Management of Commercial Banking
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Lecture 07
Bank Performance Measures – II

Good morning, in the previous class we discussed about the Bank Performance Measures. In fact we started the discussion on the bank performance measures, today we will go into the different other dimensions of the bank performance and how basically both the sources of income in terms of interest payments or interest income and as well as non-interest income. They are going to play the significant role in terms of bank profitability or the overall performance that we will be discussing in the coming sessions.

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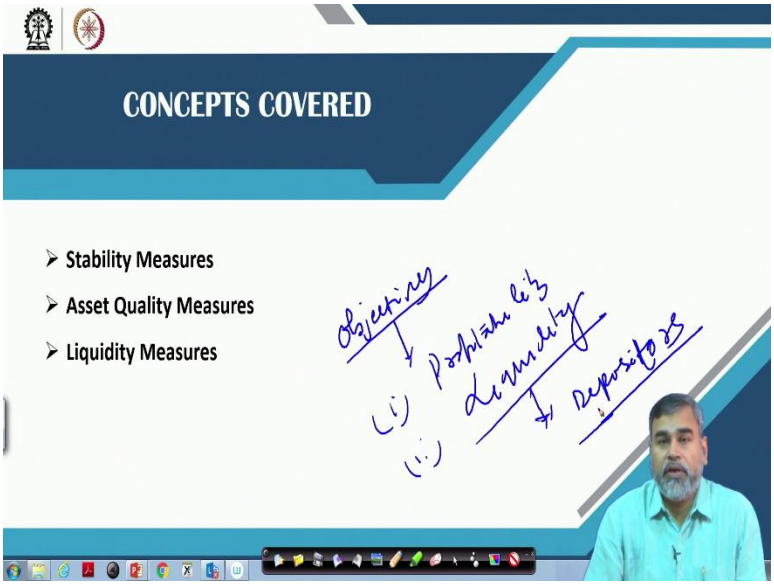

So, today if you see that the basic objective of today's session is, what are those different measures the bank uses for measuring the stability, then what are those different measures bank basically uses for the asset quality measurement and as well as the liquidity measurement. Because apart from the profitability or to enhance the profitability, stability, asset quality and liquidity, these are the three things where the bank always takes into account or these are quite important in terms of the performance measures of the commercial banks in general.

Why basically the stability measures? The stability measures basically what? Stability measures basically measures the, or maybe we can use the stability measures to see that whether the

profitability of the banks is sustainable or can be sustainable or not. And as well as we have to see that if there is any kind of disturbances, there is any kind of uneven situations arise in the economy, whether the bank is able to manage to run their business in that particular system? Or is there any kind of crisis which take place?

Because of certain external forces then whether the bank is really good enough to maintain their profitability in the particular market or not. So, that is why this stability is very important from the bank performance point of view. Asset quality means although the banks have many types of assets and mostly the, if you see that the balance sheet or the income statement of a commercial bank you will find that the loans are the major constituents of the assets apart from the investments and other things.

So, whenever the banks provides the loans that what kind of quality the loans basically has and as well as that whether the bank is able to really convert those loans into the profit making assets or not. So because of that the asset quality measure is quite important. Then liquidity, particularly in the emergence of the Basel 3, the importance of liquidity risk is quite important, not only form the banking point of view, from the overall economic point of view in all the financial systems the liquidity measures are quite important, or we have to see that whether the liquidity is maintained properly or not.

If you remember why we are thinking about liquidity or giving much importance in the liquidity that whenever we talk about the objectives of the banking what basically we have seen, there are 2 objectives. One is your profitability and other one is basically maintaining the liquidity which may not be the objective of a typical organization but this is very important from the commercial bank point of view, why it is important form the commercial bank point of view?

Because the commercial banks another major objective is as a major function or operation is to fulfill the requirement of the depositors and as well as there are many short term requirements which the banks need which is not predicted beforehand. At any point of time the withdrawals can be made and as well as the customer can demand their money whatever they have deposited. So because of that if the bank will not maintain enough cash with them or if the bank will not maintain the liquidity then it will be difficult for the banks to create the confidence in the mind of the customers or the depositors then the bank will be prone to the failure.

Because lack of confidence declines the confidence of the customers on that bank's operations and finally the bank can lead to any kind of problem or any kind of crisis may occur. So because of that the liquidity is measures or quite important to check whether really the bank is well equipped to fulfill the requirements of the customers or the depositors at that particular point of time whenever they need the money. So, these are the concepts what we are going to cover today and how those particular measures are or particular ratios are measured or what are those different ratios are used to measure this thing. So this is the major discussion what we are going to discus in this particular session.

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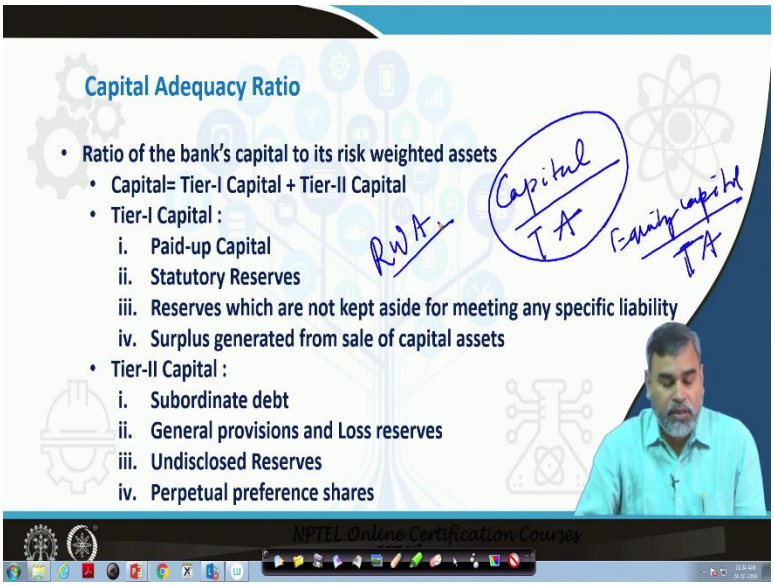

So, let us see that how this stability is measured, most important measure of stability according to the Basel norms is the capital adequacy ratio. We know that the bank has a capital ratio which is nothing but the capital upon total assets, there are normal capital upon the total assets this is the capital ratio or if you talk about the leverage ratio of the banks, the leverage ratio of the bank is measured as the equity capital upon the total assets.

So, these are the normal capital ratios what the bank uses, but whenever we talk about a capital adequacy ratio little bit the ratio is different in the sense, here the total asset instead of taking the total asset we are talking about the risk weighted assets, in short we can use this abbreviation that RWA, so this is basically we use it the risk weighted assets, that means every asset will be assigned certain kind of weights on the basis of the risk involved in that particular asset.

So, the bank basically faces many types of risks, so on the basis of the different type of risk we are assigning certain weights to that particular asset and finally the risk weighted assets can be calculated. The assets can be varying on the basis of the nature of the asset or on the basis of the objectives or may be the short term and long term type of asset. There are many ways the assets can be classified.

So on the basis of that, we will discuss all those things in the forthcoming sessions whenever we discuss about the Basel norms and according to the Basel norms how the risk basically is measured and whatever those different type of risk the bank faces and as well as we can see that really that how that risk matters whenever we talk about the risk weighted assets calculation for the commercial banks that we will see in the forthcoming sessions. But here you only keep in the mind that the capital adequacy ratio is nothing but the total capital upon the risk weighted assets and the weights are given on the basis of the risk involved to that particular asset what the bank has already considered.

So, whenever we talk about the numerator which is the capital broadly there are two types of capital, one is your Tier 1 capital and the Tier 2 capital. Whenever we talk about the Tier 1 capital which is the core capital of the commercial bank, and Tier 2 capital is not core to the commercial bank but still they are consider as the major capital for the commercial banks as per the regulatory norms. So, which are the items which concerned to the Tier 1 capital? Obviously we have the share capital or the paid of capital.

The equity, the equity capital is the major source of the Tier 1 capital because that particular money belongs to the individual shareholders of that particular organization. So, paid-up capital is the major core capital or the Tier 1 capital of the commercial bank. Then you have the statutory reserves, the reserves includes as per the regulatory norms whatever reserves the commercial banks are keeping that is the second source of the Tier 1 capital.

Then we have certain reserves what the bank keep because of the certain kind of, which are not kept aside for meeting any specific liability. Because there are certain provisions the bank keep on the basis of the risk involved in the different type of assets. But here what basically we are talking about, there are certain reserves the bank keep in general when those objective of keeping those capital is not for meeting any kind of specific liability what the banks have.

And if at any point of time the bank is selling certain kind of fixed assets or capital assets then also the surplus amount what is generated that can be also kept as the capital for the commercial bank which is consider as or which is comes under the Tier 1 capital. So, these are the different components of the Tier 1 capital. And whenever Tier 2 capital we will talk about, the tier 2 capital mostly comprised of the debt instruments or the bonds. So, the first one is the subordinate bonds then why we talk about the subordinate bonds?

The subordinate bonds or subordinate debts are relatively risky and they are long term in nature and as well as they generally not backed by any kind of specific assets or any kind of mortgage or collaterals are not used for the subordinate debts. But one thing you remember the maturity period of the subordinate debts are relatively longer in that sense. And the second one is the provisions which are kept for the loan losses.

Already you know that if whenever the bank disburses the loans they keep certain kind of reserves against that particular loan by calculating the probability of default or the loss. If because every loan always have certain kind of probability of default, the bank calculates that probability of default beforehand and they ask, they keep certain kind of provisions against that. Depending upon the probability of loss involved to that particular loans.

So, these are basically the loan loss reserves, then there are some undisclosed reserves the bank keep for some specific contingency plan, so these are the undisclosed reserves. Then the preference shares which also comes under the Tier 2 capital. Because the preference share is consider as a hybrid instrument, the preference share can be debt and preference share can be equity.

Because, what do you mean by the preference share all of you know, the preference share is nothing but which basically provides a fixed amount of divided or fixed rate of dividend over the period of time. And the preference shareholders have no voting rights but if there is any kind of liquidation then they, if there is at any point of time the bank is liquidated then whatever money the bank gets first basically it should be distributed to the debt holders then next the money should be given to the preference shareholders.

But at any pint of time that is why the preference shareholders are partially called is a debt instruments and also is an equity instrument. The reason is the fixed dividend is the characteristics of the debt and always we have the equity component involved in that because that is also

considered as the preference shares. So, the perpetual preference shares are also the components of the Tier 2 capital. So, these are the different components which comes under the Tier 1 and Tier 2 and the risk weighted assets already I told you, the assets are assigned or weighted on the basis of the risk involved in the different assets.

And finally we can calculate the total risk weighted asset of the commercial bank, so if the ratio is higher, then we can say that the bank is stable, the ratio is higher the bank is stable and the ratio is lower the bank is unstable. As per the requirement of the Basel norms the minimum capital adequacy ratio should be 8 percent. If it is below 8 percent we can say that it is inadequately capitalized and if it is more than 8 percent we can say that the bank is adequately capitalized. So this is the sense the bank stability is measured in the system.

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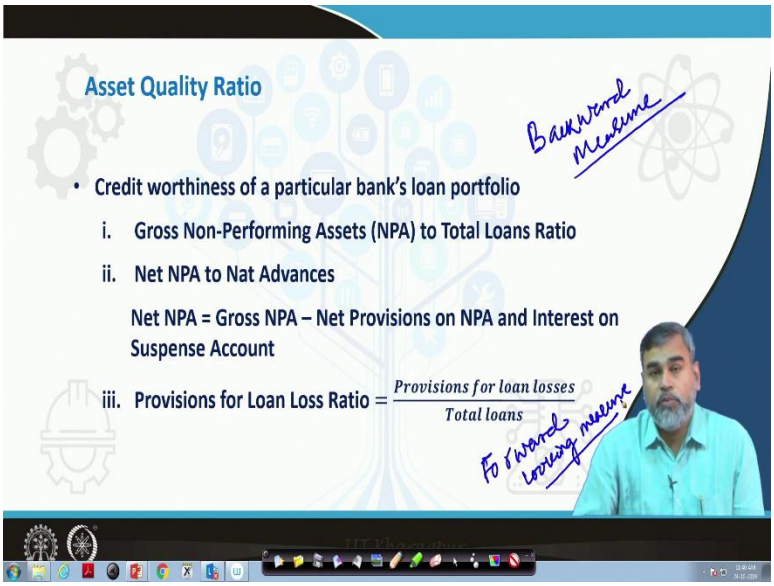

Then we have the asset quality ratio, so whenever we talk about the asset quality ratio that already I told you that asset quality means that what is the quality of the loans? Because loans is the major component of the total assets of the commercial banks. So the total asset quality basically what it measures? It measure the credit worthiness of a particular bank's loan portfolio. Then whatever the loan portfolio the bank has made, what is the quality of assets really the bank has on the basis of the risk involved in that particular assets.

So, if the risk is quite high we can say that the credit worthiness is basically lower and if this particular risk is low then the credit worthiness will be higher. So in that sense the credit worthiness

of the bank's portfolio is measure through the asset quality. Then how the asset quality is measured? The most important measure of the asset quality is the gross NPA to the total loans.

That means whatever the loans the commercial bank has given how much of the total loans are basically consider as the NPA, non-performing assets and the total non-performing assets or the percentage of the total loan will tell you that what is the components of the total loans which are really secured the bank is able to generate revenue or income out of this and what is the percentage of the total loans for the bank is not able to generate revenue?

So, therefore, the gross NPA upon the total asset is consider as a credit worthiness of the commercial bank or the asset quality ratio. Or you can also consider the net NPA, the net NPA is nothing but the gross NPA minus the net provisions on NPA. Whatever provisions we have kept you can minus that one because anyway if the loan is not recovered then the provisions can be utilized for that and the interest on the suspense account.

There are certain kind of accounts where the bank can classify on the basis of various factors which is called the suspense accounts, so that particular account may not be exactly accrued as the interest for the commercial bank because of there are different other kind of external risks are involved now because of that the interest what we generate out of this that also can be deducted from the gross NPA to calculate this net NPA.

So, provisions and the interest on suspense account these are the two things has to be deducted to find out the net NPA. But this NPA to total assets is basically people consider is a backward looking measure. Because already I told you that NPA to total assets ratio is considered as a backward looking measure. Why we call it a backward looking measure or backward measure? Why this particular ratio is called as the backward measure or name this backward measure, the reason is that already this particular NPA or the problem with respect to that loan has already occurred.

So, depending upon the total amount of loans which are consider as NPA we are telling that how the bank's loan portfolio looks like. But it is not a forward looking measure, it is a backward looking measure in the sense. Already this particular realization has taken place. So further we cannot say that how it is going to improve or what is going to happen in the future that is basically cannot be judged from the total NPA to the total loans ratio.

So, therefore, but the forward looking measure if you consider then we can use the provisions for the loan loss as a forward looking measure. Why we consider that provisions for loan loss is a forward looking measure? Because the banks keep those kind of provisions by expecting that how much loss they are going to incur against that particular type of loan.

So in that sense what we are trying to say if really the bank is able to say that what is the problem is going to happen and they have forecasted that particular problem and accordingly they have kept certain kind of reserves with them then we can say that is why it is called as a forward looking measure. So the provisions for the loan losses what the banks are keeping divided by the total loans that can be consider as a loan loss reserves ratio and already I told you this is a forward looking measure, this is a forward looking measure.

The reason is bank basically is calculating this loan as reserves on the basis of the probability of loss what they are going to incur against that particular loan or particular asset. So that is, that is why these are the two major ratios which are used to measure the asset quality. But now the question is what this NPA is. How that NPA is defined?

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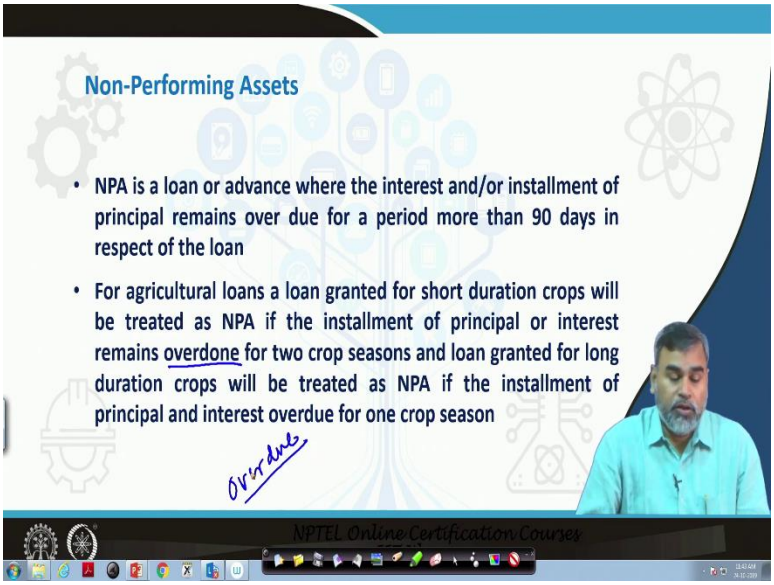

So, whenever you talk about NPA as per our Indian banking system. The NPA is basically is a loan or the advance where the interest or the installment of the principle. Because whenever you are giving a loan, we are giving a principle and against the principle we are basically expecting certain kind of interest. So, if a particular loan has been disbursed and against that loan either interest or the installment of the payments remains overdue for a period more than 90 days then we can consider that that particular asset or that particular loan is a non-performing loan or non-performing asset, that means it is around 3 months period.

For the 3 months time the loan could not be disbursed then we can consider or the loan has been disbursed but the interest payments or the principle could not be recovered then we can say that this is one basically consider as a non-performing asset. But the definition can vary on the basis of the nature of the loan. In general this is the definition but whenever you talk about the different types of the loan on that basis also sometimes the definitions little bit vary.

Then how that definitions basically vary? If you define in Indian system if you define the loans are categorized into two, one is agricultural loan and another one is non-agricultural loan, then this definition is general definition mostly for the non-agricultural loan but whenever you talk about the agricultural loan, in the agricultural loan the definition is little bit different, what is the difference?

For the agricultural loan, a loan granted for short duration because the loans can be given for a long duration crop and a short duration crop, but if the loan is granted for a short duration crop then it will be consider as an NPA, if the installment of the principle or interest remains overdue for 2 seasons, overdue basically it is not over done it is basically you keep in the mind this is overdue, this particular thing can be read as overdue.

So, if remains overdue for the 2 crop seasons, then we consider that is a NPA for the commercial bank. If the loan is given for this short duration crop but if the loan is granted for a long duration crop then if the installment of interest or the installment of principle the interest is not paid for one crop season then it is consider as a non-performing asset. So little bit the definition of the non-performing asset vary on the basis of the nature of the loans where the commercial banks disbursed. So, but the formal definition is that if it is overdue for a 90 days period either principle or interest is not repaid for a 90 days period then we consider that loan is a non-performing loan.

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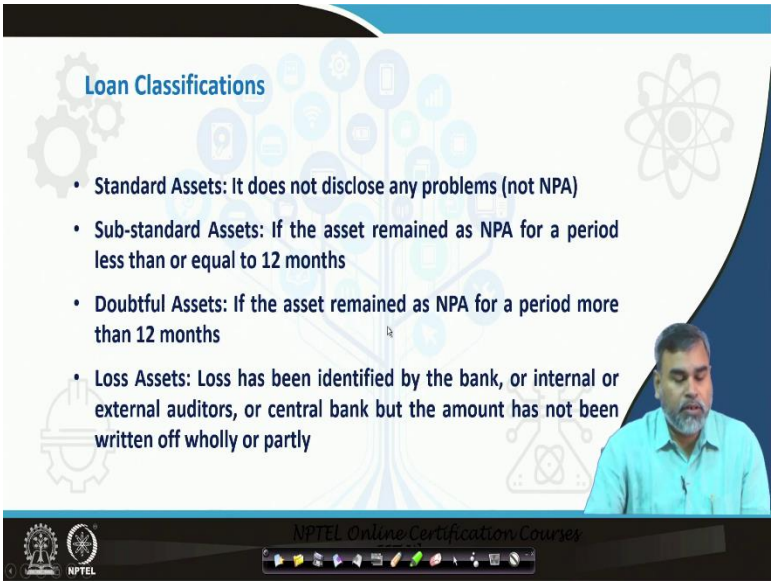

Then the other thing is that if you see that on the basis of this definition we can classify the loans or classify the assets in different ways. One is your bank has a standard asset, standard asset means it is not a NPA, it is has no problem, the interest as well as the installment of the payments the bank is receiving in the regular basis and there is no such kind of credit risk or any other risk involved with respect to that loan or particular asset then we consider it is a standard asset.

But whenever you talk about the sub-standard asset, in the case of sub-standard asset or the asset can be defined as a sub-standard asset if the asset remained as NPA for a period less than or equal to 12 months. It has become a NPA and within a same NPA category it remained in that particular account in the balance sheet for the 12 months that means 1 year. For 1 year one particular loan is kept as an NPA or it satisfies the condition to be declared as NPA then we can say that this is sub-standard asset.

But again if the same asset remained as NPA for a period more than 1 year or 12 months then we consider them as a doubtful asset. Because that NPA category or in that particular condition the loan remained more than 1 year. And another type of asset is the loss asset and when the loss has been identified, the loss has been identified by the bank or internal or external auditors or by the central bank but the amount has not been written up fully or partially.

The reason is there are certain cases the loan can be waved off, the loan can be retain up. There are certain conditions on that basis if there is certain kind of losses were incurring then that particular losses can be retain up but if its particular loss cannot be retain up but still it is there as an NPA and that has become a doubtful asset and either external, internal auditors, central bank anybody or by the bank itself is not able to write up that particular asset then we consider that asset is a loss asset.

So this is the way the different assets are defined or on the different assets are classified or the different loans are classified by the commercial bank and already from that we consider the total NPA and the total NPA upon the total assets is measure for the loan quality of the commercial bank.

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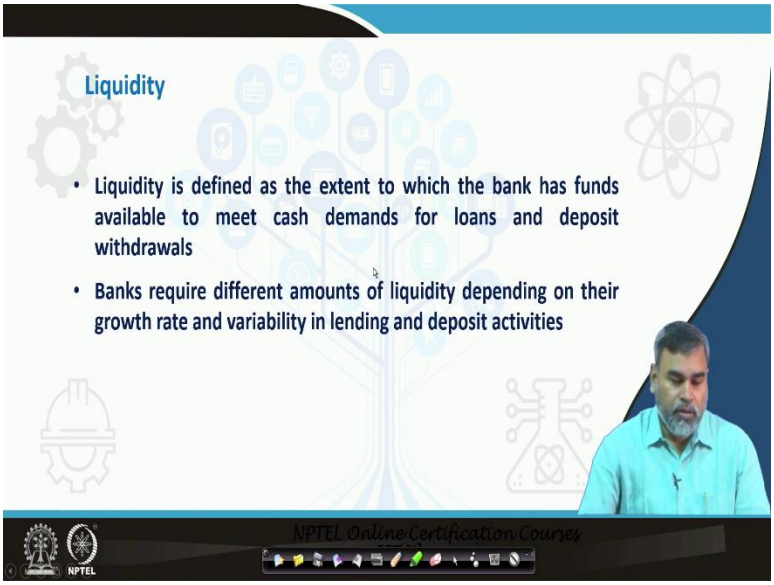

Then the other important feature is the liquidity. So, whenever you talk about the liquidity already I told you, what do you mean by the liquidity? The liquidity is basically defined as the extent to which the bank has funds available to meet the cash demand for the loans and their deposit withdrawals. The small loan demands they are able to fulfill and as well as they are going to fulfill the requirements of the customers or the depositors. At any point of time if somebody wants to withdraw the money that particular client or the customer should not face any problem to withdraw the money for the commercial bank, from the commercial bank.

So because of that if there is any problem in terms of withdrawal or the bank is not able to honor that demands what the customers are making then we can say that there is a problem of liquidity and you know that if there is a problem of liquidity that declines the confidence level of the depositor and if the confidence level of the depositor declines on that particular bank then it has a spiral negative impact on the commercial banks overall performance.

So because of that the bank has to take utmost measure to maintain the liquidity, adequate liquidity to cater the demand for all kind of stake holders who need the short term financing from the commercial banks. So banks basically require different amounts of liquidity depending on their growth rate and variability in lending and deposit activities. How frequently the lending and deposit activities are changing on that basis the bank basically maintains the liquidity.

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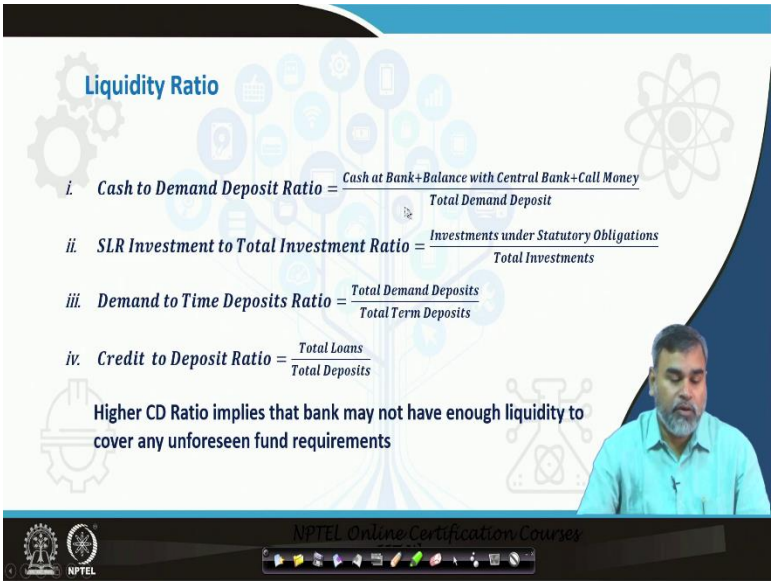

Then how this liquidity is measured? There are many ratios the banks use to measure the liquidity, we have

$$Cash\ to\ Demand\ Deposit = \frac{Cash\ at\ Bank+Balance\ with\ Central\ Bank+Call\ Money}{Total\ Demand\ Deposit}$$

cash to demand deposit, cash at bank plus balance with the central bank plus the money floated in the call money market or the intra bank market divided by the total demand deposits, the total demand deposits includes the saving deposits and the current deposits. Then we have the statutory liquidity ratio investments as a mandatory investments, the total investment.

Because the statutory investments are basically very short term in nature and they are less risky and as well as it is very easy to convert them into the cash, so if the more that investments the commercial banks are making then obviously this banks or sets are more liquid. Then the demand to time deposits, the total demand deposits divided by the term deposits. The term deposits are not very liquid but the demand deposits are relatively more liquid than the term deposits or the fixed deposits.

Then we have the credit deposit ratio, the total loans divided by the total deposits. Higher credit deposit ratio implies that bank may not have enough liquidity to cover any unforeseen fund requirements, that means the loans are already disbursed, the high amount of loans have been given, the banks have not kept enough money to cater the demands for the short term stake holders

of that particular commercial bank. So because of that there is one inverse relationship exists between the liquidity and the credit deposit ratio.

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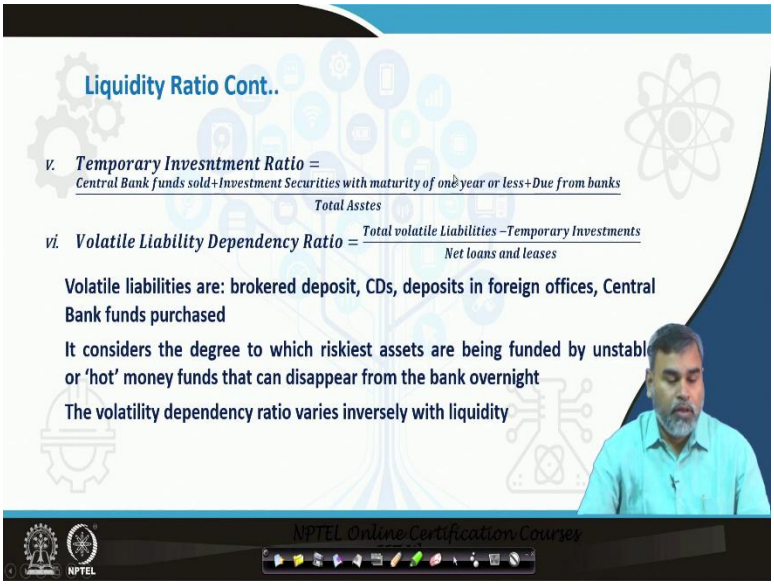

Then according to Basel there are two major issues there using, one is temporary investment ratio, other one is the volatile liability dependence ratio and whenever you talk about the temporary investment ratio it is the central banks funds sold, if the, anything is there, then investments security with maturity of 1 year or less whatever investments the bank have made on those assets with maturity period is 1 year or less and the due from the banks, other banks divided by the total assets that is called the temporary investment ratio feature where the assets are basically highly short term in nature and also the C code investments.

And another one the volatile liability dependence ratio that means how the, what are those volatile liabilities the banks have? And what are these volatile investment the banks have made? If you take the difference between them divide by the total loans and the leases whatever the commercial banks have that will give you the volatile liability dependence ratio and what are those volatile liabilities?

That is the broker deposits, certificate of deposit, deposits in foreign offices of the commercial bank, central banks fund purchased, so these are the different type of volatile liability dependence ratio. So, it consider the degree to which the riskiest assets are being funded by the unstable or the

hot money which are highly volatile funds that can disappear from the market overnight and it has inverse relationship with the liquidity.

More the volatile then the liquidity will be relatively less, so that is why there is an inverse relationship between the volatile dependence ratio and the bank liquidity. So these are the different measures of the liquidity.

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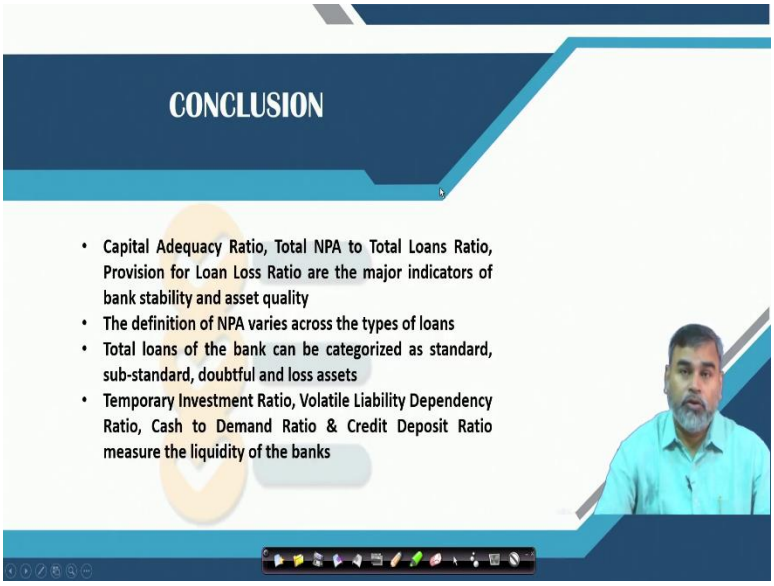

So, here, in today's discussion whatever we have seen their capital adequacy ratio, total NPA to total loans, for, provision for loan losses ratio these are the major indicators of the bank stability and asset quality and the definition of NPA varies across the types of loans.

Then the total loans of banks can be categorized as standard, sub-standard, doubtful or the loss assets, temporary investment ratio, volatile dependence ratio, cash to demand ratio, credit deposit ratio these are the different measures of liquidity what the bank uses to know that how far they are able to really cater the demand for their customers in terms of the deposit withdrawals or cash requirement for the loan. So this is about some of the major performance measure for the commercial banks uses.

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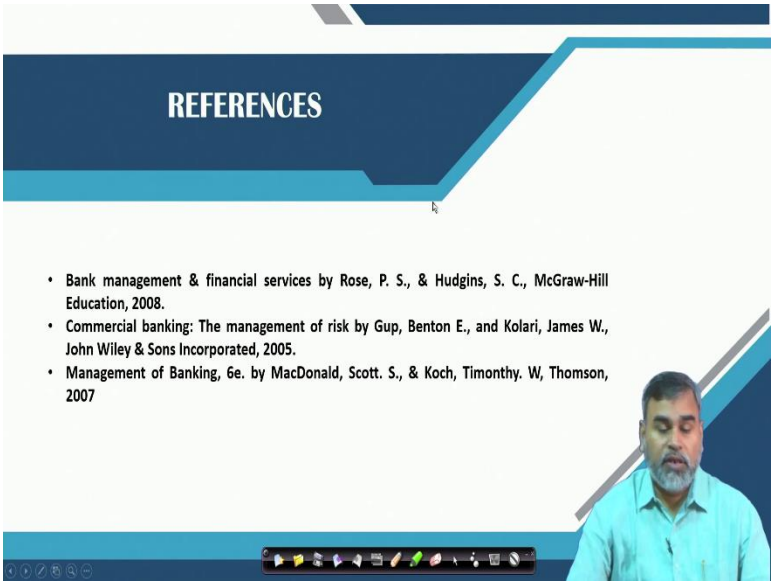

So, these are the references you can go through for the detail analysis on this and also can discuss about the other performance measure in the forthcoming sessions, thank you.