.

Table No. 7.28 STATEMENT OF ELEMENTS OF COST OF MEHSANA URBAN CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	159 70	212 16	307 20	838 20	2089 86	4139.81	6552 35	9753 45	9280.30	6224 25	5092.68	4059.09
Salaries	21.91	28 47	38.08	56 98	88 48	133 67	195.08	261 63	311 21	336.09	386.22	168 89
Printing & Stationary	0 00	0.00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	0.00	0 00	0 00
Postage & Telegram	1.44	2.48	4 65	7.13	9.42	14.85	21 42	29 41	32 75	29 28	26.98	16.34
Rent	0 00	0.00	0 04	0 11	0 07	0 23	0 23	0.00	0 08	2 99	7 14	0.99
Depreciation	0.81	0 87	0 99	1.82	3 33	6 33	9 33	12.42	14 85	14 69	14 60	7 27
Audit fees	0 10	0 05	0.15	0.15	0.24	0 74	1 10	1.53	1 98	2.48	2.44	0.99
Director's fees	3 46	4.29	8.27	12.39	17.41	25 73	42 57	60 89	70 30	73.11	70.98	35.40
Legal fees	3 36	3 19	5.18	7.40	8 94	15.50	19 27	22 53	27 24	22 99	17.32	13.90
Total fixed cost	31 06	39 35	57 34	85 96	127 88	197.04	288 98	388.39	458 39	481 62	525.66	243 79
TOTAL COST	190.76	251.50	364 54	924 16	2217 73	4336 84	6841 33	10141 84	9738.69	6705.87	5618 34	4302 87
Interest received	263 31	344.66	501.43	1147.48	2593.40	4889 42	7555 13	10987 63	10835 56	8355 22	7324.61	4981.62
Other income	3.56	4 61	8.24	10.82	16 92	41.56	62 11	82.23	113 00	141 29	176.37	60 06
TOTAL INCOME	266 86	349.27	509 67	1158.30	2610 31	4930.98	7617.24	11069.87	10948 55	8496.51	7500 97	5041.68
Reserves plus profit	76.11	97 77	145.13	234.14	392 58	594.14	775.90	928 03	1209.87	1790.64	1882 63	738 81
NET PROFIT / LOSS	70.57	91.35	120.20	183 64	318.53	489 57	636 92	765.14	865.72	703 02	510 44	432.28

In the above statement of elements of cost of Mehsana urban co-operative bank it is worth noting that the amount of directors' fees is nil in all the years under study. The amount of variable cost is declining in the last two years where as the amount of fixed cost is increasing though out the period of study. The other income has increased from Rs. 3.56 lakhs form the year 1993-94 to Rs 176.37 lakhs up to 2003-04. The net profit of Mehsana urban co-operative bank shows a decline in the last year of study.

In table no. 7.29 of proportions of Mehsana urban co-operative bank we have observed in the earlier table no.7.28 that the other income has increased from Rs. 3.56 lakhs form the year 1993-94 to Rs 176.37 lakhs up to 2003-04 but in table

no.7.29 the proportion of other income to total income on an average remains only 1 per cent of the total income.

Table No. 7.29   STATEMENT OF PROPORTIONS OF MEHSANA URBAN CO-OP BANK, MEHSANA

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0.01	0 01	0.02	0 01	0.01	0.01	0 01	0.01	0 01	0.02	0 02	0 01
Interest received to total income	0 99	0 99	0 98	0.99	0.99	0.99	0 99	0.99	0 99	0 98	0.98	0 99
Profit to total deposits	0 04	0.04	0 04	0 03	0 02	0.02	0 02	0.01	0.02	0.02	0 01	0.02
Variable cost to total deposits	0 08	0 09	0 09	0 10	0 13	0 15	0.17	0 18	0 16	0 14	0 14	0 13
Fixed cost to total deposits	0.02	0 02	0 02	0 01	0.01	0 01	0 01	0 01	0 01	0 01	0.01	0 01
Total cost to total deposits	0 10	0 11	0.11	0.12	0.14	0 16	0.18	0 19	0.17	0.16	0 15	0.14
Profit to total advances	0 05	0.05	0 05	0 04	0 03	0 03	0 02	0.02	0.02	0.02	0.02	0 03
Variable cost to total advances	0 11	0.11	0 13	0.16	0.19	0 21	0 23	0.25	0 21	0.16	0.16	0 17
Fixed cost to total advances	0.02	0.02	0 02	0.02	0 01	0.01	0 01	0 01	0 01	0 01	0.02	0 02
Total cost to total advances	0 13	0.13	0.15	0.18	0 20	0 22	0.24	0 26	0.22	0 17	0.17	0 19

Table No. 7.30   STATEMENT OF ELEMENTS OF COST OF MODASA NAGRIK SAHAKARI BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	129 70	140 46	165.71	210 58	268.36	329 09	375 73	421.47	444.25	442 81	410 40	303 50
Salaries	24 26	29 69	35.32	40 00	46 34	55 98	62 75	65 02	68.30	72 86	78 12	52.60
Printing & Stationary	1.98	2 40	2 69	2.74	2 48	2 09	2 35	2.85	2 57	2.63	2.74	2 50
Postage & Telegram	0.25	0 29	0 40	0.52	0 49	0.49	0.58	0 58	0 77	1.02	0 65	0 55
Rent	3.13	2.94	2.38	2 73	3 48	4 77	4.92	5 09	5.91	5.86	5 21	4.22
Depreciation	1 29	1 75	2 08	2 14	2 31	2.50	3 77	4.98	5.11	4 97	4.71	3 23
Audit fees	0.10	0 10	0.10	0 10	0 14	0.15	0.11	0 11	0 17	0.21	0.30	0 14
Director's fees	0.00	0.00	0.00	0.00	0.00	0 00	0 00	0 00	0.00	0 00	0 00	0 00
Legal fees	0 19	0 12	0 11	0 50	0 44	0.10	0 36	0.70	0.50	0 15	0 59	0.34
Total fixed cost	31.19	37 27	43 07	48.72	55 67	66 07	74.83	79.31	83.31	87 68	92 31	63.58
TOTAL COST	160 89	177 73	208.78	259 29	324.03	395 16	450 56	500 78	527 56	530 49	502 70	367.09
Interest received	203 05	225 77	266.69	335 57	416.28	488 91	544 28	606.83	715.07	757 84	679.69	476.36
Other income	2.79	3 41	3 95	4 88	6 02	6 65	9 71	10.50	8.30	8 79	18 22	7 56
TOTAL INCOME	205.84	229 18	270 64	340 45	422 30	495 57	553 99	617 33	723 37	766 63	697 91	483 93
Reserves plus profit	44 96	51 46	61 86	81 16	98 28	100.41	103 44	116 55	195.81	236.14	195 21	116.84
NET PROFIT / LOSS	43.21	49.23	59.05	77 98	95 80	98 14	100.86	108 19	147.56	179.22	161 61	101 89

The table no.7.30 shows the statement of element of cost of Modasa nagrik sahakari bank. It is important to note that the directors fee remains nil during the entire period of study from the year 1993-94 to 2003-04. The variable cost is increasing till the year 2001-02 and slightly declining in the last two years however the fixed cost is continuously increasing. The total income in every year

of study is higher than the total cost and so the profit is continuously increasing except in the last year i.e. 2003-04. The amount of other income also rises at steady rate till 2000-01 than declines and increases sharply in the last year.

Table No. 7.31   **STATEMENT OF PROPORTIONS OF MODASA NAGARIK SAHAKARI BANK, MODASA**

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.03	0.02
Interest received to total income	0.99	0.99	0.99	0.99	0.99	0 99	0.98	0.98	0.99	0.99	0 97	0.98
Profit to total deposits	0 04	0.04	0 04	0.04	0.04	0 04	0.03	0.03	0.04	0.04	0 04	0.04
Variable cost to total deposits	0 11	0.11	0 11	0.11	0.12	0.12	0.12	0.11	0.11	0.10	0 10	0.11
Fixed cost to total deposits	0.03	0 03	0.03	0.03	0.02	0.02	0 02	0.02	0.02	0.02	0.02	0 02
Total cost to total deposits	0.14	0.14	0.14	0 14	0 14	0.14	0.14	0.13	0.13	0 13	0.12	0.13
Profit to total advances	0 04	0.04	0.05	0.05	0.06	0 06	0.06	0.05	0.06	0.07	0.06	0.05
Variable cost to total advances	0 13	0.13	0.13	0.14	0.15	0 19	0.21	0.20	0.17	0.17	0.16	0.16
Fixed cost to total advances	0.03	0.03	0 03	0.03	0 03	0.04	0.04	0.04	0.03	0.03	0.04	0.04
Total cost to total advances	0.17	0.16	0.17	0.18	0.19	0 22	0.26	0.24	0.21	0.21	0.19	0 20

The above statement of proportions indicates that the fixed and variable cost as a portion of total deposits has almost remained same during the entire period of study from the year 1993-94 to 2003-04. But the fixed and variable cost as a portion to total advances shows variations over the period of study. Moreover, such proportion is high in case of advances as compare to the deposits of Modasa urban co-operative bank.

Table No. 7.32   **STATEMENT OF ELEMENTS OF COST OF SURAT PEOPLES CO-OPERATIVE BANK**

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	1314.46	1446 47	1605.72	2048.16	2759.93	3749.87	4849 44	5529.20	5746 51	5538.12	4996 99	3598.62
Salaries	347.53	436.14	541.43	575 16	650.70	831 11	1095.72	1178 23	1164.29	1294 41	1372.80	862.50
Printing & Stationary	17.25	18.84	22.92	27.95	37 98	50.57	56.16	55.27	48.85	44.46	50.80	39.19
Postage & Telegram	3.33	3.61	3.65	3.96	5.59	7.77	10 00	21.12	28 31	24.25	25.96	12.50
Rent	17.15	22.37	27 71	29.98	29.08	36 13	55.14	69 03	76.41	80 07	91.55	48 60
Depreciation	35.88	42.79	58.06	66.48	65 86	85.28	124 27	141 70	177.82	179.40	206.64	107.65
Audit fees	0 58	0 33	0.48	0.78	0.93	1.10	1 45	2.38	4.56	7.79	11.79	2.92
Director's fees	0.23	0 23	0 20	0.30	0 44	0.65	0.94	1.04	0.99	0.93	0.95	0.62
Legal fees	0 10	0.24	0.49	1 03	3.22	3.87	3 53	3 67	4.43	6.47	6.79	3.07
Total fixed cost	422.03	524.53	654.92	705.63	793.77	1016.46	1347.19	1472.43	1505.64	1637.77	1767.27	1077.06
TOTAL COST	1736.49	1971.00	2260.64	2753.79	3553.70	4766.33	6196.63	7001.63	7252 15	7175.88	6764 26	4675 68
Interest received	2576.53	2782.58	3222.98	4266.10	5372.92	6593 89	8092.80	8678.88	8918.52	9200 07	8934.93	6240.02
Other income	45.72	73.64	100 74	88.39	120 51	147 85	138 06	479 19	882.05	940.95	976 56	363.06
TOTAL INCOME	2622 25	2856.22	3323.72	4354.49	5493.43	6741.73	8230.86	9158.07	9800.57	10155.40	9939.75	6606.95
Reserves plus profit	885.76	885 23	1063.08	1600.70	1939.73	1975.41	2034.23	2156.45	2548 43	2979.52	3175 50	1931 27
NET PROFIT / LOSS	472.77	493.09	590 93	828.96	919.97	862 46	931 66	815.58	675.69	814 75	1063.83	769.97

The given table no.7.32 related to elements of cost of Surat peoples' co-operative bank indicates that salaries is one of the biggest constituents of the fixed cost. Variable cost in form of interest and commission paid is also continuously increasing except in the last two years of study. On the revenue side other income forms a substantial part of the total income. On an average 17.09 per cent of the total income is in the form of other income in the period of study from the year 1993-94 to2003-04. Profit of the bank though fall in the years 2000-01 and 2001-02 but shows an increase there after.

Table No. 7.33   **STATEMENT OF PROPORTIONS OF SURAT PEOPLES CO-OPERATIVE BANK, SURAT**

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0 02	0 03	0.03	0 02	0.02	0 02	0 02	0.05	0 09	0.09	0 10	0.04
Interest received to total income	0 98	0.97	0 97	0 98	0 98	0 98	0 98	0 95	0 91	0.91	0.90	0.96
Profit to total deposits	0 03	0 03	0 03	0 03	0 03	0 02	0 02	0.01	0 01	0.01	0 02	0.02
Variable cost to total deposits	0 09	0 09	0 08	0 08	0 09	0 09	0 09	0 09	0 09	0.09	0 08	0.09
Fixed cost to total deposits	0 03	0 03	0 03	0.03	0.02	0 02	0.03	0 03	0 02	0 03	0.03	0 03
Total cost to total deposits	0 11	0.12	0 12	0.11	0 11	0 11	0 12	0 12	0 11	0 11	0 10	0 11
Profit to total advances	0 06	0.05	0.05	0 07	0 06	0 04	0 04	0 03	0 02	0 03	0 03	0 04
Variable cost to total advances	0 16	0.15	0 14	0.17	0 18	0 17	0 18	0.20	0 20	0 18	0.15	0.17
Fixed cost to total advances	0 05	0.05	0 06	0 06	0 05	0.05	0 05	0.05	0 05	0.05	0 05	0.05
Total cost to total advances	0.22	0 20	0.19	0.23	0.23	0 21	0.23	0 26	0.25	0.23	0.21	0 22

The statement of proportions of Surat peoples' co-operative bank also shows the same trends as shown in the earlier statement of element of cost. The proportion of other income to total income is rising on a constant basis. The ratio of fixed and variable cost to total deposits remains more or less same in the period of study. However, the same ratio when considered in terms of advances they show a deviation especially the variable cost.

The below cost sheet belongs to Sardar Bhiladwala Pardi peoples co-operative bank one of the oldest UCB in south Gujarat. It is important to note that the average directors' fee, which is a part of fixed cost, is a negligible amount i.e. only 0.47 lakhs. The variable cost has decreased in the last two years of study. The other income forms a substantial portion of total income but do not show a steady growth. It interesting to note that the profits of Sardar Bhiladwala Pardi peoples co-operative bank has faced the worst in the year 2002-03 but then after recovered which is clearly indicated by the profit earned in the year 2003-04.

Table No. 7.34   STATEMENT OF ELEMENTS OF COST OF SARDAR BHILADWALA PARDI PEOPLE'S CO-OPERATIVE BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	522.01	576 29	644.83	786 15	983 18	1250 78	1647.22	2095.43	2328.69	2209 74	1911 91	1359 66
Salaries	135 85	152 34	172.90	223 26	271.34	304 10	346 74	376.31	376.58	405.79	430 73	290.54
Printing & Stationary	0 00	0 00	0 00	0.00	0.00	0.59	1.53	1.87	1 04	0.11	0.00	0.47
Postage & Telegram	6 52	6.56	7 62	9.67	13.90	19 65	25 20	31.93	37.98	36 12	32 51	20.69
Rent	0 40	0.38	0 37	0 24	0 18	0.16	0.09	0 64	0 62	1 10	1.65	0.53
Depreciation	2 63	2 69	3.24	4 41	6 07	8 31	10 94	14.93	15 75	11.10	9 20	8 11
Audit fees	0.19	0.10	0 10	0 15	0 15	0.10	0 10	0.10	0.10	0.10	0 11	0.12
Director's fees	11.60	13 09	14 50	22 12	30 98	31.29	36.60	67 65	85 41	69 99	55 78	39 91
Legal fees	7 30	7 35	7.81	8.85	10.21	11 64	13 15	15.72	14 02	10 39	10.56	10.63
Total fixed cost	164 47	182.49	206 54	268.68	332.81	375.82	434.33	509 14	531 48	534.68	540.53	371 00
TOTAL COST	686 48	758.78	851 37	1054.83	1315.99	1626 60	2081 55	2604 57	2860 17	2744.42	2452 43	1730 65
Interest received	912.77	1001.54	1229 07	1657.64	2079 79	2364 06	2849 35	3312 90	3291.03	3059 35	2996.73	2250 38
Other income	23.03	26.23	29.87	35 23	202.38	209.21	67 69	126 73	200 57	140 85	162.57	111 30
TOTAL INCOME	935 80	1027 77	1258.94	1692 87	2282.16	2573 26	2917 04	3439.63	3491.60	3200.19	3159 30	2361 68
Reserves plus profit	249 32	268 99	407 57	638 04	966 17	946 66	835 49	835 06	631.43	455.78	706 87	631 03
NET PROFIT / LOSS	209 49	205.67	330.89	554 68	711 06	670.60	703.17	685.78	365.31	83 16	217.60	430 67

Table No. 7.35   STATEMENT OF PROPORTIONS OF SARDAR BHILADWALA PARDI PEOPLES CO-OPERATIVE BANK, VALSAD DISTRICT

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0.02	0 03	0.02	0 02	0 08	0.08	0.02	0 04	0 06	0 04	0 05	0.04
Interest received to total income	0 98	0 97	0 98	0 98	0.92	0.92	0.98	0.96	0 94	0 96	0.95	0.96
Profit to total deposits	0.03	0.03	0 04	0.05	0.06	0 04	0 03	0.03	0.01	0.00	0 01	0.03
Variable cost to total deposits	0 08	0.08	0.08	0 08	0 08	0.08	0.08	0 08	0.09	0.09	0 08	0 08
Fixed cost to total deposits	0 03	0.02	0 02	0 03	0 03	0.02	0 02	0 02	0.02	0 02	0 02	0.02
Total cost to total deposits	0 11	0 10	0 10	0 10	0.10	0 10	0.10	0.10	0 11	0.11	0.10	0 10
Profit to total advances	0.05	0 04	0 06	0.08	0 09	0 07	0 06	0.04	0.02	0 01	0.02	0.05
Variable cost to total advances	0.12	0 12	0 12	0.12	0.12	0 12	0 13	0 12	0 13	0.14	0.14	0 13
Fixed cost to total advances	0 04	0.04	0 04	0 04	0 04	0 04	0.03	0.03	0.03	0 04	0 04	0.04
Total cost to total advances	0 16	0 16	0.16	0.16	0.16	0.16	0 16	0.15	0 16	0 18	0.19	0.16

The table no. 7.35 of proportions of Sardar Bhiladwala Pardi peoples co-operative bank shows that the variable cost and fixed cost as a proportion of total deposits has remain almost same during the period of study so is the proportion of variable and fixed cost with the total advances. However it is significant to notice that the

proportion of profit to deposits in the year 2002-03 shows nil when the figures are rounded off, where as the actual profit is Rs. 83.16 lakhs.

Table No. 7.36   STATEMENT OF ELEMENTS OF COST OF RAJKOT NAGARIK SAHAKARI BANK

(Rs.in Lakhs)

COST ELEMENTS	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	AVG.
Variable cost (interest paid)	1876.12	2071 99	2393.22	2760.03	3279.03	4018.58	4797 56	6459.12	7003.47	6342 85	6299.36	4300.12
Salaries	291.02	322 13	357.28	416.14	480.65	534.29	584.47	661.24	746.66	797 77	902.53	554.01
Printing & Stationary	16 69	15 59	14.16	14.21	15.90	13.67	12 17	24.03	34 19	28 29	23.87	19.34
Postage & Telegram	9 95	11.85	12.22	11 77	12.81	14 97	17.59	19.64	20.55	23.59	25.95	16.44
Rent	19.73	27.07	31.08	31.97	35.30	44.68	55.31	59.37	64.90	84 95	89.62	49 45
Depreciation	19.44	22.58	27.68	31.73	34.01	35.37	38.70	55.17	70.48	74.96	81.17	44 66
Audit fees	0.88	0.99	0.82	0.85	0.93	0.96	1.33	3 34	9.96	11.84	10 30	3.83
Director's fees	0.15	0 16	0.17	0.18	0 20	0.21	0 23	0 24	0.22	0.18	0.16	0.19
Legal fees	2.01	0 96	0.37	0.23	0.08	0.54	0 81	0 78	1 35	3.10	4 54	1.34
Total fixed cost	359.85	401.31	443.76	507.07	579.86	644.67	710 60	823.79	948 30	1024.65	1138.12	689.27
TOTAL COST	2235 96	2473.30	2836.98	3267.10	3858.89	4663 24	5508.16	7282 90	7951 77	7367.50	7437.48	4989 39
Interest received	3582.47	3938.19	4773.67	5860.81	7281 79	8464.12	9169.55	10416.46	10021 67	9016.98	8674.00	7381.79
Other income	54 63	73.33	92.74	102.39	111.14	138.83	487 24	1088.66	2479.35	2337 28	1729.09	790.42
TOTAL INCOME	3637.10	4011 51	4866.41	5963.20	7392.93	8602.94	9656.78	11505 11	12501.01	11354.26	10403 08	8172.21
Reserves plus profit	1401.14	1538.22	2029 43	2696.10	3534.04	3939 70	4148.63	4222.21	4549.25	3986 76	2965 60	3182.82
NET PROFIT / LOSS	160.79	179.58	206.87	232.57	283.90	381.39	520 63	669.88	822.83	1110.71	1355 05	538.56

The above statement of cost is of Rajkot nagrik sahakari bank one of the scheduled bank in this study. It is also a multi-state UCB. Salaries and rent are the major constituents of the fixed cost for this bank. The other income shows a remarkable growth especially with a big jump in the year 2000-01 where the other income has increased nearly 3 times of the previous year. It is one of the UCB where the profit never decline during the entire period of study.

Table No. 7.37   STATEMENT OF PROPORTIONS OF RAJKOT NAGARIK SAHAKARI BANK, RAJKOT

PROPORTIONS	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Other income to total income	0.01	0.02	0.02	0.02	0.02	0.02	0.05	0.09	0 20	0.20	0 17	0.07
Interest received to total income	0.99	0.98	0.98	0.98	0.98	0.98	0.95	0 91	0.80	0.80	0.83	0 93
Profit to total deposits	0.01	0.01	0 01	0 01	0.01	0 01	0 01	0 01	0.01	0 02	0.02	0 01
Variable cost to total deposits	0.09	0.09	0 09	0.09	0.09	0.10	0 09	0.10	0.10	0.09	0.08	0.09
Fixed cost to total deposits	0 02	0.02	0.02	0.02	0 02	0.02	0.01	0.01	0 01	0.01	0.02	0.02
Total cost to total deposits	0 11	0.11	0 11	0.11	0.11	0 11	0 11	0 11	0.11	0 11	0.10	0.11
Profit to total advances	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0 03	0.01
Variable cost to total advances	0.12	0 12	0.11	0.11	0.13	0.14	0.14	0.14	0.14	0.13	0.14	0.13
Fixed cost to total advances	0.02	0.02	0.02	0 02	0.02	0.02	0.02	0 02	0.02	0.02	0.03	0.02
Total cost to total advances	0.14	0.14	0 13	0.13	0.15	0 17	0 16	0 16	0.16	0 15	0.16	0.15

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As stated earlier regarding the other income of Rajkot nagrik sahakari bank we can observe in the above table of proportions that the other incomes is as high as 20 per cent of the total income in the years 2001-02 and 2002-03. The ratios of profit to total deposits have increased and remain constant in the last two years of the study. The proportion of fixed and variable cost to total deposits is nearly same in all the years of study.

The table no. 7.38 is the summary statement of cost management of deposits and advances of all the UCBs under study for the years from 1993-94 to 2003-04. The table shows the average of all proportions, banks wise as discussed in the statements of proportions earlier. The last column of the above table is important as it reve]s the average proportions of all the banks under study. The column of average indicates the position of UCBs in Gujarat where we can observe that the all the cost and profit proportions with advances are more than the proportions with deposits. The proportion of other income to total income on an average is 11 per cent for all the UCBs in the study.

Table No. 7.38   **COST MANAGEMENT OF DEPOSITS AND ADVANCES FOR SELECTED URBAN CO-OPERATIVE BANKS IN GUJARAT (1993-94 TO 2003-04)**

PROPORTIONS	ANYONYA	B-NAGAR	DAHOD	GODHARA	KALUPUR	MEHSANA	MODASA	RAJKOT	S.B.WALA	SURAT	AVG.
Variable cost to total deposits	0.10	0 13	0.11	0.11	0 10	0.13	0.11	0.09	0.08	0.09	0 11
Variable cost to total advances	0 18	0.21	0.17	0 17	0.15	0 17	0.16	0 13	0 13	0.17	0 16
Fixed cost to total deposits	0 03	0 01	0.02	0 02	0 01	0 01	0.02	0 02	0 02	0.03	0.02
Fixed cost to total advances	0 05	0.02	0 03	0 03	0.02	0 02	0.04	0 02	0 04	0 05	0 03
Total cost to total deposits	0 13	0 14	0 13	0.13	0.11	0 14	0 13	0 11	0.10	0 11	0 12
Total cost to total advances	0.23	0 23	0 21	0 20	0 17	0 19	0 20	0.15	0 16	0 22	0 20
Profit to total deposits	0 01	0 02	0 01	0 01	0.02	0 02	0 04	0.01	0.03	0.02	0 02
Profit to total advances	0 02	0.03	0 02	0.02	0.03	0.03	0 05	0.01	0 05	0.04	0.03
Interest received to total income	0 92	0.98	0 96	0 96	0.96	0 99	0.98	0.93	0 96	0.96	0.89
Other income to total income	0.08	0 02	0 04	0 04	0 04	0 01	0.02	0 07	0.04	0 04	0 11

7.6   ANALYSIS OF COST AND REVENUE:

We can also make a graphical presentation of the performances of these UCBs with respect to fixed cost, variable cost, total cost and total revenue. Where the total cost is equal to fixed cost plus variable cost and total revenue minus total cost is equal to profit of the bank.

It can be inferred that if fixed cost remain constant over a period of time every change in the total cost is the result of change in variable cost. In case of all the UCBs under study we can observe that the fixed cost is increasing which is normal. However, Anyonya co-operative bank is an example where the fixed cost is showing a decline in the year 2003-04 as against 2002-03. From the graphs of cost and revenue curves of these UCBs, it is easily observed that the portion of fixed cost in case of Bhavnagar nagrik sahakari bank, Kalupur commercial co-operative bank and Meshana urban co-operative bank is comparatively less than the other UCBs under study.

However, analysis of each urban co-operative bank under study is as follows

Graph No. 7.1
Cost and Revenue Curves of Anyonya Co-operative Bank
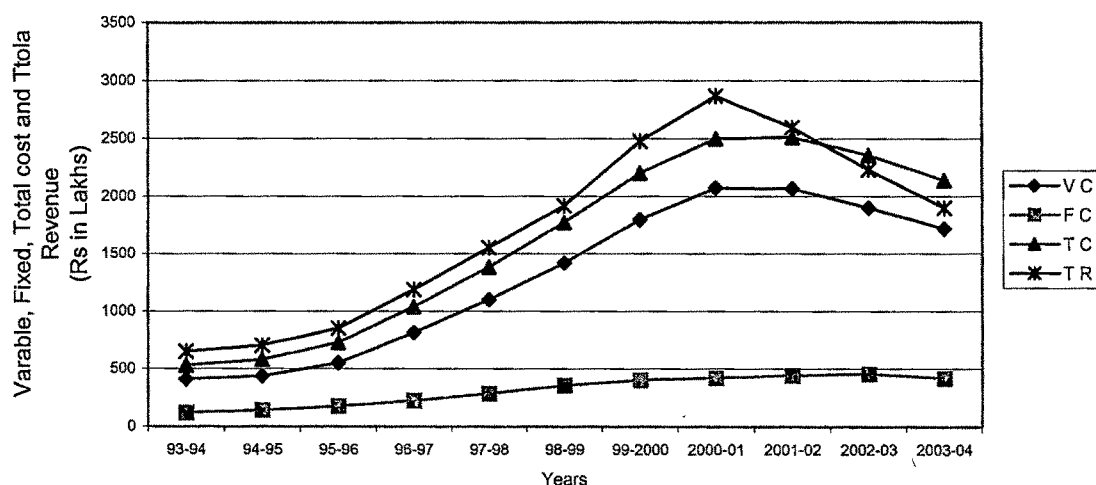
In case of Anyonya co-operative bank total cost is more than total revenue since last two years. The variable cost is showing a decline in the year 2002-03 and 2003-04. Similarly the fixed cost is also showing a fall, which will help the bank in improving its position in future.

Graph No. 7.2
Cost and Revenue Curves of Dahod Urban co-op. Bank
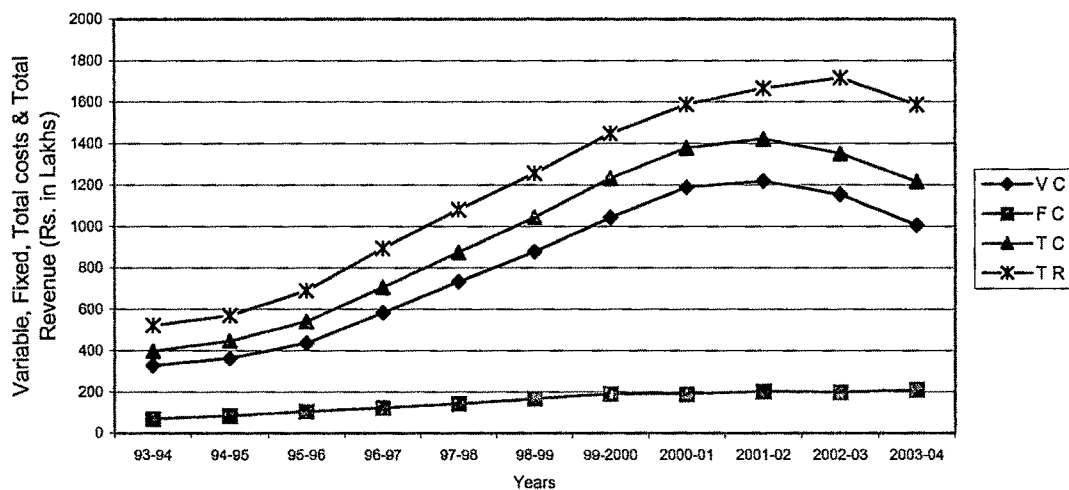
In case of Dahod urban co-operative bank the fixed cost is almost stable since 2001-02. The total revenue curve is showing a decline after 2002-03 however the fall is not as steep as total cost. So the bank is generating profit at an increasing rate.

Graph No. 7.3
Cost and Revenue Curves of Godhara City Co-op. Bank
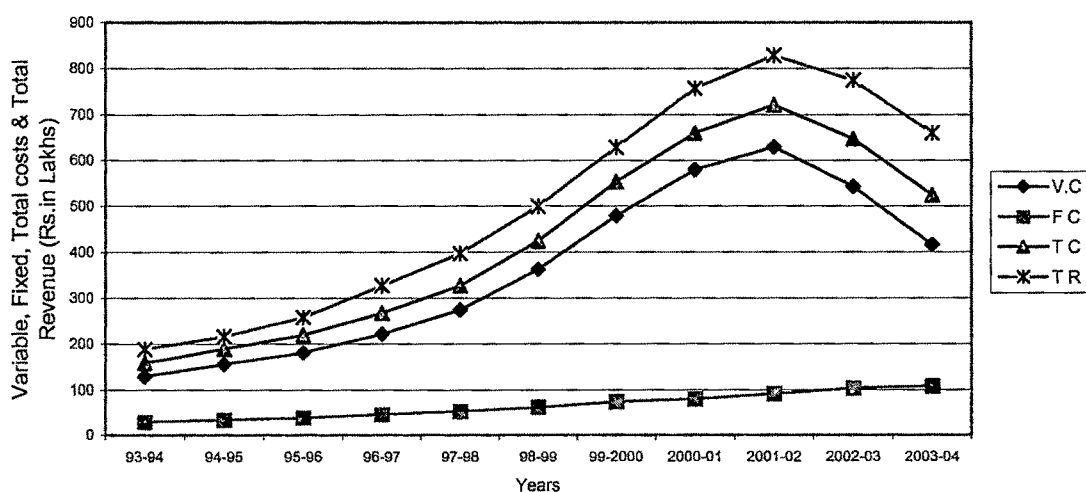
The position of Godhara city co-operative bank is improving as the fixed cost is rising but at a decreasing rate. The total cost and total revenue curve though show a downtrend after the year 2001-02 but the profit of the bank is continuously increasing.

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Graph No. 7.4
Cost and Revenue Curves of Kalupur Co-op. Bank
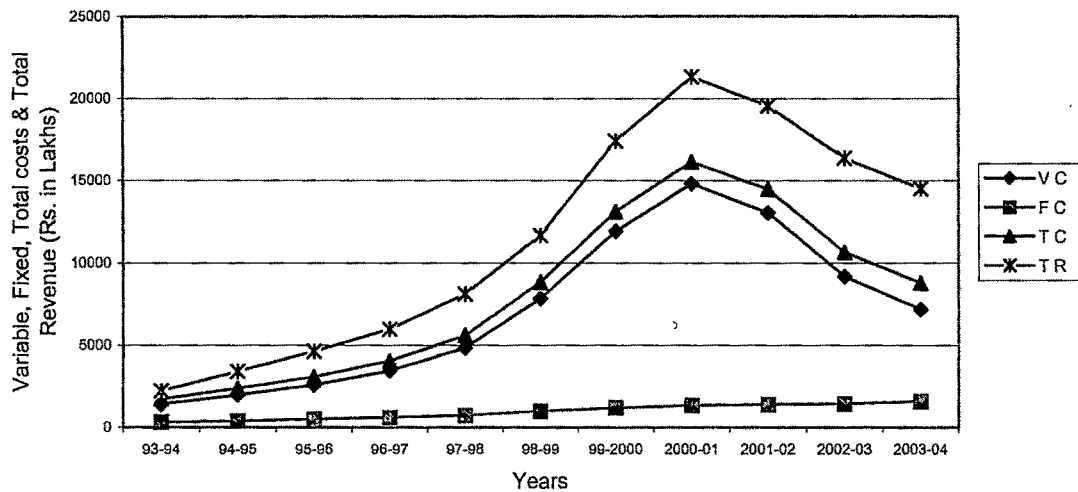
In case of Kalupur co-operative bank the fixed $_\wedge$is increasing continuously, which indicates increase in administrative expenses like salaries, rent, depreciation, audit fees etc. The variable cost declines shapely after the year2000-01 as a result the total cost is al _so falling down. It is important in case of this bank that the profits are continuously increasing even in the period o$\not$decrease in the overall business.

Graph No. 7.5
Cost and Revenue Curves of Mehsana Urban co-op. Bank
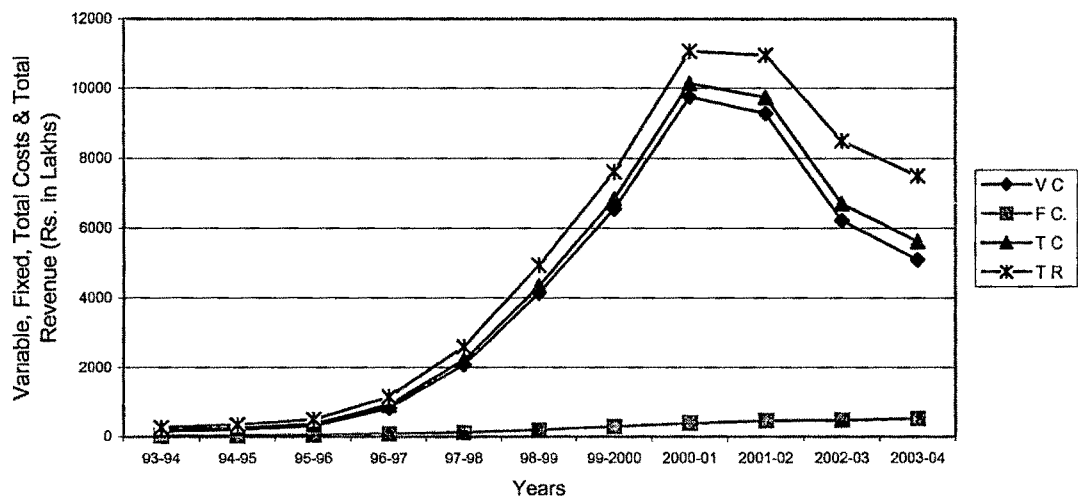
In case of Mesahana urban co-operative bank fixed cost though increasing it is very less compare to other banks. So the total cost in all most near to variable cost. The

difference: between total cost and total revenue is increasing ever year as a result there is a continuous increase in the profits of the bank.

Graph No. 7.6
Cost and Revenue Curves of Modasa Nagrik Sahakari Bank
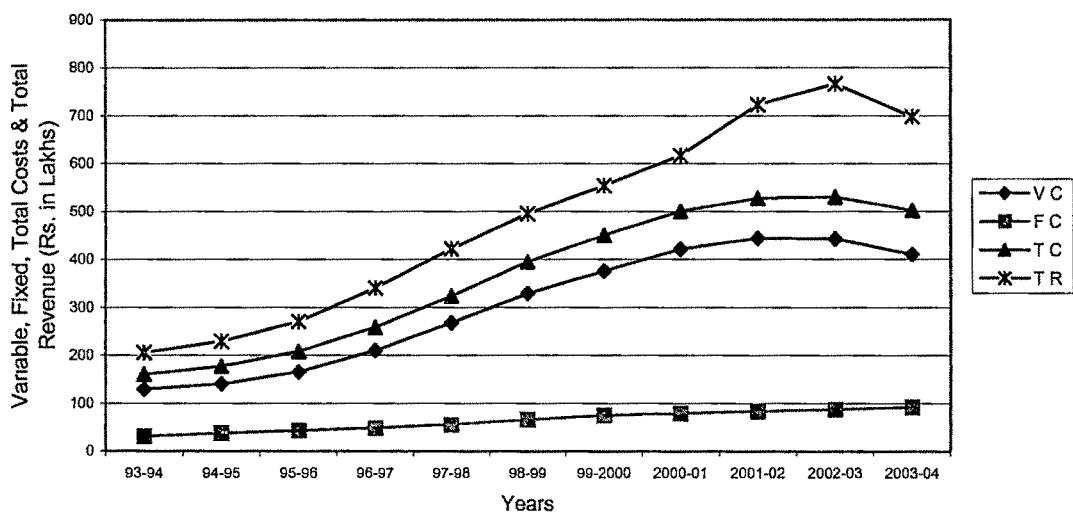
In case of Modasa nagrik sahakari bank the fixed cost is increasing at a decreasing rate. It is important to note that the bank's total revenue is continuously increasing till the year 2002-03 and the small fall is observed only in the last year of the study.

Graph No. 7.7
Cost and Revenue Curves of Surat Peoples' Co-op Bank

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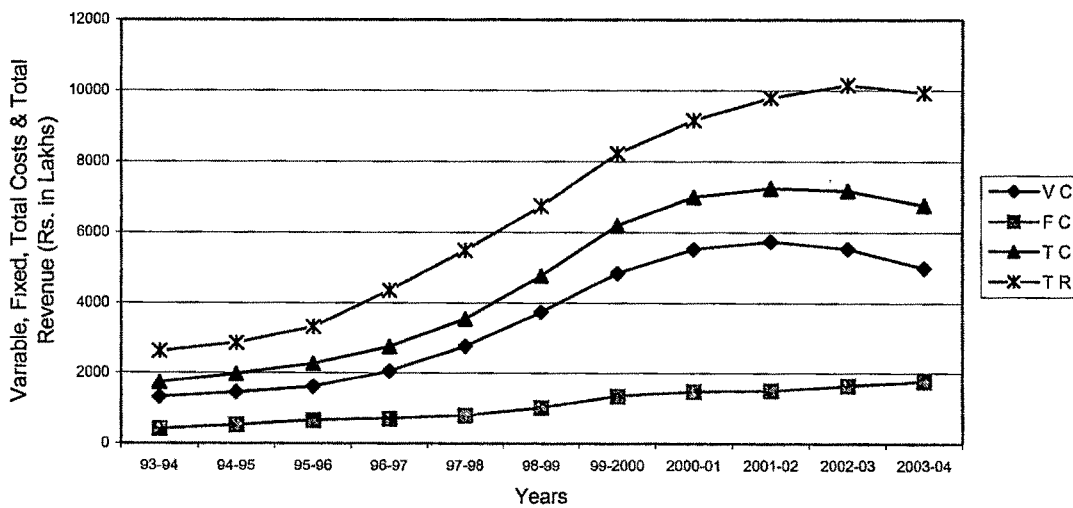
The Surat people's co-operative bank is one of the best bank is terms of earning income. The total revenue of the bank is continuously increasing except with a small decrease in the year2003-04.

Graph No. 7.8
Cost and Revenue Curves of Sardar Bhiladwala Pardi Peoples' Co-op.
Bank
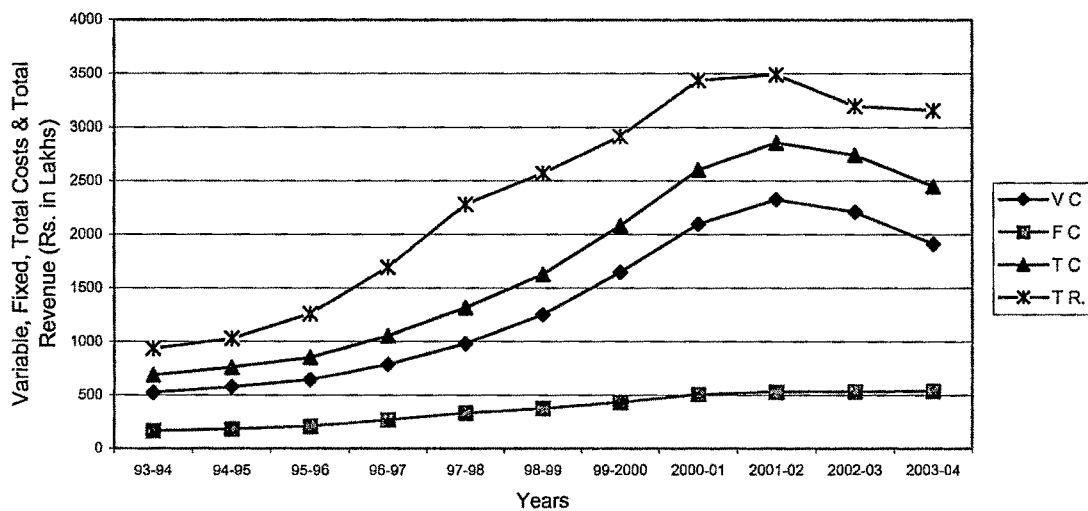
In case of Sardar Bhiladwala pardi people's co-operative bank the total revenue curve is rising but not at the same pace. There is a small decrease in the rate of increase in total revenue from the year 1997-98 to 2000-01. There is a decline in the income in the year 2002-03 but recover in the year 2003-04.

Graph No. 7.9
Cost and Revenue Curves of Rajkot Nagrik Sahakari Bank
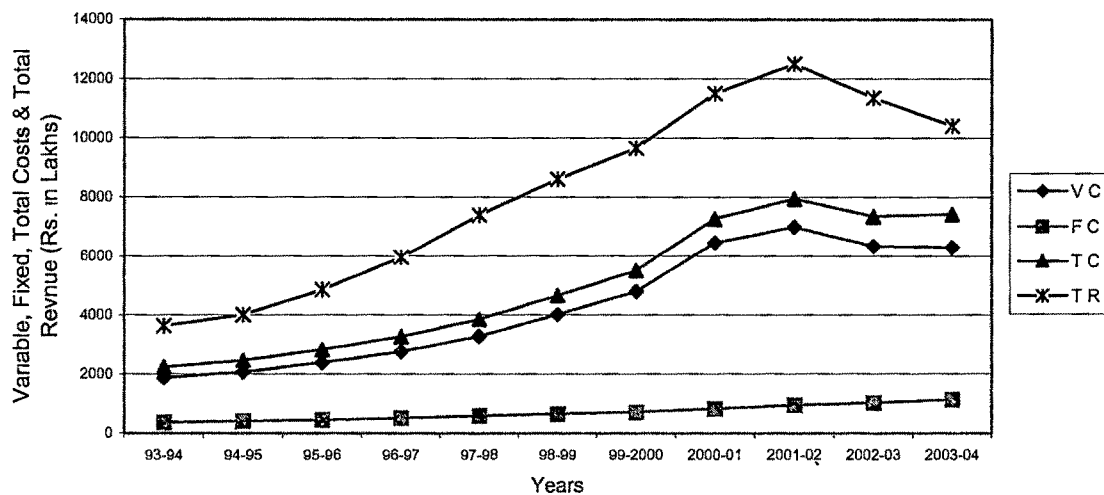
Rajkot nagrik sahakari bank is one of the UCBs with huge profits, which can be observed in the graph no 7.29. The fixed cost of bank is comparatively small and increasing at a declining rate.

Graph No. 7.10
Cost and Revenue Curves of Bhavnagar Nagrik Sahakari Bank
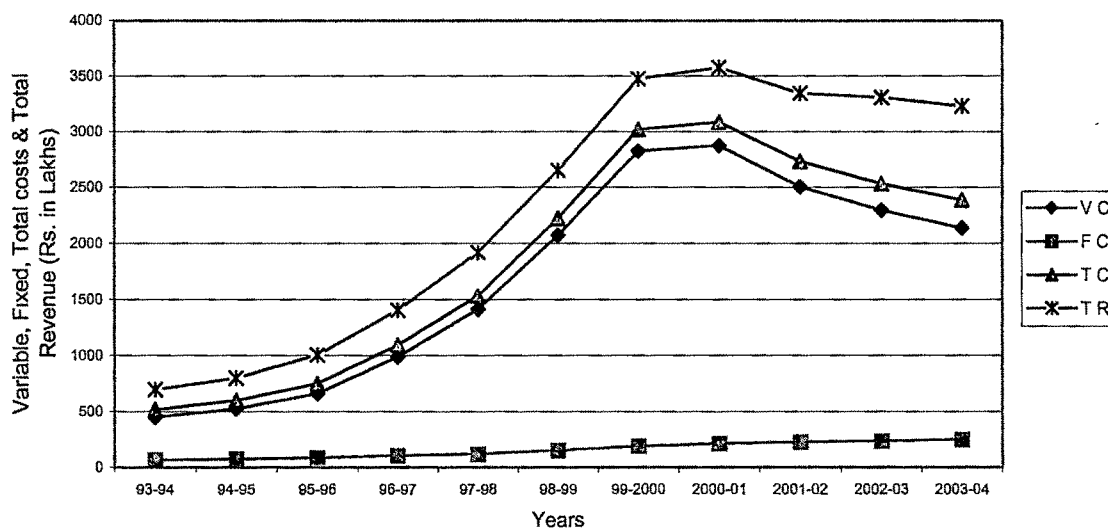
In case of Bhavnagar nagrik sahakari bank the fixed cost is increasing at a declining rate. The total cost of the bank is falling after the year 2000-01 however the total revenue curve shows a recovery from the fall in 2001-02 so the profits started increasing again.

7.7 A SIMPLE METHOD:

There are several methods to find out the management of Assets and Liabilities of a bank as discussed earlier. Most of them are developed keeping in mind the nature and scope of activities of commercial banks. As the nature and scope of activities of co-operative banks as well as their objectives differ from that of commercial banks these methods though advised by RBI are not very popular with the co-operative banks because of

> Non-availability of necessary in-formations.

> Non-availability of competent staff.

> Nature, scope and impact of risks are different.

> Costly system.

> Requires computerization of banking system.

> No appropriate training for the staff.

> Limitations of tools like Structural Liquidity Gap Analysis has a main limitation that it is based on positioning of assets and liabilities on a particular date and change if any in future is not considered.

> In case of Ratio analysis no single liquidity ratio can give a total idea of liquidity position of a particular bank at a point of time. It is also difficult to decided prudent limits for some key liquidity ratios.

> Structural Liquidity Gap Analysis and Key Ratio Analysis do not get in to the changing nature of liquidity management. Where as the assets and liabilities of a bank is continuously changing with change in the business environment.

> No adequate liquidity or investment planning depending upon various situation faced by the banks,

> Due to the diversity and varying size of balance sheet items between banks, it may neither be possible nor may it be necessary to adopt a uniform risks management system.

The design of risk management framework should, therefore, be oriented towards the banks' own requirement dictated by the size and complexity of business.

In case of Co-operative banks a method is needed which is easy to understand and simple to workout. Here is a serious attempt to study the various aspects of assets - liabilities and their management. The method is developed step by step considering rate sensitive assets and liabilities. Deposits are the sensitive liabilities to be met by the liquid and current assets.
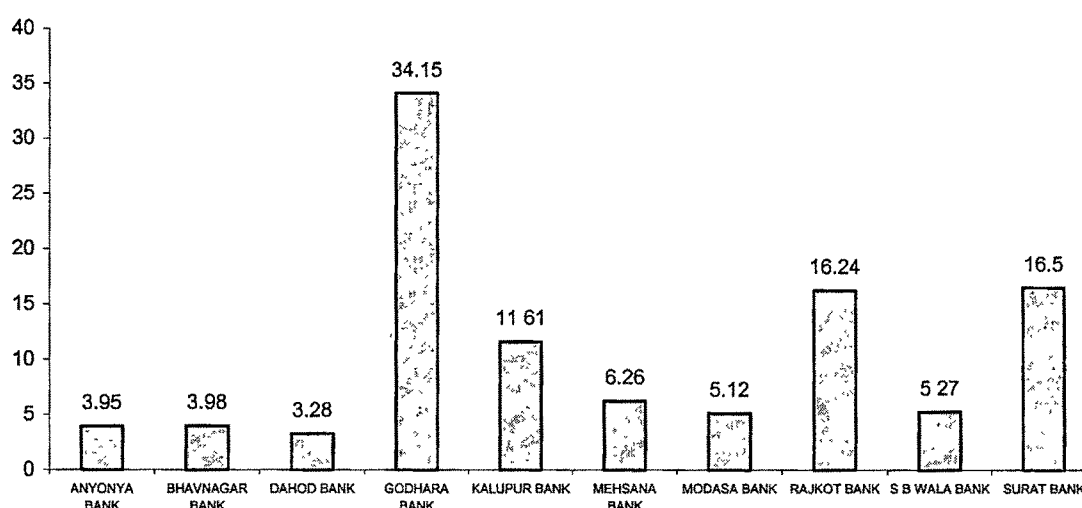
Cash available with the banks

Table No. 7.39   **Proportion of Cash in hand to deposit of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	4 44	4 36	3 78	4 57	4.34	3.33	3.43	3.66	3.84	3.66	4 09	3 95
Bhavnagar Nagrik Bank	4 05	4 03	4.06	4 39	4 12	3 64	3.90	3 91	3 92	3.94	3.86	3 98
Dahod Urban Bank	2.94	3.09	3 32	3 36	3 16	3 06	3 07	3 14	3 41	3 82	3 67	3 28
Godhara City Co-op Bank	32 22	32.49	32.54	34.47	38 63	38 45	35 67	33.03	31.61	30 72	35.83	34 15
The Kalupur Bank	10.51	9 83	9 55	9 32	8 44	7.14	7.01	7.57	11 81	21.00	25.57	11.61
Mehsana Urban Bank	6.97	6 99	6 19	5 07	5 26	4.04	2 06	5 01	8.64	8.89	9 80	6 26
The Modasa Nagrik Bank	4 65	5 15	6.31	7.05	5 44	4 88	4.19	4.24	4 68	4.81	4.89	5.12
The Rajkot Nagrik Bank	17 87	22.04	23.41	21 80	21.36	20.13	17 46	12.59	9 17	7 40	5 41	16 24
Sardar Bhiladwala Bank	4 36	3 82	3 49	3 71	4 06	4.08	6 59	6 88	6 54	7.73	6 75	5 27
The Surat People's Bank	8 70	8.87	9 56	9.85	15 46	20.16	18 02	18 97	22.44	25 04	24 45	16 50

We know that bank keeps only a portion of deposits accepted in form of cash (CRR or SLR) to meet the liquidity requirement. The table no.7.39 and chart no. 7.21 shows available cash in hand with the UCBs under study. Godhara city co-operative bank is the first to keep the highest amount of cash is hand followed by Rajkot Nagrik Sahakari bank and Kalupur Co-operative bank. The least balance of cash is with Dahod urban co-operative bank and Anyonya co-operative bank. However, it is common understanding that banks are not in a position to meet the liquidity requirement fully with the amount of balance of cash in hand only.

Chart No 7.21

Percentage of Cash in hand to Total Deposits of Selected UCBs in Gujarat
(1993-94 to 2003-04)

.**Bank balance available with banks**

Table No. 7.40   **Proportion of Balance with banks to deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	35.11	34.57	24 10	29 25	33 00	32 68	28 88	25 29	24 49	22 72	16 29	27 85
Bhavnagar Nagrik Bank	18 90	39 22	33.93	33 47	44 15	52 47	60.93	64.57	61 94	58.86	57.85	47.85
Dahod Urban Bank	36 45	40 83	29 44	19 33	20.44	27 64	31 13	28 55	29 50	32 96	35 65	30 17
Godhara City Co-op. Bank	0 38	0 52	0 54	0 34	0.31	0.29	0 71	1 73	2.86	4 91	4.76	1.58
The Kalupur Bank	11 41	5 96	3 64	6 78	14 28	20 46	18 66	16 39	11.68	6.40	5.98	11.06
Mehsana Urban Bank	29 52	23 98	26 89	25 84	18 20	15 01	18 13	12.93	6.01	8 20	10 13	17 71
The Modasa Nagrik Bank	34 57	30.70	33 79	34 27	36 64	42 14	43 05	36.86	22.89	15 94	16 05	31 54
The Rajkot Nagrik Bank	6.33	7 63	7 27	3.29	3 69	5.85	7.63	4.76	2.18	5 36	7.54	5.59
Sardar Bhiladwala Bank	39 05	45 55	39 46	25.69	21 58	28 42	35.26	32 70	29 68	29 74	31 64	32 62
The Surat People's Bank	51.18	31 90	25.39	21 12	10 59	3 66	4 46	3 63	1 54	1 40	1 60	14 22

Chart No. 7.22

Percentage of Balance with banks to Total Deposits of Selected UCBs in Gujarat
(1993-94 to 2003-04)
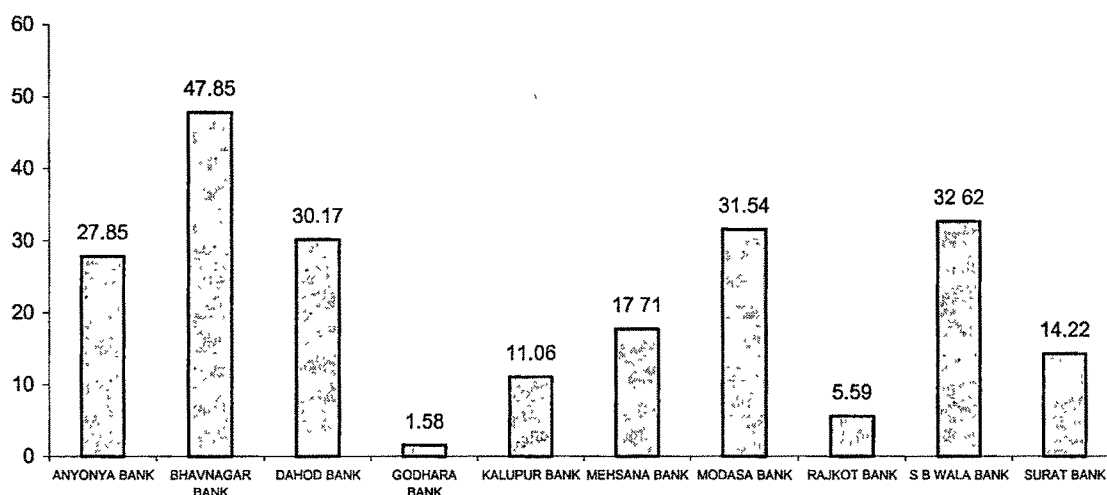
The table no 7.40 and chart no. 7.22 give the position of bank balance of the banks and with the other banks. In this case we can observe that Godhara city co-operative bank, which was having highest balance of cash in hand, now has the least bank balance. If we make a total of cash in hand and the bank balance with the other banks than also most of the banks could meet only the 20 to 25 per cent of the liquidity requirement if the banks faces liquidity crises. This indicates that we require more asset to meet the liability requirement arises at any point of time

Money at calls and short notice available with the banks

Table No. 7.41   **Proportion of Money at calls and short notice to deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	18 54	17 95	22.78	11.52	6 14	4 81	2.06	0 00	0.00	0 00	0 00	7 62
Bhavnagar Nagrik Bank	23 75	1.99	7 22	7 22	1 13	1 13	0 00	0.00	0.00	0.00	0.00	3 86
Dahod Urban Bank	11.46	0 00	0.00	0 00	0 00	0 00	0.00	0.00	0.00	0 24	0.24	1.09
Godhara City Co-op Bank	0 00	0.00	0 00	0.00	0.00	0 00	0 00	0.00	0 00	0 00	0.00	0.00
The Kalupur Bank	1 55	0 00	1 02	5 79	4 93	0 26	0 87	2 31	1 54	1.03	1 03	1.85
Mehsana Urban Bank	0 00	0.00	0 00	0 88	1.94	2 70	1.64	0.00	0 00	0.00	10 00	1.56
The Modasa Nagrik Bank	2 38	1 92	0 00	0.00	0 29	0 29	0 00	0.00	0.71	1 18	0 83	0 69
The Rajkot Nagrik Bank	16.15	7 95	1.58	5 22	5 87	4 09	3 41	0 35	1 52	3 63	5.90	5 06
Sardar Bhiladwala Bank	0 00	0.00	0 00	0 00	0.00	0.00	0.00	0.00	0 00	1.44	1 76	0 29
The Surat People's Bank	0.00	0 00	0.00	0 00	0 00	0.00	0.00	0 00	0 00	0 00	0.49	0.04

Chart No 7.23

**Percentage of Call money to Total Deposits of Selected UCBs in Gujarat
(1993-94 to 2003-04)**
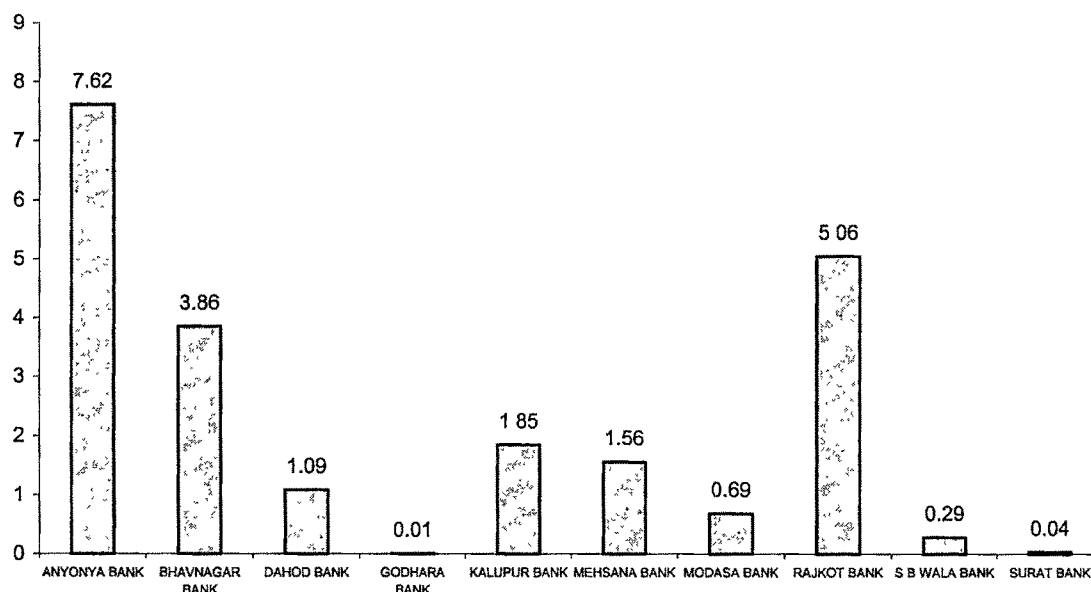
It can be inferred from the table no.7.41 and chart no.7.23 graph that the head of money at call and short notice is not very popular with the urban co-operative banks. The UCBs like Godhara city co-operative bank, Surat Peoples co-operative bank hardly practice the call money as a measure of managing the assets even though it is one of the important short-term measure used for meeting the liquidity requirement.

Core liquid assets available with the banks: this head includes cash in hand, balance with banks and money at calls short notice.

Table No. 7.42   **Proportion of Core liquid assets to Total Deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	58.08	56 88	50.66	45.35	43 48	40.82	34 38	28.94	28 33	26.38	20 37	39.43
Bhavnagar Nagrik Bank	46 70	45 24	45.22	45.07	49 40	57 24	64.83	68.47	65 87	62 80	61.71	55 69
Dahod Urban Bank	50.86	43.91	32 76	22 69	23 60	30 70	34.21	31 68	32 91	37 02	39.56	34.54
Godhara City Co-op Bank	32 60	33 01	33.08	34 81	38.94	38 74	36 38	34.76	34.48	35.63	40 59	35.73
The Kalupur Bank	23.46	15 79	14.21	21 88	27 66	27 85	26 53	26 27	25 03	28.42	32 58	24 52
Mehsana Urban Bank	36 49	30.98	33.09	31 80	25 40	21.74	21.82	17 93	14.65	17.09	29.93	25 54
The Modasa Nagrik Bank	41 60	37 76	40 10	41 32	42 37	47 31	47 24	41.10	28.28	21.93	21.77	37.35
The Rajkot Nagrik Bank	40.36	37 62	32 27	30 30	30.91	30 07	28 51	17.71	12.88	16.39	18 85	26 90
Sardar Bhiladwala Bank	43 41	49 37	42 94	29 41	25 64	32.50	41.84	39 58	36 23	38 91	40 15	38.18
The Surat People's Bank .	59.88	40.77	34 95	30 97	26 05	23.81	22.48	22 60	23 98	26.44	26.54	30 77

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Chart No.7.24

Percentage of Core liquid assets to Total deposits of Selected UCBs in Gujarat
(1993-94 to 2003-04)
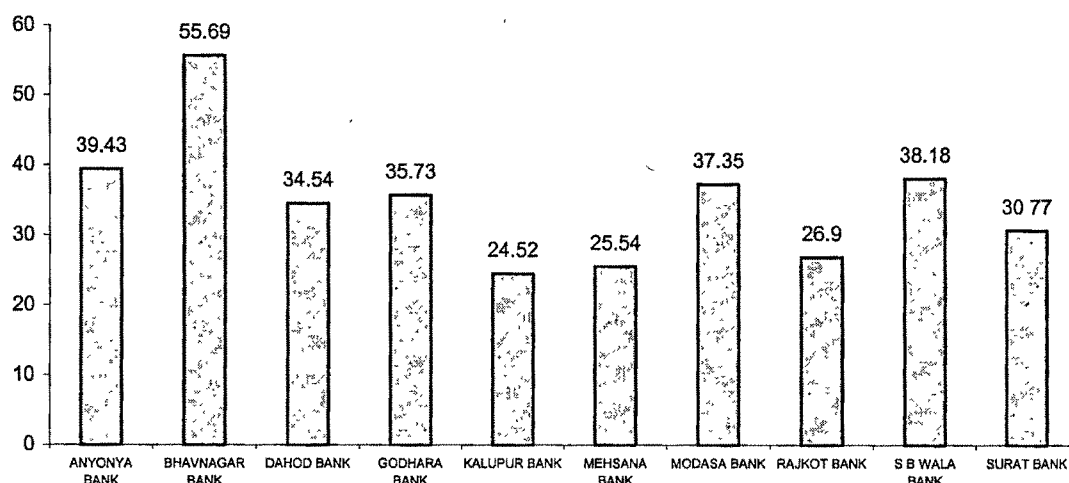
The table no. 7.42 and chart no. 7.24 shows the sum total of cash in hand, balance with the other banks and money at calls and short notice and its proportion to the total deposits. It can be observed that availability of such funds to meet the liquidity requirement ranges from 25 per cent to 55 per cent in case of all UCBs under study. Bhavnagar nagrik sahakari bank has the highest amount of average total balance under this head of Rs. 55.69 Lakhs. However, for most of the banks under study the total of this head is not sufficient to meet the requirement of the sensitive liabilities i.e., deposits on the other side of the balance sheet. So to meet the requirement we can add current asset in form of investments that is easily realizable to meet the liquidity need.

**Core liquid and current assets available with the banks:** this head includes cash in hand, balance with banks, money at calls short notice and investments.

Table No. 7.43 **Proportion of Core liquid and Core current assets to Total Deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	68.86	70 50	67 73	64 17	62 39	59.12	58.82	60 92	57.36	51 44	44 46	60 52
Bhavnagar Nagrik Bank	58 84	61.91	60 52	59.82	62.42	70 06	78.97	84 65	84.70	83 87	86 02	71.98
Dahod Urban Bank	68.23	68 44	58 31	51.15	50.90	61.20	69.62	70.52	71.61	70.49	67 11	64 33
Godhara City Co-op. Bank	35 29	36 60	36 13	37 20	43.77	52 74	55.85	53 48	54 22	56.50	61.04	47.53
The Kalupur Bank	63 95	62.02	49.89	52 15	68 22	74.82	78.76	79 67	84 18	97.02	103.41	74 01
Mehsana Urban Bank	39.97	35 32	40 23	43.05	36.54	33 88	35 27	35.61	41.56	50.08	62 38	41 26
The Modasa Nagrik Bank	42.86	40 21	42 28	43 58	45.50	55 72	64 30	64.46	61 25	63 40	65 20	53 52
The Rajkot Nagrik Bank	55 47	59.09	56 34	58 84	61 22	59 88	60.32	56 26	57 84	63 16	73.26	60.15
Sardar Bhiladwala Bank	51.06	58 93	64.30	63 38	58 32	58.29	60 96	55.54	53.26	59.53	68 34	59.26
The Surat People's Bank	82.36	79.09	75 74	81.51	82.01	74.62	76 90	82 16	81 99	76 89	76 92	79 11

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Chart No. 7.25

Percentage of Core liquid assets and Core current assets to Total Deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)
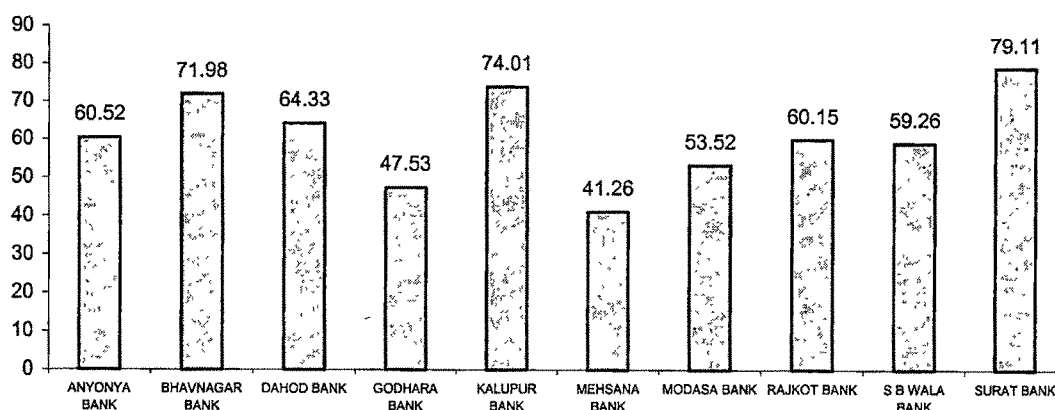
In table no. 7.43 and chart no.7.25 one more head of the asset side is added in form of investment to the earlier total of cash, bank balance and calls. Investments are current assets that are available with in a short period to meet the liquidity requirement standing in the near future. From the above chart it can be derived that except two banks i.e., Godhara city co-operative bank and Meshana urban co-operative bank all other UCBs under study can balance their liquidity side by more than 50 per cent. Surat peoples' co-operative bank can meet such requirement even up to nearly 80 per cent, if needed. However, investments are prone to volatility. Fluctuation in the value of investment in market will be a cause of concern, which will be considered in the further discussion. The derived head of asset is still not covering the core liability on the other side of the balance sheet. So we can consider even the wide option of fixed assets to be used to meet the liquidity needs of these banks

All core assets available with the banks: this head includes cash in hand, balance with banks, money at calls short notice, investments and building-furniture and fixtures.

Table No. 7.44 **Proportion of all Core Assets to Total Deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	69 19	70 84	68 38	64.99	63.34	60 62	61 11	63 50	59.79	54 04	47.42	62.11
Bhavnagar Nagrik Bank	60.27	63 60	62.01	61 11	63 64	71.18	80 02	85 68	85 46	84 35	86.41	73 07
Dahod Urban Bank	68 42	68 76	58 80	51.57	51.32	61.69	70 09	70 97	72 60	72.08	68.86	65 01
Godhara City Co-op Bank	36.37	38.79	39.28	39.78	45 99	54 52	57 10	54.49	55 24	57 52	62 03	49.19
The Kalupur Bank	64.85	62 82	51 25	53 98	69 87	75 98	79.63	80.57	85 50	98 78	105 18	75.31
Mehsana Urban Bank	42 77	37 85	43 66	46.14	38 13	35 12	36 54	36 89	43.01	51 89	64.38	43 31
The Modasa Nagrik Bank	45 03	42.48	44.43	45 41	47.09	57 11	65 47	65 45	62 17	64.27	66 17	55 01
The Rajkot Nagrik Bank	56 77	60.32	57 51	59.95	62 27	60 78	61 09	57.48	59.55	64.91	74 97	61.42
Sardar Bhiladwala Bank	52 66	60 54	65 91	64.98	59.95	59.98	62.46	56 93	54.73	60 94	69.66	60.79
The Surat People's Bank	84.09	81.08	77.82	84 07	84.64	76.73	78 82	84.02	83 61	78 33	78 76	81 09

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Chart No 7.26

Percentage of All core assets to Total Deposits of Selected UCBs in Gujarat (1993-94 to 2003-04)
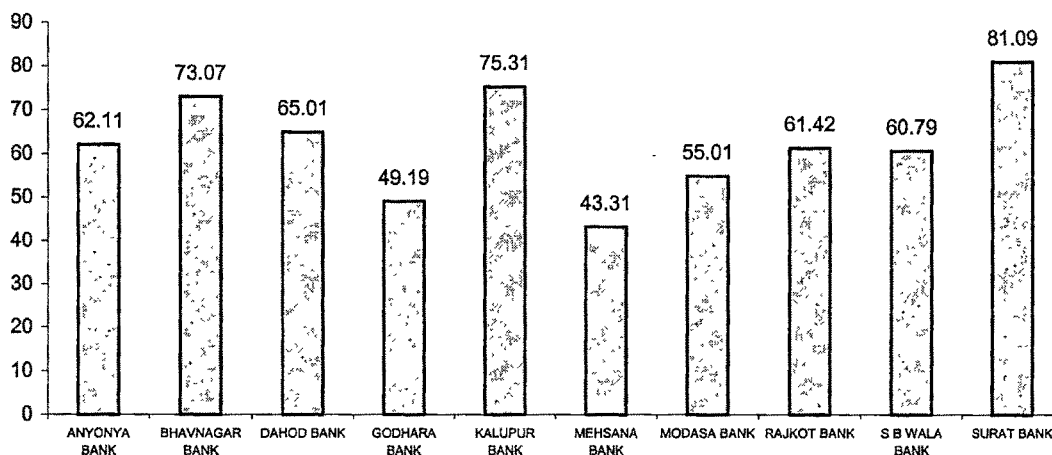
Fixed assets may be considered as measure to meet the liquidity requirement in cases of final settlement. Fixed assets bears cost and affect the profitability of the banks if they are not managed properly. In the wider prospective, management of fixed assets also play an important role in asset liability management even though fixed assets are not immediately available to match the liabilities on the other side, its consideration is worth will from the point view of over all assets and liabilities management.

On the liability side up to now we have taken only deposits as core liability but borrowings could be another one that will affect the need of liquidity requirement. So we can consider borrowings as a part of core liability in the next head to be derived.

All core assets and liabilities available with the banks:

Table No. 7.45   **Proportion of (Cash + Balance with Banks + Calls+ Investments + Fixed Assets) to (Deposits + Borrowings) of Selected UCBs in Gujarat (1993-94 to 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	69.99	71 27	68 62	65.14	64.13	61.44	60 82	63 17	59 83	53 14	47.13	62 24
Bhavnagar Nagrik Bank	60.27	63 60	62.01	61 11	63 64	71 18	80 02	85.68	85.46	84 35	86.41	73 07
Dahod Urban Bank	63 94	61 14	54.02	49 65	49 62	59 33	67.30	69 63	71 86	71 47	67.25	62.29
Godhara City Co-op. Bank	36 37	38 79	39.28	39.78	45 99	54.52	57 10	54.49	55.24	57 52	62.03	49.19
The Kalupur Bank	63.26	61.84	49.64	52.80	68.72	72 23	74 73	73.01	80.03	95.20	99.68	71.92
Mehsana Urban Bank	41 42	37 60	45 08	46.48	38 37	35 40	35 74	35 80	42 30	50.37	61.28	42 71
The Modasa Nagrik Bank	42.72	41 12	43 19	44.32	46 34	55 71	63.80	62.41	59 10	62.76	65 14	53.33
The Rajkot Nagrik Bank	57.95	62 40	60.01	62 70	65 30	64 11	63.00	57 95	59 93	77 89	101.60	66 62
Sardar Bhiladwala Bank	51 32	59 23	64.04	62 86	58.60	59 09	61.14	54 36	52 68	60 34	69.41	59 37
The Surat People's Bank	84 09	81.08	77 82	83.46	82 93	75.39	78 43	83.65	83 40	78 04	78 47	80 61

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Chart No.7.27

**Percentage of Cash balance+Bank balance+Call money+Investments+
Fixed Assets to Total Deposits.+Borrowings of Selected UCBs in
Gujarat (1993-94 to 2003-04)**
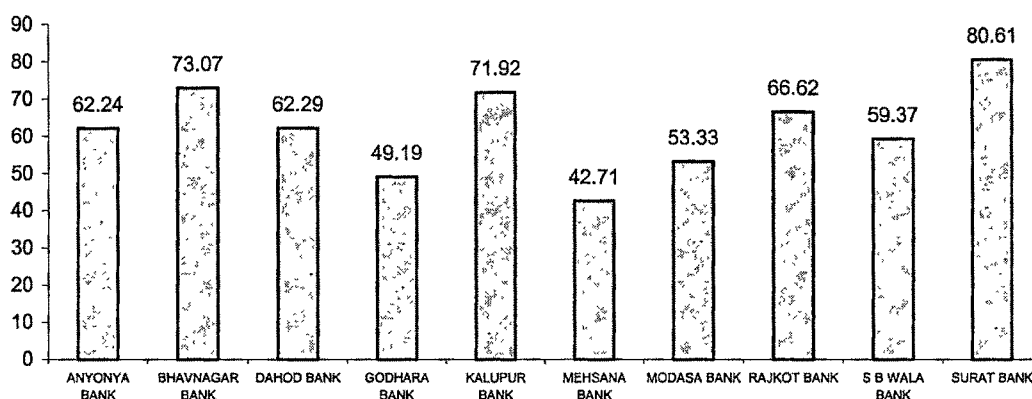
In table no.7.4 and chart no. 7.27 we can observe that borrowings has not created any pressure on the liability of the banks similarly fixed assets don't contribute much to bringing liquidity. As per the above table after considering the borrowings and fixed assets only Surat Peoples' co-operative bank, Bhavnagar nagrik sahakari bank and Kalupur commercial co-operative bank are at better position in terms of management of assets and liabilities. So it is not worthwhile to consider borrowings and fixed assets for measuring liquidity position or management of assets and liabilities.

As stated earlier investment value is market determined. The market value of shares and securities in which the banks are making investing keeps on changing. The market is volatile as a result there is a possibility that when the bank needs money in crises the market may be showing a downtrend and the investments by bank generates less value. The investments are realized at net annual value that may be less than the expectation of the bank. Considering the risk in investment we assume that the net annual value bank of investment realize only 90% of total investments in any given situation i.e. total investments minus 10%

On the liability side of the bank balance sheet deposits are most sensitive. The total deposits consist of fixed deposits, current deposits and saving deposits. The opening balances of fixed deposits at the beginning do not remain same at the end of the year with the banks. According to a study based on the questionnaire prepared and answered by

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various authorities in the co-operative banks 89 out of 118 stated that on an average 25 per cent of the bank's fixed deposits get matured during the year. So while considering the liability side we take only 75 per cent of the fixed deposits i.e., fixed deposits minus 25%.

Table No. 7.46　　**PROPORTION OF ASSET-LIABILITY FOR SELECTED URBAN CO-OPERATIVE BANKS IN GUJARAT (1993-94 TO 2003-04)**

NAME OF BANK	93-94	94-95	95-96	96-97	97-98	98-99	99-2k	2k-01	01-02	02-03	03-04	AVG.
Anyonya Co-operative Bank	1.50	1.56	1 54	1.48	1.44	1 40	1 37	1.37	1.35	1 26	1.11	1.40
Bhavnagar Nagrik Bank	1 16	1 25	1.28	1 33	1.46	1 69	1.97	2 19	2.26	2.20	2 16	1.72
Dahod Urban Bank	1 44	1 53	1.40	1.25	1 25	1 41	1.62	1 69	1 69	1 66	1 60	1.50
Godhara City Co-op Bank	0 91	0.94	0 96	0 98	1 10	1.33	1.50	1.50	1.46	1 44	1 46	1.23
The Kalupur Bank	1 21	1.17	1 11	1.08	1.32	1 65	1 87	2.06	2.12	2.19	2 34	1.65
Mehsana Urban Bank	0 76	0 73	0.79	0 95	0 97	0 90	0 91	0.97	1 06	1.20	1.39	0.97
The Modasa Nagrik Bank	1.07	1 01	0 98	1.03	1 10	1 27	1 50	1 61	1.57	1 51	1 50	1.29
The Rajkot Nagrik Bank	1 11	1 21	1.18	1 16	1.21	1.23	1 26	1 27	1 27	1.35	1.52	1.25
Sardar Bhiladwala Bank	0.86	0 96	1 04	1 06	1 01	0.99	1 07	1 09	1 06	1 08	1.14	1.03
The Surat People's Bank	1.37	1 37	1 29	1.35	1 45	1.43	1.45	1 54	1 57	1 52	1 47	1.44

Chart No 7.28

Proportion of [Cash balance+Bank balance+Call money+(Invesments-10%)] to [(Fixed Deposits - 25%) + Saving Deposits + Current Deposits] of Selected UCBs in Gujarat (1993-94 to 2003-04)
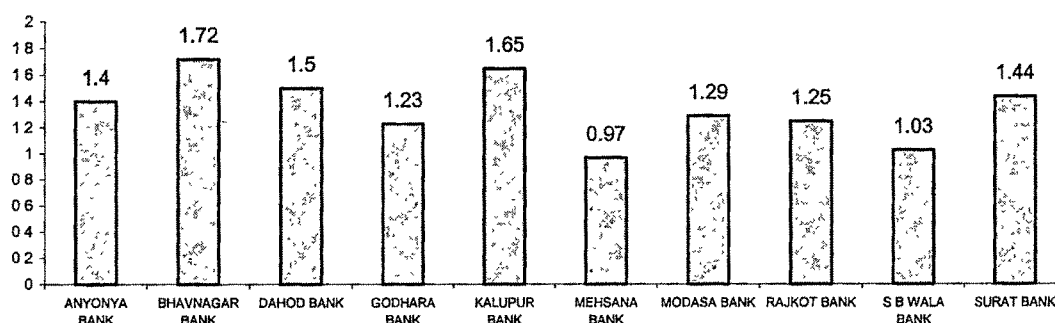

As it is inferred earlier that borrowings on the liability side and fixed assets on the assets side of the balance sheet are not as acute as deposits and advances for the purpose of assets liability management hence are not considered in the table no. 7.46 and chart no. 7.28 for the developing the final base for the calculation of proportion of assets and liabilities. In the above formula only 90 per cent of investments are taken in to

calculation and on liability side we considered 25 per cent of fixed deposits not forming the part of acute and immediate need for the purpose of maintaining the necessary liquidity requirement by the UCBs. This concept give birth to a new equation to maintain the proportion of assets and liabilities which is as follows:

ALM	=	**CASH WITH BANK + BALALNCE WITH OTHER BANKS + CALL AT SHORT NOTICE + (INVESTMENTS-10%)**
		25% OF FIXED DEPOSITS + SAVING DEPOSITS +CURRENT DEPOSITS

Chart No 7.29

Chart No. 7.29
ASSET-LIABILITY MANAGEMENTOF SELECTED UCBs IN GUJARAT
(1992-93 TO 2003-04)
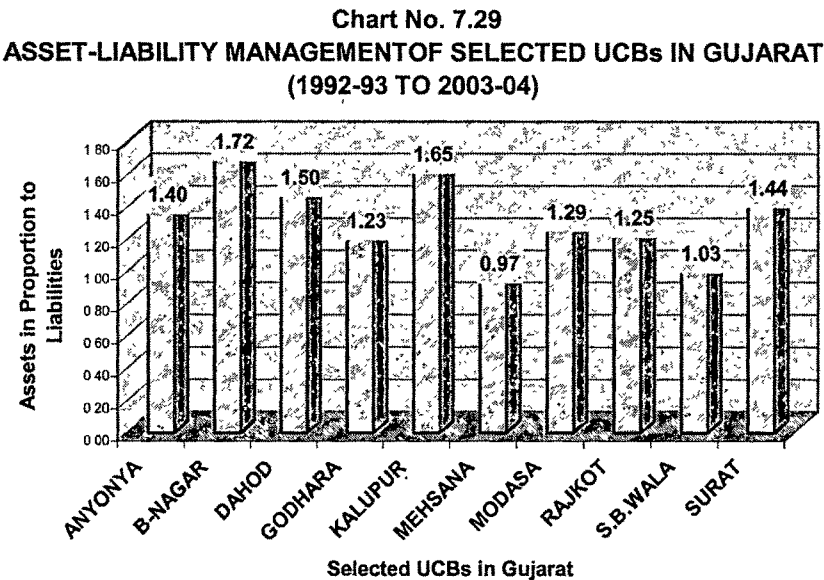
We know that as per the balance sheet equation in all situations the total of asset side must be equal to the liability side. If the proportion of assets is more than the liabilities it shows better position of banks to face the crises of liquidity at any point of time during the period of study from the year 1992-93 to 2003-04. It is easily observed from the chart no 7.29 that for all most all the UCBs under study the proportion of assets to their liabilities is nearly equal to one or more than one. We can also note that five UCBs under study Anyonya co-operative bank, Bhavnagar nagrik sahakari bank, Dahod urban co-operative bank, Kalupur commercial co-operative bank and Surat peoples' co-operative bank are such where the assets are placed at as high as 1.5 times of its liabilities. Other UCBs like Godhara city co-operative bank, Mehsana urban co-operative bank, Modasa urban co-operative bank, Rajkot nagrik sahakari bank and Sardar Bhiladwala Pardi

Peoples co-operative bank are maintaining the Rate Sensitive Assets neck to neck with the Rate Sensitive Liabilities.

The position of assets and liabilities based on the new formula for all UCBs under study from the year 1992-93 to 2003-04 is given below from Chart No. 7.30 to 7.39.

Chart No.7.30
ASSET-LIABILITY MANAGEMENT
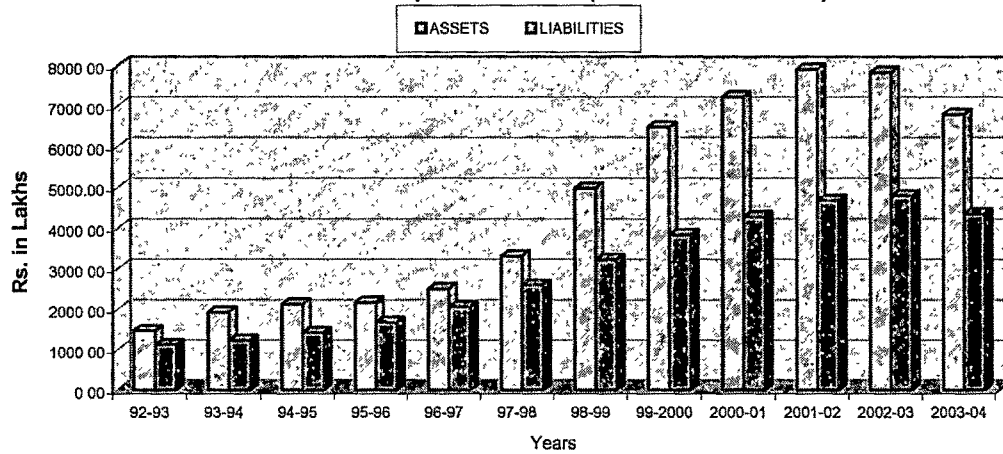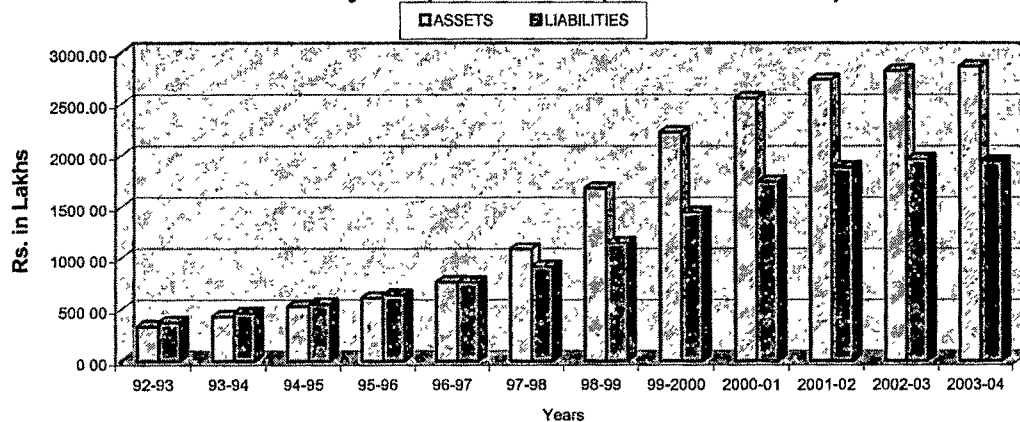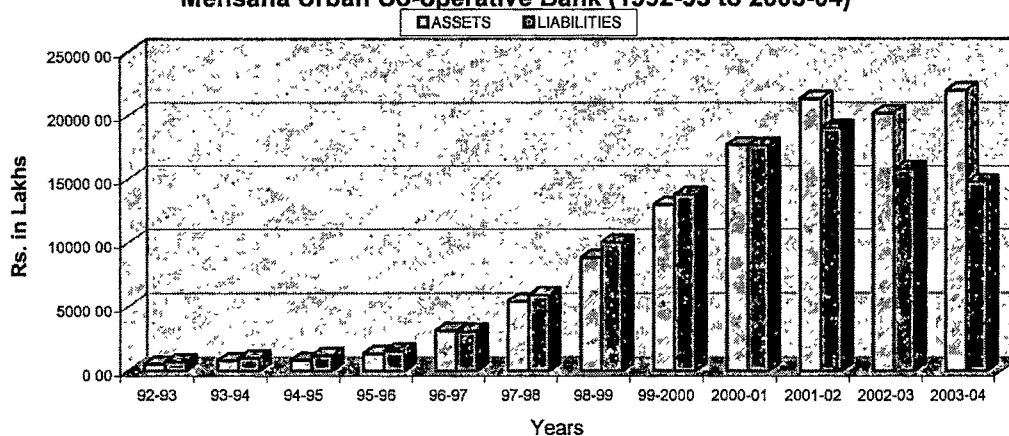**Anyonya Co-operative Bank (1992-93 to 2003-04)**
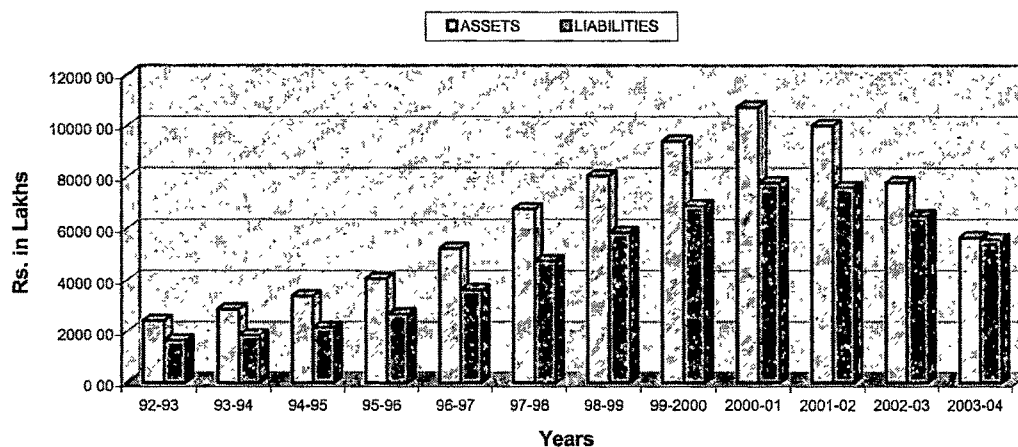
Chart No. 7.31
ASSET-LIABILITY MANAGEMENT
Bhavnagar Nagrik Sahakari Bank (1992-93 to 2003-04)
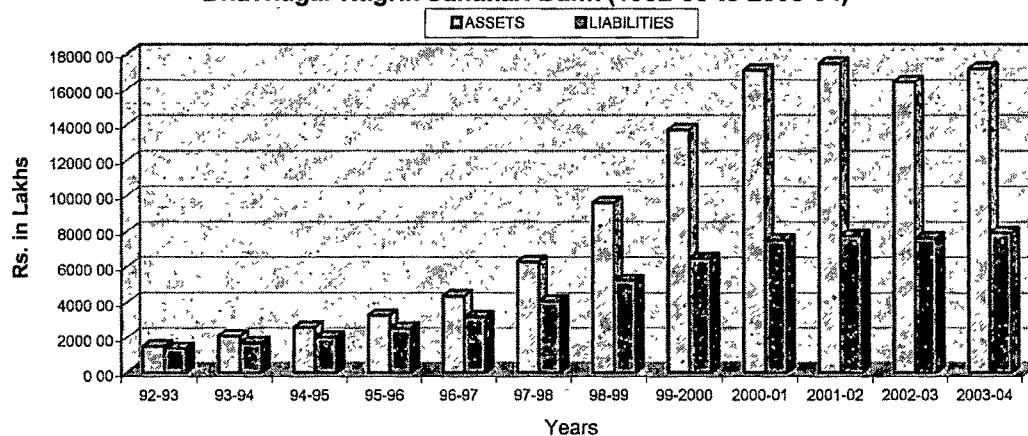
Chart No 7.32
ASSET-LIABILITY MANAGEMENT
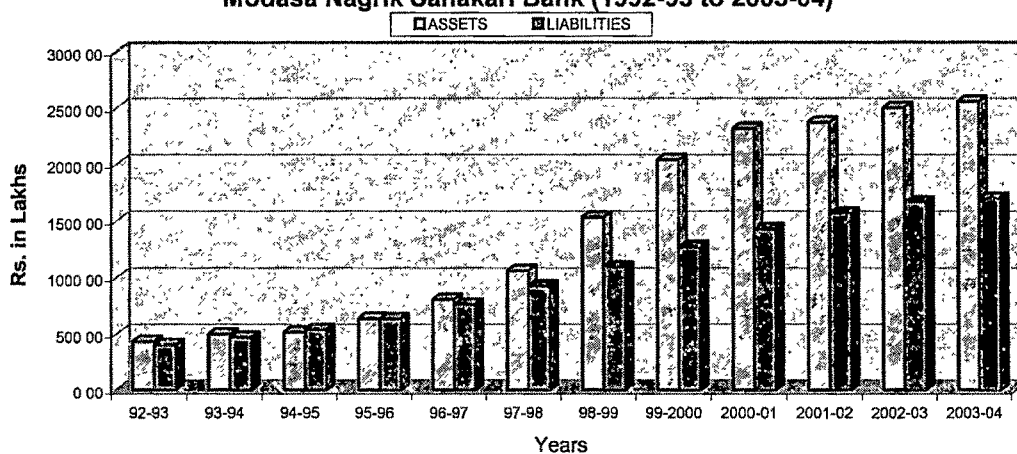**Dahod Urban Co-operative Bank (1992-93 to 2003-04)**

Chart No. 7.33
ASSET-LIABILITY MANAGEMENT
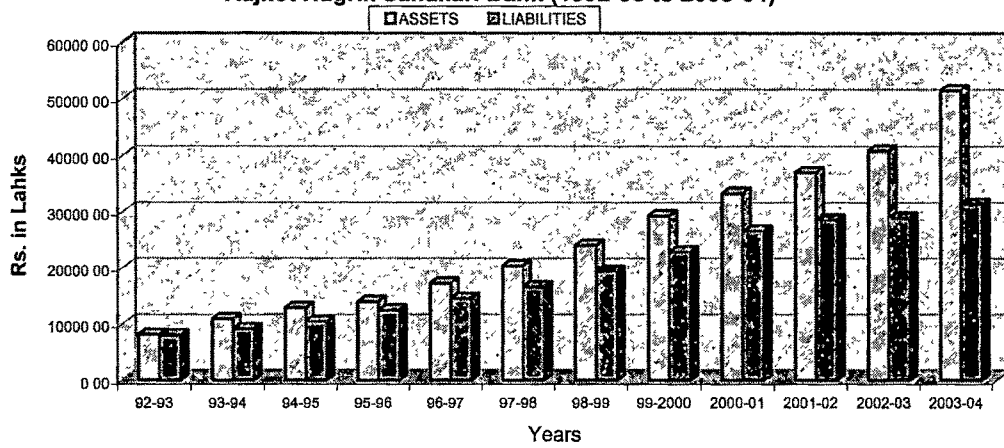**Godhara City Co-operative Bank (1992-93 to 2003-04)**

Chart No. 7.34
ASSET-LIABILITY MANAGEMENT
Mehsana Urban Co-operative Bank (1992-93 to 2003-04)

Legend: ASSETS, LIABILITIES

Y-axis: Rs. in Lakhs (0 00, 5000 00, 10000 00, 15000 00, 20000 00, 25000 00)

X-axis (Years): 92-93, 93-94, 94-95, 95-96, 96-97, 97-98, 98-99, 99-2000, 2000-01, 2001-02, 2002-03, 2003-04

Chart No. 7.35
ASSET-LIABILITY MANAGEMENT
Modasa Nagrik Sahakari Bank (1992-93 to 2003-04)

Legend: ASSETS, LIABILITIES

Y-axis: Rs. in Lakhs (0 00, 500 00, 1000 00, 1500 00, 2000 00, 2500 00, 3000 00)

X-axis (Years): 92-93, 93-94, 94-95, 95-96, 96-97, 97-98, 98-99, 99-2000, 2000-01, 2001-02, 2002-03, 2003-04
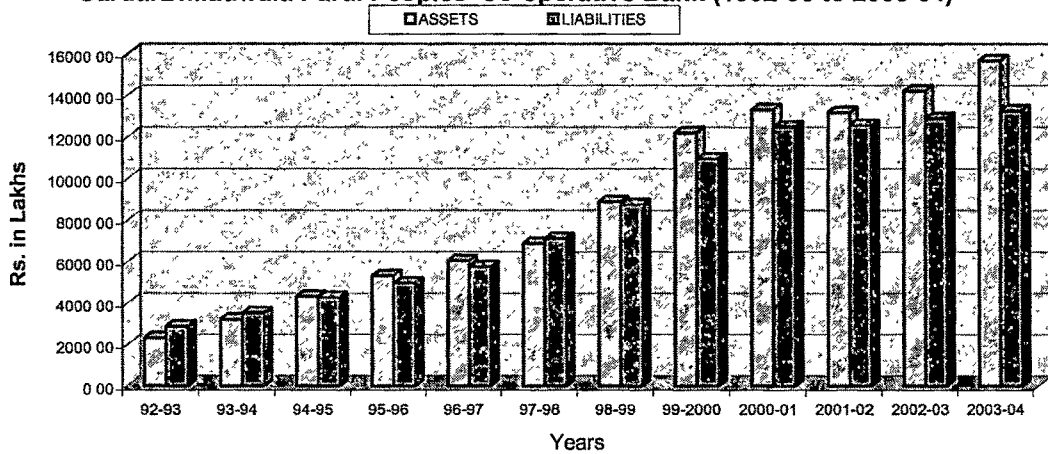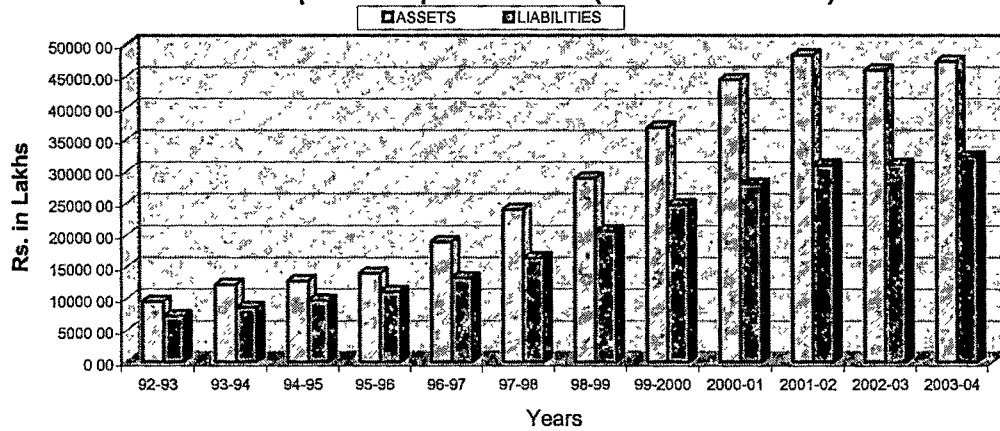
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Chart No. 7.36
ASSET-LIABILITY MANAGEMENT
Rajkot Nagrik Sahakari Bank (1992-93 to 2003-04)

Chart No. 7.37
ASSET-LIABILITY MANAGEMENT
SardarBhiladwala Pardi Peoples' Co-operative Bank (1992-93 to 2003-04)

Chart No. 7.38
ASSET-LIABILITY MANAGEMENT
Surat Peoples' Co-operative Bank (1992-93 to 2003-04)

Chart No. 7.39
ASSET-LIABILITY MANAGEMENT
Kalupur Commercial Co-operative Bank (1992-93 to 2003-04)