

**Management of Commercial Banking**  
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**Lecture: 50**  
**Managing Liquidity of Commercial Banks- V**

So, in the previous class we have discussed about certain methods related to the measuring the liquidity needs of the commercial bank and we have also discussed certain issues related to the money management or the how to measure this legal leisure requirements of the commercial banks against this different type of deposits, what about they have. In today's class, we will be discussing about the different strategies for the commercial banks can adopt to manage the liquid deposits with them and whether there is a concept of optimum bank liquidity.

So, if there is an optimum concept of bank liquidity, how this optimum bank liquidity can be obtain? And what are those different approaches the banks would use to maintain this optimum bank liquidity? So, these are the two major topics what we are going to discuss in today's session. Let us start with this liquidity management strategy.

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**Liquidity Management Strategies**

- Asset Liquidity Management or Asset Conversion Strategy
- Borrowed Liquidity or Liability Management Strategy
- Balanced Liquidity Strategy

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In the beginning, again and again, we are telling that the liquidity management of the commercial banks have two steps; one is measurement of the liquidity need.

Second one is the managing to achieve that particular target. So, whenever we talk about the second part, the commercial banks or the managers of the commercial banks has to adopt certain strategy by that the liquidity requirements can be fulfilled but not without the expense

of the maintaining the profitability. So, in this context, what basically we have to see, there are 3 types of management strategy the commercial banks can adopt to maintain their or to manage their liquidity positions. What are those? One is your asset liquid management or asset conversion strategy. They can use their assets to manage the liquidity. They can use the liability to manage their liquidity.

That is why this is borrowed liquidity or liability management strategy. Or they can go for a balanced liquidity strategy—liquidity management strategy, which is basically a combination of both assets and liabilities. So in overall, what basically we can say? The commercial banks can play with their assets to manage the liquidity or to maintain the liquidity. The commercial banks can play with their liabilities or they can use their liabilities to manage their liquidity or they can use both assets and liabilities to manage their liquidity.

So there are 3 different broad types of strategies what this commercial banks always use to manage their liquid positions in the particular system, particular bank. So, whenever we talk about the asset liquidity management strategy, what it exactly means.

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**Asset Liquidity Management Strategies**

- This strategy calls for storing liquidity in the form of liquid assets (t-bills, fed funds loans, cds, etc.) And selling them when liquidity is needed
- Liquid Asset
  - Must have a ready market so it can be converted to cash quickly
  - Must have a reasonably stable price
  - Must be reversible so an investor can recover original investment with little risk

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The slide features a background with faint icons of a gear, a lightbulb, a network diagram, and a molecular structure. A video inset in the bottom right corner shows a man with a beard and glasses, wearing a light blue shirt, speaking. The NPTEL logo is visible in the bottom left corner of the slide.

Moreover, when I talk about asset management, in the context of asset management, what we see, here the strategy basically calls for the sorting the liquidity in the form of the liquid assets like your T-bills, the government loans—federal fund loans, certificate of deposits, etc. and selling them when the liquidity is needed.

What does it means? It means, if you are holding certain liquid assets in your balance sheets. There is no need to keep enough liquid cash with you. Whenever there is a requirement of

liquidity, you sell those assets and fulfil your liquid requirements. That is the basic notion of the use of the assets. Then what is a liquid asset? The liquid asset is basically what? It this liquid assets should be marketable and they should have a ready market, by that these assets can be converted into the cash so quickly.

So, if you are holding these kinds of treasury bills, then we have the loans from the all the investments in the government securities. If you are some kind of short maturity certificate of deposits. So then, what happens, then we have ready market for this or we have some coloumonium market assets. So, if those kind of assets, we are holding with us, then it is easy to convert those assets into the cash.

So, those assets, at point of time, can be sold, can be redeemed and the money can be utilised for fulfilment of the liquidity requirements of the commercial bank. And another thing you remember another major characteristic of liquid asset is; they must have reasonable stable price. Stable price, in the sense, what happens that any kind of market fluctuations is not going to drastically sinks the price of that particular asset. Or any changes in the other macro-economic fundamentals or the factors, which are also linked to that particular asset that is not going to drastically fluctuate from the equilibrium, price of that particular asset.

That means, the price is more or less stable for those kind of assets. At any point of time, whatever price basically what we are going to pay against that asset, that price, basically, should be stable. And it must be reversible so that the investor can recover their original investment with little risk. So again, whenever the position is down, so then, those assets can be further again the bank can use those assets for their short-term investments with a little risk. That means the risk of this investments is relatively low. There is a low risk against these particular types of assets.

So, because of that, those assets can be considered as the liquid assets. Then again, these assets can be utilised in the system and at a short span of times, the assets can be sold in the market and accordingly, the liquidity can be managed.

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The slide is titled "Options for Storing Liquidity" and lists various financial instruments and services. It features a background with a stylized tree and various icons. A small video inset of a man is visible in the bottom right corner.

- Treasury Bills
- Fed Funds Sold to Other Banks
- Purchasing Securities for Resale (Repos)
- Deposits with Correspondent Banks
- Money market instruments
- Municipal Bonds and Notes
- Federal Agency Securities
- Negotiable Certificates of Deposits
- Eurocurrency Loans

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What are those different kind of options, which are available? We have treasury bills. We have the federal funds or the government funds sold to the other banks, Repos, deposits with other banks. There are many other money market instruments like borrowing from the call money-- instruments in the call money market. We have the CBLO market, we have the turn money market, etc., etc.

If we little bit, expand it, then in other countries like U.S, they have municipal bonds and the notes, we have the federal agency securities means we are talking about the securities, which are relatively long term in nature. Particularly long term is not up to 30 years or 20 years. The certificates of deposits and today's context, the importance of the Eurocurrency loans was also has increased. So, these are the different asserts which are considered as the liquid assets where the commercial banks can hold. And either of these assets can be utilised whenever they need of the liquidity and those assets can be sold in the market to fulfil the liquidity gap.

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**Cost of Asset Liquidity Management**

- Loss of future earnings on assets that must be sold
- Transaction costs (commissions) on assets that must be sold
- Potential capital losses if interest rates are rising
- May weaken appearance of balance sheet
- Liquid assets generally have low returns

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But one thing, remember, there is a cost involved. It is not that at any point of time, we can sell those assets and maintain the liquidity. First of all, practical point of view, there should be a proper market. But even if there is a proper market if we are selling those assets frequently and fulfil our liquidity requirements and there is a chance of loss of future earnings and assets. We are basically even if in that particular point of time the asset would have given better results whenever if you are holding it up to the maturity.

But instead of getting that, we are getting less return because we are basically redeeming it in the prematurely and the proceedings what we get against that we are utilising that proceedings to maintain our liquidity. So, that is why, there is a chance of loss. The loss of the future earnings that basically creates the problem. If frequently, we are selling those assets in the market. Transaction cost (commissions). Whenever we are utilising those assets to sell it in the market to fulfil our requirements, we are incurring also the huge amount of transaction costs for that particular reasons.

So, the return what we are expecting from these kind of activities that may not be good enough to compensate the cost what we are bearing for this kind of transactions. Another reason is that there is a chance of potential capital losses if the interest rates are rising. If the interest rates are rising, there is a chance of the capital losses because the price of those assets goes down. So if the price of the assets are goes down or is going down, then apart from the losses whatever we have made in terms of the earnings, there is a possibility that we can also incur the losses because we are selling those assets with a lower price and the price whatever we have paid or that is already had in that.

So, in the high interest rate scenario, because it is a requirement for the banks because they want to fulfil the liquidity, liabilities whatever they have. But there is a possibility that they can incur the capital losses, if the interest rates are increasing in that particular point of time. And another thing also, whenever they are again and again selling those assets with a loss that has an adverse impact on the balance sheet. So, if the balance sheet get distorted and balance sheet becomes weak that has a spiral impact on the confidence level of the investors, the confidence level of the depositors that means it gives a negative signal to the market that this particular bank have some financial problem and with respect to the liquidity, the bank is offering a lot.

So again, further recovering this particular kind of losses will be really difficult for them, because once the public lost their confidence on this then gaining the confidence to convince the public that whether really we are in a good state now, our liquidity is now in comfortable position. That is very difficult to convince them that whether really this particular problem is overcome and now the bank is in a position to maintain their balance, in terms of liquidity. So that is why, there is a long-term impact on this particular kind of approach.

And already liquid asset generally have low returns that already we know that if you are holding many liquid assets with you assuming that you are going to face some liquid problem, so to remove that liquidity problem or to overcome that liquidity problem we will sell those asset to get the benefits. But one thing we can keep in the mind that in comparisons to the other assets, what we use it for the investments, the liquid assets gives low returns because one is there is a less risk in that and their short term nature because of the return from those assets are relatively less.

So holding too much liquid assets with the commercial bank is also a kind of difficult task or may be not that way very much profitable for the commercial banks. So these are the different types of cost. What basically always we can face whenever we go for the using the assets to maintain or manage the liquidity of the commercial bank.

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The slide is titled "Liability Liquidity Management Strategy" and features a background with various financial icons like gears, a tree, and a person. It lists the following points:

- This strategy calls for the bank to purchase or borrow from the money market to cover all of its liquidity needs
- Sources of Borrowed Funds
  - Call money market
  - Government Funds Purchased
  - Selling Securities for Repurchase (Repos)
  - Issuing Large CDs
  - Issuing Eurocurrency Deposits
  - Securing Advance from other FIs
  - Borrowing Reserves from the Discount Window of the central bank

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Then the other option we have that is the liability. The liability means what? We can borrow from the money market. We can purchase or borrow the money from the money market and that proceedings can be utilised to manage the liquidity.

That is you sell the assets, one approach. Another is borrow from the market and fill the gap. And what are those sources of the borrowed funds. From where you can borrow? You can borrow from the call money market. You can borrow from the government funds or the government securities. You can use the repos. You can go for issuance of the large certificate of deposits, Eurocurrency deposits. Or you can borrow the reserves from the discount window of the central bank.

So, any of the ways you can borrow. You have a money market, which is available, or you have a government fund, which are available with the central bank, or you can issue some of the certificate of deposits and all other things and against that, you can raise some money and that money can be utilised to maintain your liquidity. But mostly, the money which is required to maintain the liquidity that can be coming out of the investment made on the seller investments like statutory liquidity ratio investments and as well as the borrowings from the call money market if you talk about with respect to India.

So, these are the different kind of alternatives, which are available in the system. But basic notion or essence of the liability management is that we are utilising certain kind of borrowed money to fulfil our gap or to fulfil this requirements what we get we need in terms of the liquidity management.



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The slide is titled "Liability Liquidity Management Strategy" and is part of an NPTEL Online Certification Course. It is divided into two columns: "Advantages" and "Disadvantages". The "Advantages" column lists three points: borrowing only when there is a need for funds, maintaining the volume and composition of the investment portfolio, and the institution's ability to control interest rates to borrow funds. The "Disadvantages" column lists three points: high expected return with high risk due to volatility, always uncertain borrowing costs, and borrowing needs being interpreted as a signal of financial difficulties. A small video inset of a man is visible in the bottom right corner of the slide.

| Advantages   | Disadvantages  |
|--|--|
| <ul style="list-style-type: none"><li>• Borrow Only When There is a Need for Funds</li><li>• Volume and Composition of the Investment Portfolio Can Remain Unchanged</li><li>• The Institution Can Control Interest Rates in Order to Borrow Funds (raise offer rates when needs requisite amounts of funds)</li></ul> | <ul style="list-style-type: none"><li>• Highest Expected Return But Carries the Highest Risk Due to Volatility of Interest Rates and Possible Rapid Changes in Credit Availability</li><li>• Borrowing Cost is Always Uncertain-&gt; Uncertain Earnings</li><li>• Borrowing Needs Can Be Interpreted as a Signal of Financial Difficulties</li></ul> |

Then here, if you see, there are many advantages, many disadvantages. If you going to use this liability liquid management strategy. Advantages are that borrow when there is a need for funds. Volume and composition of the investment portfolio can remain unchanged.

The institution can control the interest rates in order to borrow funds (raise offer rates when needs requisite amounts of funds are there in the particular bank). So, whenever we need it we can use it and the other composition of the portfolio is not going to be affected. That is why, it is not going to distort the balance sheet in that sense. But disadvantages are highest expected return but carries the highest risk due to volatility of interest rates and possible rapid changes in credit availability. Borrowing cost is always uncertain that may be more than the earnings that you are generating.

So, the cost benefit analysis if you make that in that particular emergency time whenever you want to borrow the money from the system that whatever cost you are incurring that cost may be exceeding the earnings or the returns what we are going to generate. So, that is basically another region we have to consider whenever we go for the liability management. So, if enough borrowings you are making in the balance sheet if you are showing that huge amount of the borrowings that basically provides a negative signal to the market that this particular bank is going through or following a financial difficulties.

So, that is some financial difficulty, because of that the bank is basically borrowing a lot. Again, creating the confidence among the public becomes difficult. So, that is basically another disadvantage because that may provide a negative signal to the system. That also you have to keep in the mind. So, that is basically another disadvantage what we can always does



we can get whenever we are going through the liability management. Then we have a problem with asset management.

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**Balanced Liquidity Management Strategy**

- Combination of asset and liability management strategies
- Some of the expected demands for liquidity are stored in assets and other anticipated liquidity needs are managed by arrangements for lines of credit from potential suppliers of funds
- Unexpected cash needs are met from near term borrowings
- Longer term liquidity needs can be planned for can be arranged from asset management

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Then we have a problem with liability management then what the bank basically supposed to do?

The bank basically can use the combination of both. The bank can use the balanced approach. They can use asset management strategy or they also use the liability management strategy in at a same point of time. There can be a combination of the both. Here, in the combination case what basically they are trying to do? The some of the expected demands for liquidity as are stored in assets and other anticipated liquidity needs are managed by the arrangements for lines of credit from potential suppliers of the fund. So, some part is managed by he expected demands of liquidity can be managed by the selling of assets which are in the near term maturity or may be in the early stage of the maturity.

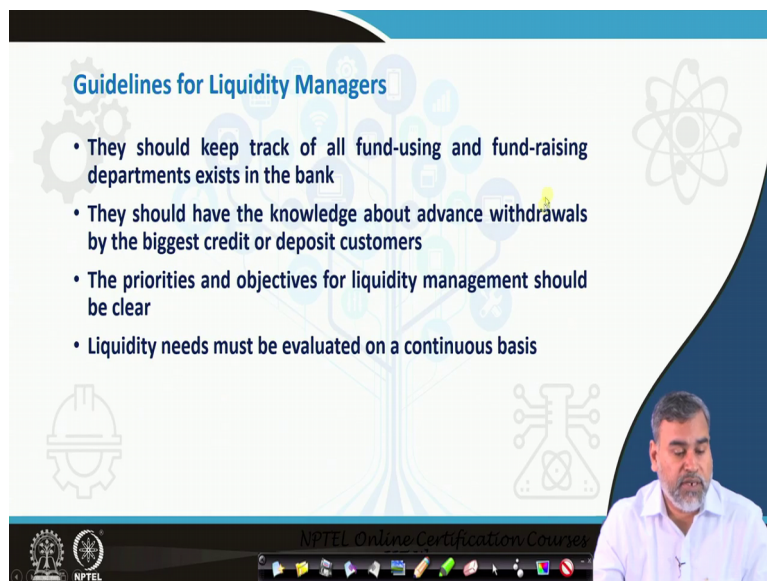
And another type of management another position can be managed through the different kinds of lines of credit what they are expected to get from the different suppliers of the funds. That means, from the borrowing or purchasing the different securities in the system. Unexpected cash need are made from near term borrowing. Whatever cash needs are there, they can be use some near terms borrowings. Near term borrowings since that very short-term borrowings for overnight basis or for daily basis, they can use those instruments. And the longer-term liquidity needs can be arranged from asset management.

So, the short term borrowings will be utilised to fulfil the short term liquidity requirements and the long term liquidity requirements has to be met by the selling of the assets. So, by that, that frequent selling of the assets will not be required and there is a combination of the assets what the banks can hold and there is a maturity buckets whatever they have for the different types of assets in their portfolio that can basically help them that when that particular asset is going to be mature and accordingly they can maintain their liquidity deposition in such a way they are not going to incur lot of capital losses in the market.

The capital again, basically they can realise and because most of the assets can be matured. So that is why, there is a proper planning for both short term and long term. For short-term purpose, they can use this liability management and for the long-term purpose, they can use the asset management. So, they can combine these both, which basically does not require much cost or it does not give any kind of negative signal to the system. By that, what will happen that the proper management balanced management strategy can be adopted?

So, this about your balance liquid management strategy.

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**Guidelines for Liquidity Managers**

- They should keep track of all fund-using and fund-raising departments exists in the bank
- They should have the knowledge about advance withdrawals by the biggest credit or deposit customers
- The priorities and objectives for liquidity management should be clear
- Liquidity needs must be evaluated on a continuous basis

The slide features a blue and white color scheme with decorative icons of a gear, a lightbulb, and a network diagram. A video inset in the bottom right corner shows a man with a beard and glasses speaking. The NPTEL logo is visible in the bottom left corner of the slide.

So, that is why there are many guidelines can be formulated for the liquidity managers, who are managing this particular liquid position of the commercial banks. What are those guidelines? The guidelines should be based upon that different kind of cheques and balance sheets with respect to the fund positions of the bank. They should keep track of all fund using and fund-raising departments exists in the bank. Where the fund is coming? Where the fund is going? Whether the funds are long term or the funds are short term? What is the frequency

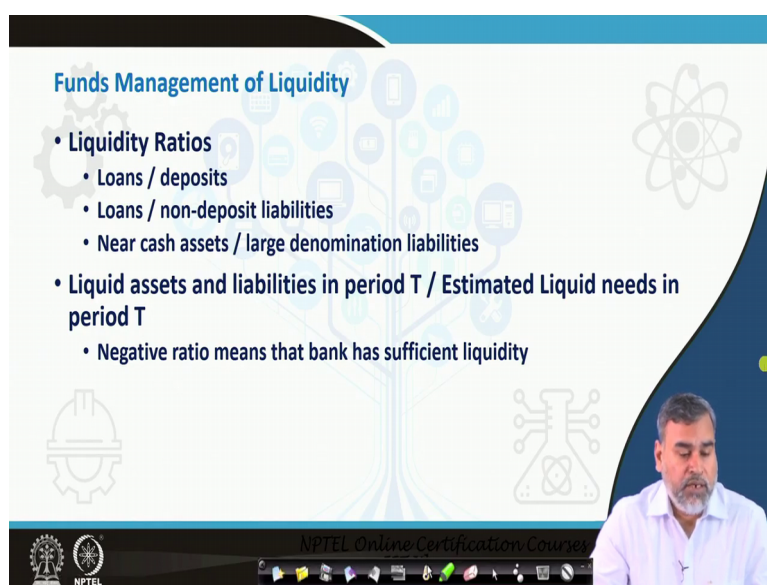
of the withdrawals and what frequency this particular demand will be there? And what frequency the supply demand will be there?

Demand for the loans and all these things that also they have to keep a continuous eye on this. They have to maintain a particular record in such a way that they can have an updated idea that what is going to happen with respect to that particular liquidity position of the commercial bank. They should have the knowledge about in advance, advance withdrawals for the biggest credit or deposit customers that the small deposits, which are withdrawn, that is regular basis. But if any time a larger amount of deposits will be withdrawn or a bigger amount of loan will be dispersed.

So, the money managers should have the advance knowledge about that, this much money they need at this much point of time to overcome this kind of balance sheets or this kind of gaps. By that, they would prepared before that that how basically this requirement can be fulfilled or this demand can be earned. The priorities and objectives of liquidity management should be clear that what the objective of managing this solid is. Again and again, we are telling, liquidity should be managed to fulfil the gap and to make a perfect balance between liquidity and profitability is very much required.

So, that is why the planning, objective and the priorities that should be defined from the beginning that periodically how this particular planning can be made? And what kind of objective has to be defined by them by that this particular problem will not arise in the future. And the liquidity needs must be evaluated on a continuous basis. It is periodical basis, the commercial bank or the manager has to evaluate the liquidity needs. By that, they are in a perfect position that at what time how much liquidity will be required. Or what is the anticipated or expected liquid required? By that the liquidity needs can be evaluated in the continuous basis for the proper monetary. So, these are the different guidelines; can be given to the liquidity managers.

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The slide is titled "Funds Management of Liquidity" and features a background with various financial icons like a tree, a gear, and a network diagram. It lists two main bullet points: "Liquidity Ratios" and "Liquid assets and liabilities in period T / Estimated Liquid needs in period T". The "Liquidity Ratios" section includes sub-bullets for "Loans / deposits", "Loans / non-deposit liabilities", and "Near cash assets / large denomination liabilities". The second section includes a sub-bullet stating "Negative ratio means that bank has sufficient liquidity". The NPTEL logo is visible in the bottom left corner, and a small video feed of a man is in the bottom right corner.

- **Liquidity Ratios**
  - Loans / deposits
  - Loans / non-deposit liabilities
  - Near cash assets / large denomination liabilities
- **Liquid assets and liabilities in period T / Estimated Liquid needs in period T**
  - Negative ratio means that bank has sufficient liquidity

Then we have the funds management of liquidity. So there you see that there are many ways the according to the different regulatory bodies like banks for international settlement and others. They have used many liquidity receivables for the banks to understand that what is the liquidity position of the commercial bank? So, one of them is the loans for deposits. If that ratio is quite high or quite low, accordingly they can judge that whether the bank is in a position to cater the demand for the depositors or cater the demand for the loan seekers. Then loans open the non-deposit liabilities that is also another measure we can use.

Then we have the near cash assets like the government securities, the highly short term securities, which are highly traded in the market or highly marketable in the market divided by the large denomination liabilities like your high denominated values with respect to the different deposits whatever the commercial banks are holding. And another good measure for the liquidity what the banks generally in the practical sense use that is basically your liquid assets and liabilities at period T divided by the estimated liquid needs in period T. How much liquid in assets and liabilities the banks are holding in a particular period? Divided by the estimated liquid needs in the period T.

The calculate the estimated value of the liquidity and they have the actual liquidity which is available with them and that ratio can be better proxy for measuring the liquidity of the commercial banks than any other balance sheet measure whatever they already have. So, if the ratio is negative if the ratio is negative means we do not need liquidity. Already there is a high liquidity. So, the negative ratio means that the bank have sufficient liquidity. So mostly, if you see that what happens that either it can be negative. Either the estimated liquidity need

is negative because the liquid assets and all these things if it is also negative and this one is positive then again, it is negative.

So either of these cases, what basically we can say that the bank has sufficient liquidity, therefore, the liquidity is not required. So, the bank is in position that the liquid position of the bank is stable or it is stronger. So, in that context the bank is free to utilise their funds in the various activities for maximising the profitability. So, this is basically another issue what the commercial banks can use for managing their liquidity positions in that respective banks. Then considering those things, every bank should have optimum liquidity or we call it the optimum bank liquidity.

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The slide is titled "Optimum Bank Liquidity" in blue text. It features a background with various icons including gears, a tree, a hard hat, and a molecular structure. The main content is a bulleted list:

- Balancing risks and returns
- Measures of liquidity need to be high enough to meet even unexpected changes in liquidity needs and sources
- Opportunity cost of liquidity should be considered
- Cost of insufficient liquidity and cost of maintaining liquidity should be analyzed

At the bottom right, there is a video feed of a male presenter with a beard, wearing a light blue shirt. The NPTEL logo is visible in the bottom left corner of the slide.

So, the optimum bank liquidity basically considers the balancing between the risk and returns. So, it also basically measures the liquidity need to be high enough to meet even the unexpected changes in liquidity needs and sources whatever the banks have. And while doing these things, we have to consider the opportunity cost of liquidity and whenever we talk about this, we always habited of between these two. One is our cost of insufficient liquidity and the cost of maintaining liquidity. If you are not maintaining liquidity, you are incurring certain cost or if you are maintaining liquidity, you are also incurring certain cost.

So, the total cost has to be calculated or they can compare between the two costs and accordingly you decide that how much liquidity should be always kept in the mind or kept in the bank to overcome those kind of losses. But they have incurred if either of these cases will happen. If they are not maintaining, they are incurring a loss because there is a cost involved in this. If they are maintaining, they are incurring a loss because they are not incurring a loss,

they are incurring a cost. So, if the revenue what they are generating against that, it is more than the cost, then it then it is ideal for them to go for maintaining the liquidity.

Or if they have insufficient liquidity, then what are the regulatory cost that they are going to incur that is the reputation cost that they incur? How the confidence they are losing and all kind of calculations they have to make to understand what the cost are basically they are going to bear in terms of not maintaining insufficiency of the liquidity. So, that is why there is a trade-off there is a kind of comparison, they have to make between these two and finally they can decide that how much optimum bank liquidity the bank should always have whenever they want to manage this liquid deposition of the commercial banks.

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**CONCLUSION**

- The liquidity management strategies can be categorized as asset management strategy, liability management strategy and balanced strategy
- The optimum liquidity of the bank can be determined by the cost and benefits occurred in different strategies

So, what we have discussed that the liquidity management strategies can be three types. One is your they can go for managing the assets or they can go for managing the liability or they can also use the balanced strategy and the optimum strategy of the bank can be determined by the cost and benefits occurred in different strategies. But one thing, remember that the mostly commercial banks use a balance strategy where they will combine both the active or we can say that asset management and the liability management, both for short term management, they can go for the liabilities or for the long term management, they can go for the assets.

So, this is the way the liquidity management of the commercial banks can be made to maintain the optimum liquidity by that, the losses or the probability of losses will be relatively less and the bank can maintain both profitability and liquidity on the basis of their objectives. So, these are the references what you can go through. Thank you.