Management of Commercial Banking
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Lecture: 52
Management of Deposits- II

Good morning. So, in the previous class we discussed about the different types of deposits which the commercial banks always provide to the different customers and as well as that the calculation of the effective interest rate and the different types of interest rate calculations for the different types of deposits. In today's class, we will discussing about the pricing of the deposits that how those deposits are priced there are various models, which are used for this. One is your cost plus profit margin. Then another one is the application of the marginal cost and another and other one is that on the basis of the relationship between the banks and the customer.

So, there are three methods specifically used by the commercial banks for pricing the deposits and the basic principle of the pricing of the deposit is that, whatever deposit cost the commercial banks always incur. The price should be determined in such a way that the cost whatever the banks always incur that should be covered up and apart from that there is some kind of profit margins should be involved into that.

So, this is the basic principle but the concept here is that whether you should go for an application of the average cost or you should go for application of the marginal cost. So in this context, if you talk about that there is a dilemma that or some kind of trade-off between the interest rate provided which is provided for the deposits and as well as we can say that the price of the deposits what the banks decide whether that particular deposits is going to cover up the cost what they are incurring for maintaining those deposits.

Because the banks if they will maintain a high interest rate, then the more customers will be attracted to deposit the money in the bank. But sometimes what happens that the bank should avoid paying very high interest rate. The reason is that the potential profit margin what they want to maintain that can be always reduced. So, if they will keep high margin or they want to a high profit margin then the interest rates of the deposits should be low. But if the interest rates will be low then obviously, the availability of the deposits to the bank will be less.

So in that context, the bank has to decide a particular interest rate, which is acceptable to the customer, and they can attract more customers for the deposits and as well as they can

maintain their profitability. So in this context, the pricing of the deposit is a very important concept in the banking or whenever we manage this deposits, we have to maintain a particular interest rate which is really helpful for both managers of the banks or to maintain the profitability of the banks and as well as for the customers.

So, this is the basic philosophy or basic notion of the pricing of the deposits of the commercial banks.

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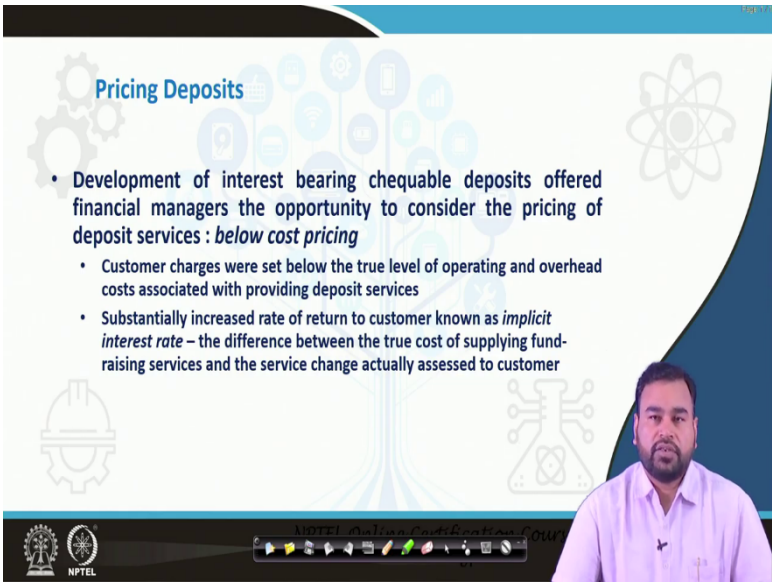

So in this context, we have to keep certain things in the mind that whenever we talk about the deposits in the different forms and here, we talk about the interest bearing checkable deposits, which offer basically an opportunity to consider the pricing of deposit services. Already, in the beginning we have said that the cost pricing what basically they have to maintain that cost pricing of the deposit has to be always kept in the mind whenever the pricing of the deposits are made.

So, if the customer charges were set below the true level of operating and overhead cost, then what basically happens that the banks basically incur a huge loss or the profit margin get hampered. Substantially, the increase rate of return to the customer, which is nothing, but the implicit interest that the difference between the true cost of supplying the fund-raising services and the service charge which basically actually assessed to the customer.

So in context, what basically we have to see, we have to maintain a particular interest in such a way that particular profit margin should not be hampered. So, that is the basic thing what always the bank should keep in the mind.

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So, considering all those considerations or all those factors into account, what the bank basically decide. The bank basically decide the interest rate for the deposits. So here in this context, what we have seen because of the highly competitive market and that is a huge competition, which is happening in the system, the average real cost of the deposit, is basically increasing.

Because everybody wants to attract more customers and to attract more depositors to the bank, the interest rates should be higher and that basically is happening because the number of banks in the system is increasing and as well as there is a huge competition which is prevailing in the banking sector. So in this context, what basically we are trying to do, that is why the different type of deposits basically priced in the different way or separately from the other services what the banks provide.

So, the price of the deposit should be different or the way of measuring the price of the deposits should be different than the other services what the bank basically provide. So in the real terms, if you talk about this it is very simplistic way basically the bank decides the price of the deposits that the unit price basically they charge for the customer to the customer for these deposit service is nothing but the operating expenses what the banks incur for the deposit service and the estimated overhead expenses which is allocated to the deposit service function and plus the profit margin, the expected or the planned profit margin for each service unit what the bank is selling.

So, the 3 components- one is operating expenses for the deposits. Number one, the overhead cost for providing this deposit services and as well as the profit margin. If you add these 3

components, then the price of the deposits can be calculated for that particular deposit scheme. So, this is the basic principle what basically we have to keep in the mind.

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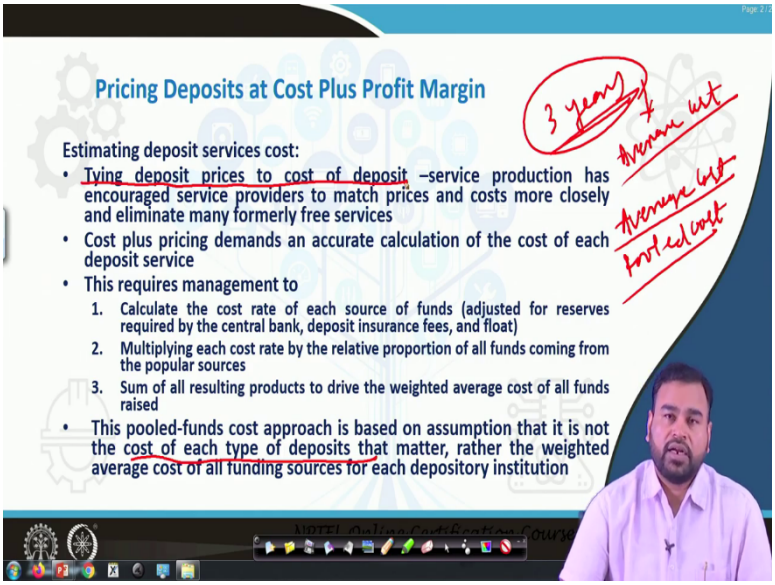

So, whenever we talk about this basically what we are basically trying. We are basically trying to remember that we are basically trying to calculate the here in this case, this is basically trying the deposit prices to the cost of deposit which is basically service production has encouraged service provider to match the prices and costs more closely and eliminate many formerly free services what the banks provide. So, if they really want to maintain that particular thing then this is not tying. This is basically tying means; we are adding off the deposit or mixing the deposit prices to the cost of deposit so that actually you can keep in the mind.

And here, whenever we talk about the cost plus pricing concept, it basically demands one accurate calculation for cost of each deposit service what the banks basically provide. So, the cost plus pricing basically, whenever we make, first of all we have to calculate the cost of each source of the funds which should be adjusted for the reserves required by the central bank, deposit insurance fees and the floating factor with respect to that. Then what we can do?

We multiply each cost rate by the relative proportion of all funds, which is coming from the different sources, then we can add it off. The sum it of the particular rate multiplied by the funds, which is available. That will give you the weighted average cost of all the funds. So for that, we have to know that how much cost we are incurring for each type of deposits and

as well as how much money or how much sources or how much sources of funds are involved with respect to that.

Then, finally, what we can do? We can calculate the cost of the deposits in aggregate. Then that is basically nothing but the weighted average of the cost of the funds. But one thing basically what we do? Here, we have 2 approaches what we can follow. One approach is the average cost, simple average cost approach and another one is the pooled fund cost of approach. So whenever we talk about the average cost of approach, here basically, what happens that for example, we are trying to deposit or we have to determine interest rate for a deposit, which is fixed deposit? So if the fixed deposit period is let 3 years.

So, the 3 years fixed deposit if you want to go for pricing then somebody can go for find out the historical average cost of interest rate of these 3 years fixed deposit scheme and that average cost plus the profit margin, that somebody can decide as interest rate for the 3 years fixed deposit scheme for the commercial bank. But generally that can mislead your analysis, because the cost what you are incurring for different type of deposits schemes are basically may be sometimes very higher or may be is not able to adjust the total average cost of the bank. So keeping that thing in the mind, so instead of using the average cost approach, we can go for the weighted average cost weighted average cost approach.

Here in this case, what basically we are trying to do? We are trying to consider all the deposit services what the bank is providing. Then we find out the cost incurred with respect to all type of assets and then we can find out the weighted average cost of all type of sources of the deposits what the bank has and that can be utilised, that can be used as a cost for the pricing that particular type of deposit. So, because of that we go for a pooled fund cost of approach, which is based on the assumption that it is not the cost of each type of deposits. So here, we have taken the example of 3 years fixed deposit.

So, instead of using the cost of each type of deposit, we are going for the weighted average cost of the funding sources for each depository institution. So in this case, what we are trying to do? We are trying to consider all type of cost involved with respect to that. So the basic principle, if you remember, what basically here we are trying to do? We are trying to unite go back; it is again, you remember, this is correct. This is basically tying the deposit prices to the cost of deposits.

So what basically we are trying to do? Whenever we are providing the service, the service production has encouraged service providers to match the prices and cost more closely and

eliminate many formerly free services. Basically, the free services is not provided by the commercial banks regularly. The reason is for each type of services, they incur certain amount of cost. Certain services has direct cost and certain services has some kind of implicit cost or the opportunity cost.

So, considering both opportunity cost and as well as the direct cost, what basically we have to do? We have to basically unite the services, the cost of the services and a well as the return what we are going to expect from that particular service. Then finally, what basically we do? And we add up the profit margin with respect to that and finally the cost of the particular deposit can be calculated. So, that actually you can keep in the mind.

So now, we will see that how this particular pooled cost of the fund approach is practical sense used in the market.

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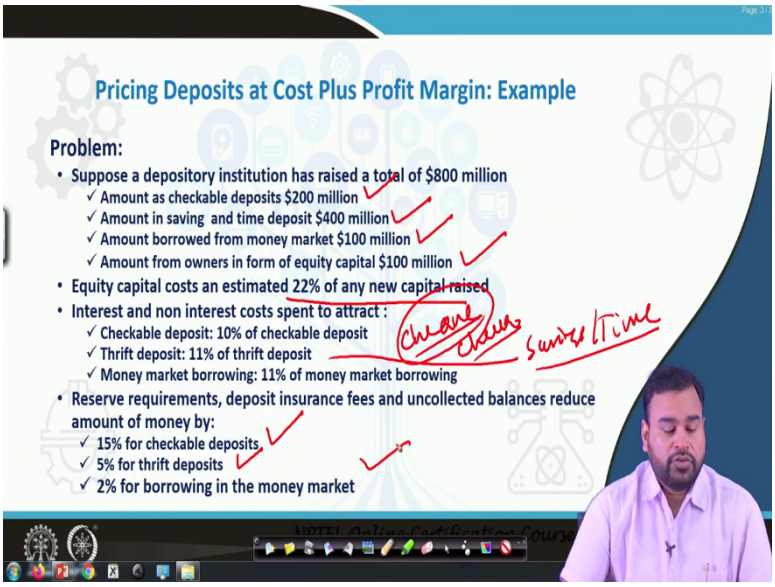

If you take this example, suppose a bank has raised 800 million dollar of the deposits and out of them we have 200 million dollar in the checkable deposits and we have the savings and time deposits that is 400 million. Then amount borrowed from money market is 100 million. Then amount from owners that is equity, that is basically your owner equity is the 100 million.

And we know that the cost, which is available with respect to each type of deposit, the cost of equity, which is historical cost of equity, is 20%. Whenever they have raised the new capital in the form of equity. Then 10% interest for the checkable deposits, you do not confuse that here, it can be interchangeable used in the book or in the various types of book, it can be

check, it is basically you can use the cheque and some books basically they write it the check. But it basically you are referring to the cheques, which the banks provide, and the accounts, which is basically involved with respect to the cheques.

The thrift deposit, thrift deposit means, this includes savings and time deposits. Savings and the time deposits and mostly these deposits are basically this small deposits, small savings. Then we have the money market borrowings, which basically the interest rate is 11% and 11% is the thrift deposit rate and we have the checkable deposit which is again, the 10% of the total 10% interest rate is involved with respect to that.

So now, for each type of deposit, which are the legal reserve requirements. In the legal reserve requirements, what we have seen: the reserve requirements, deposit insurance fees, the uncollected balance. Those kind of things involved with respect to different types of deposits. So, we have said that whatever available money is there, we cannot give all the money, we cannot use all the money or the checkable deposit that 15% for the checkable deposits, the 5% for the thrift deposits and 2% for the borrowings in the money market. So, those kinds of money is not available for the banking activity.

So because of that, out of the total money which comes under the different kind of deposits that has to be deducted or the total amount minus the reserve requirements will be considered for our calculation. So then, what basically we have seen?

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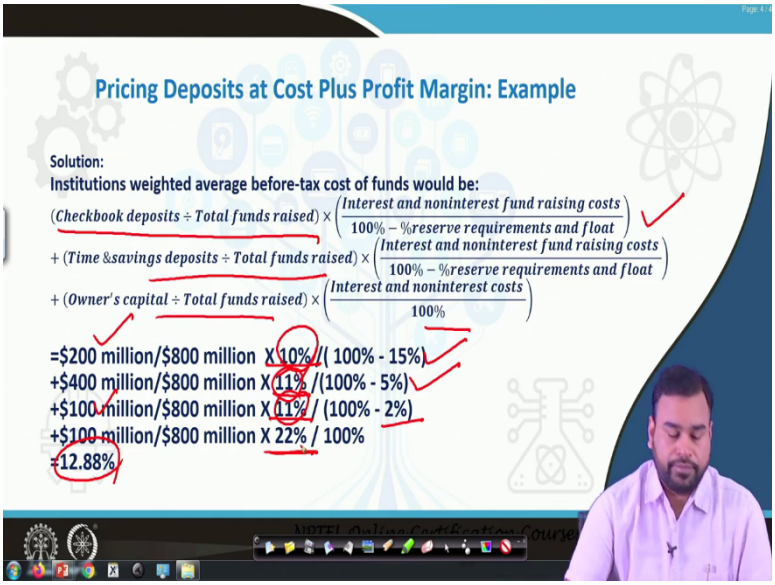

If you now go for our calculation part, then what we find that already we know that we have the chequebook deposits divided by the total funds raised. This is the proportion multiplied

by the interest and non-interest fund raising cost with respect to this chequebook deposits, divided by the 100% minus the 100% reserve requirements and the float.

Like that for saving deposits, we can find out the proportion. Here, for saving deposits or the thrift deposits proportion. Then again, we are finding out the interest and non-interest fund raising cost divided by the percentage of reserve requirements, you have to deduct it from the total available funds, which is there in the bank. Then your owner's capital into total funds raised, which is, again, in our case that is 100 million. Then interest and non-interest cost, the cost of equity divided by the 100%.

So now, what basically we have seen, for example, here we have, again, we have a money market instrument. So, that also you can calculate that the total money market borrowings, which is available. The percentage of the total money market funds, which is available with their particular bank that can be calculated from there. Then use the same concept here the cost of the fund, which is available, divided by the 100% minus the percentage of the reserved requirements.

So, we have 200 million is the checkable deposits. So, we have the 200 million divided by the 800 million into the 10%, which is the cost of this particular fund, divided by 100% minus 15%, because 15% is the reserved requirements. Then plus 400 million, which is the thrift deposits, 11% is the interest rate what we have assumed and 5% is the reserved requirements. Then 100 million is the money market deposits. Then 11% is the interest rate. Then 2% is the reserved requirements. Then like that, you have 22% as the cost of equity.

Then finally, what we got that is 12.88%. So the before tax cost of the fund, if you are going for a pooled cost of the fund approach, then we are getting in this case is 12.88%. But if you would gone for the average cost of the fund with respect to that particular type of deposits, then maybe for the checkable deposit, it would have been 10% average. Then 11% for the thrift or the money market and 22% for the equity. But in this case, what basically we have seen? We have seen the weighted average cost of the fund for that particular bank is 12.88% so after that we can add the profit margin and the other things, which can give you the idea that what kind of interest rate should be adopted for different types of deposits which the banks provide.

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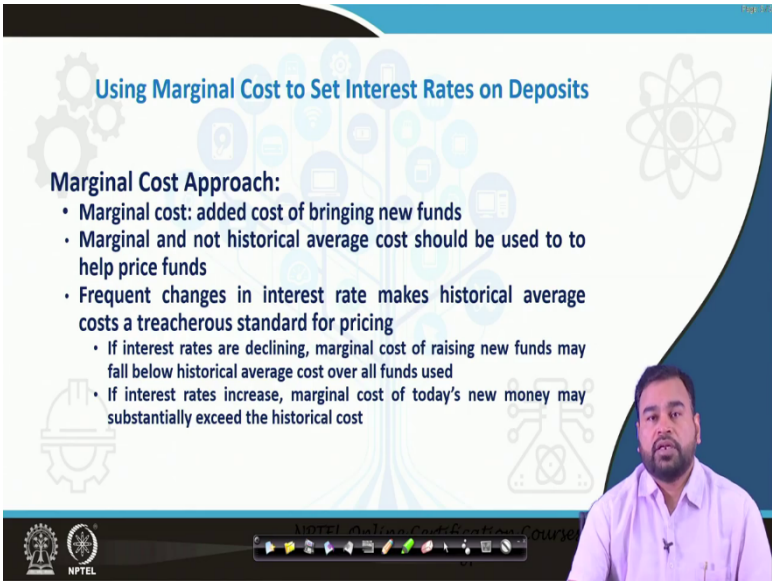

Then we can come to the marginal cost approach. This is basically another approach. As usual, you know what do you mean by the marginal cost. The marginal cost is basically the additional cost for bringing the new funds. Whenever we are adding one extra unit of the particular sources to the existing sources, then how much cost we are incurring that is basically called as the marginal cost. And whenever we are going for the marginal cost approach, we have to use the marginal cost not by historical average cost for the calculation.

So, marginal cost basically will have a better kind of idea, because how much unit cost we are incurring with respect to the service provided with respect to the deposits. That should be considered whenever we calculate the cost of the deposit. Instead of using the average cost or the average historical cost, what we have incurred to maintain that deposit scheme with that particular bank. So the why basically, we cannot use this historical average cost. Because over the period, here are many changes frequent changes are happening with respect to the interest rate due to different kind of factors and if the interest rate will change, that will have some kind of misleading results, whenever we use that historical average cost for our calculations.

So for example, if the interest rates are declining, then the marginal cost of raising new funds may fall below the historical average cost. But if the interest rate is increasing, then the marginal cost of today's new money may substantially exceed the historical cost. So,

historical cost may not give you the actual or the real interest cost what we are bearing with respect to that particular type of deposits but whenever we are going for the marginal cost that gives you a better idea of the existing cost what the bank is incurring with respect to the new services what they provide or new additions they are making to the existing deposit schemes.

So, this is basically the marginal cost approach. So, that also is quite relevant and very realistic in the sense that it gives you the actual idea about the interest rate which is prevailing in the market.

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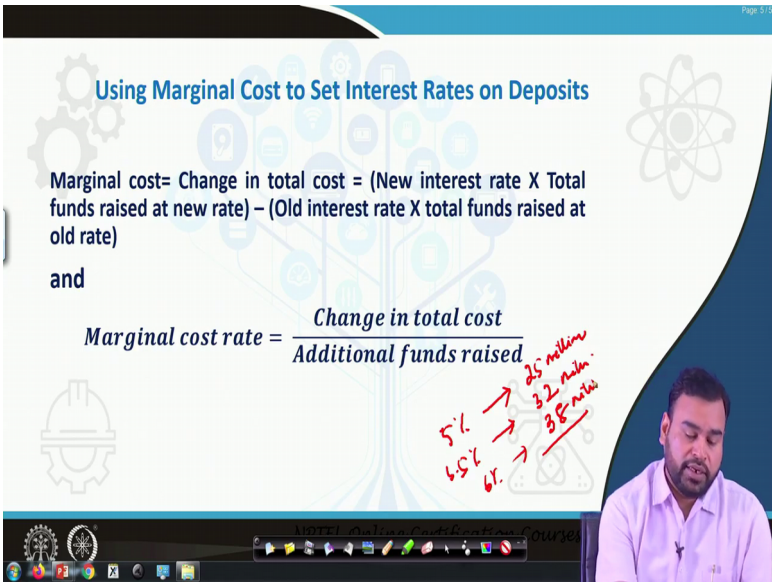

So, whenever we go for marginal cost, why basically how basically the concept is considered. For example, if you say that a bank if they will keep your interest rate as 5%, when they are expecting that they will get some 25 million deposits. If they will increase the interest rate up to 5.5%, they will get, let 32 million deposits. Again 6%, they can get, let, 38 million deposits.

So like that. So in this context, whenever they are increasing the interest rates, the expected amount of deposits also changing. So in that particular point of time, how this particular bank decides the interest rate? What exact interest rate out of all those scenarios, what interest rate would be fixed? By that, the bank can able to fulfil their objectives on terms of maintaining the profitability and as well as the liquidity. So therefore, there are 2 things we always consider. One is marginal cost. Another one is the marginal cost rate. What is marginal cost?

Marginal cost is nothing but the change in the total cost, which is calculated in this way. The new interest rate what we are going to prevail for that particular deposit scheme, multiplied by the total funds raised, minus the old interest rate into the total funds raised at the old rate. The total funds raised at the new rate minus the old interest rate multiplied by the total funds raised at the old rate. And marginal cost rate is nothing but the change in the total cost, which is nothing but the marginal cost, divided by the additional funds raised.

So in this context, if you see the example, then how basically it works, then we can get a better idea with respect to that.

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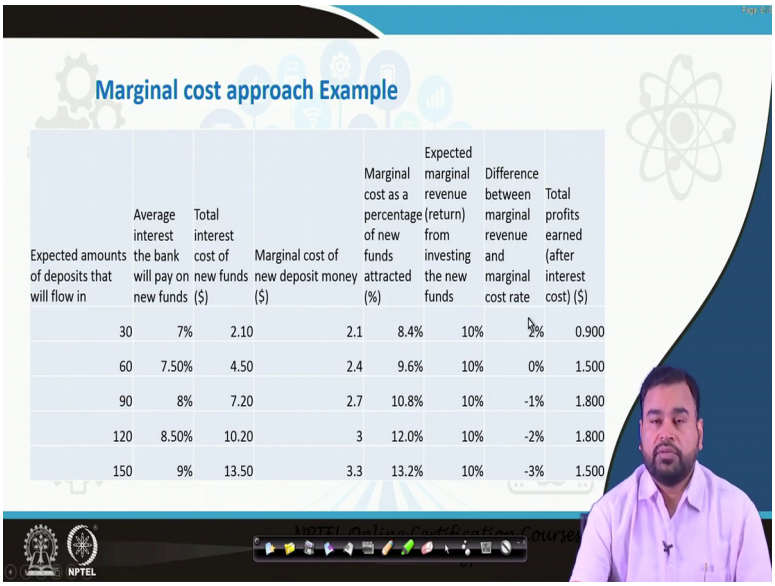

Then if you see that, let there is a bank. Here if the bank is providing 7% interest, they are able to they are expecting that they will have a deposit of the 30 million dollar. If that will increase to 7.5%, they will get 60 million. If they increase to 8%, then 90 million. Then, 8.5%, 120. Like that 9%, 150 like that. And here, they are if they are going to invest that particular fund in the market, they are expecting that they will be getting 10% interest. So now, if you wat to calculate this, then the total interest cost what they are bearing, 30 into 7% that is 2.1. 60 into 7.5%, 4.5 and all these things then they can calculate the marginal cost.

The marginal cost is nothing but this minus this, this minus this, this minus this, this minus this. So they got the marginal cost from here, then they can calculate the marginal cost and the money, which is basically they have the marginal cost as the percentage of new funds. The new funds whatever they have attracted that basically that 30 million. Here, they have attracted 30 30 30 million, they can find out the percentage of that. The marginal cost as the

percentage of the new funds, which they are attracting. Then the expected revenue what they are generating that is 30%.

Then the difference between the marginal revenue and the marginal cost is this. Then finally, your total profit, basically they are generating in this way. So this is the way, basically the marginal cost of the fund can be used whenever they want to price the deposit schemes in the market.

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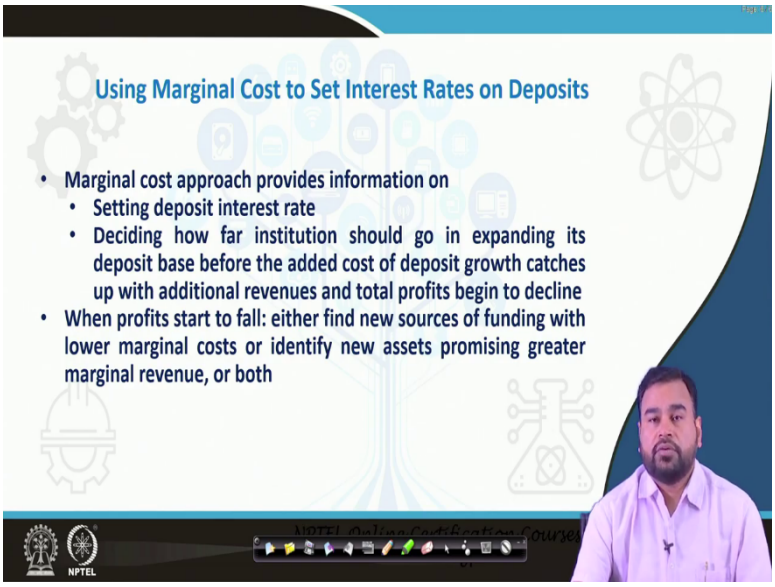

So marginal cost basically approach provide the information on setting the deposit interest rate, deciding how far the institution should go in expanding its deposits base before the added cost of deposit growth catches up with additional revenues and total profits begin to decline. And when profits start to fall, either find new sources of funding with lower marginal cost or identify the new assets which promising the greater marginal revenue or that can change both. So this is the way, the marginal cost approach basically helps the banks to go for a realistic price determination of the deposits.

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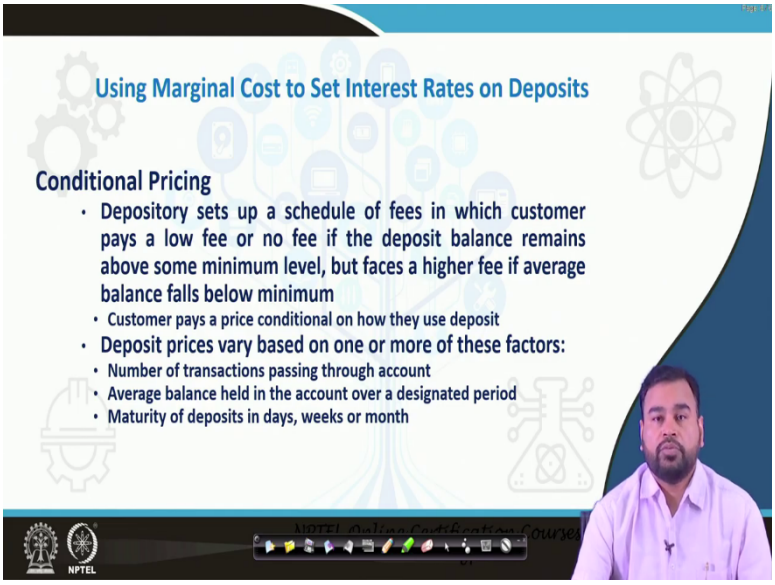

Then we have another concept that is called the conditional pricing. The conditional pricing is basically what? The depository basically sets up a schedule of fees in which customer pays a low fee or the no fee if the deposit balance remains above minimum level but faces a higher fee if the average balance falls below the minimum level. So the customer basically pays a price, which is conditional on how, they are going to use that particular deposit. So, the deposit prices vary based on many factors like number of transactions in that particular account.

The average balance held in the account for a stipulated period or a designated period. A minimum balance has to be maintain. Then the maturity of deposits in weeks or days or months that also should be kept in the mind. Higher the maturity period, more the deposit interest rate.

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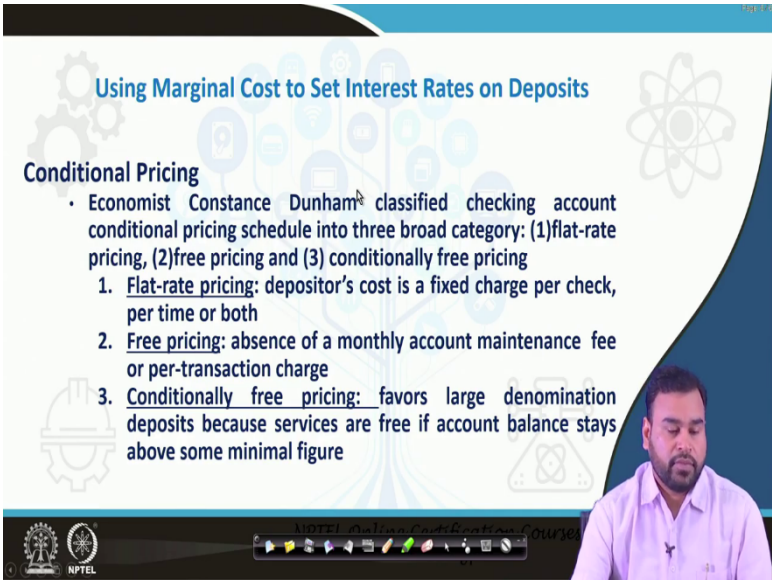

Then we have classified these different kind of pricings with respect to this conditional pricing. The Dunham basically classified this account in 3 broad category. One is your flat rate pricing. Then you have the free pricing and conditional free pricing in this particular context. The flat rate pricing is nothing but the depositor cost is a fixed charge per check, or time or both. Free pricing means absence of monthly account maintenance fee or per transaction charge. It basically for some certain customer, this kind of services bank can provide whenever they really are generating more revenue from that particular kind of customer's money, which is deposited in the bank.

Then conditionally free pricing which favours the large denomination deposits because the services are free if the account balance stays above minimal figure. If your minimum balance in a particular period then the conditional free pricing concept can be used for that. So, this the way the conditional pricing concept was whenever the interest rate determination on various deposits schemes are made by the commercial banks.

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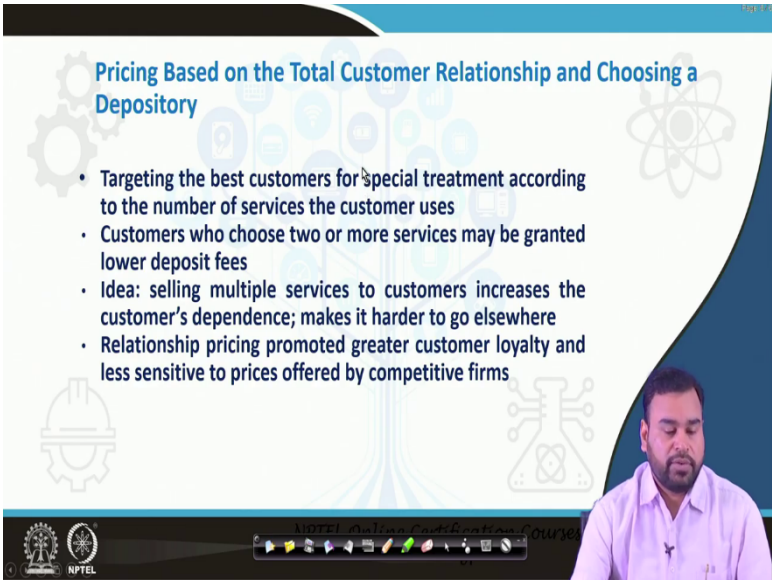

Then another one is the pricing, which is based on the customer relationship. What basically here we are happening in today's context we have seen there are different type customers the banks are basically classifying like your classy customers, preferred customers, all types of customers base they are making. The reason is first of all, they want to provide the better services depending upon the customer's ordinance or the customer's contribution to the generation of the revenue for the commercial bank and as well as the amount of money, what they are maintaining in a particular period with the commercial banks.

So in this context, one customer may have many accounts in a particular bank and one customers might have a single account in the particular bank. So considering all those factors, the deposit pricing can be also made. So in this context, the bank basically targets the best customers to whom they can provide the special treatment according to the number of services what the customer uses. The customer has taken the loan. The customer has brought some kind of other services from what the banks basically provide. So considering all those factors, the deposit rates may be higher for those kinds of customers.

So here, what the question here is that sometimes what happens that the special treatment also can go in the different ways. The customers who chose two or more services may be granted lower deposit fees because banks have seen banks have provided many kind of services or provide different kind of services to that particular customer and the customer basically is obliged to get whatever interest rate the bank is basically providing. That is also another theory what basically we can consider.

So because of that, the selling multiple services to the customers increases the customer's dependence. So in that context, what happens that whatever deposit rate the banks provide,

the customer accepts the deposit and conclude the relationship with that particular bank. Then the relationship pricing promoted greater customer loyalty and less sensitive to pricing or the prices offered by the competitive firms. If I am happy with the services of that bank and the customer relationship with that particular bank is good over the time then even if there is a huge competition, then customer may not change the particular bank to another bank to get that particular service or to have deposit account there.

So, in this context that customer relationship also plays a very significant role for pricing of the deposit for the commercial banks.

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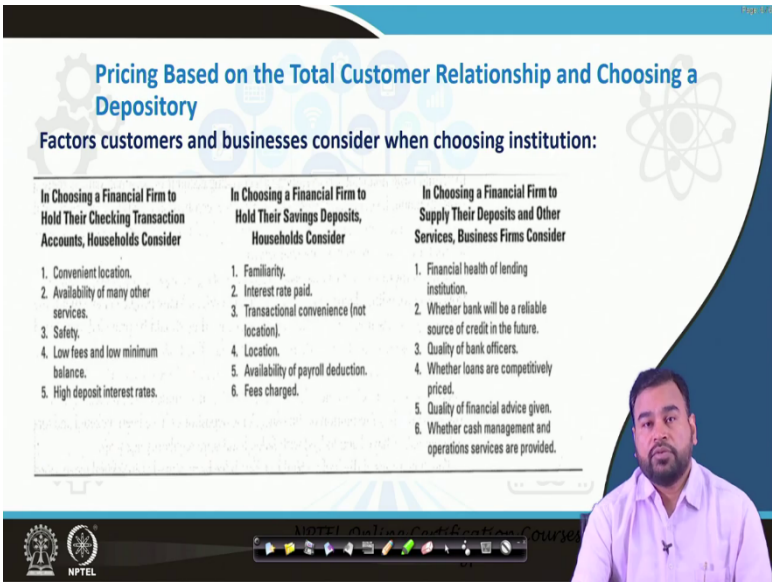

So, this is the way the factors customers and business consider when they choose the institution. Location, availability, services, safety, low fee and low minimum balances high deposit interest rate. These are basically the household sector consider. But here, another thing is household sector also consider familiarity, how much interest rate the bank is paying, then transactional convenience, location that means internet facility, other kind of facility is available or not.

Availability of payroll deduction. Fees charged- whatever fee basically banks all these factors basically decide that whether the particular individual can go and open an account with that particular bank. If it is business, units then they consider the financial health of the lending institutions. Whether the bank will be reliable source of credit in the future. Quality of the bank officers. Whether the loans are competitively priced. The quality of the financial advice given to them from time to time. Whether the cash management and operation services are

provided by the commercial bank. So, all type of factors will be considered whenever any kind of entity chooses a bank where they can have the deposits.

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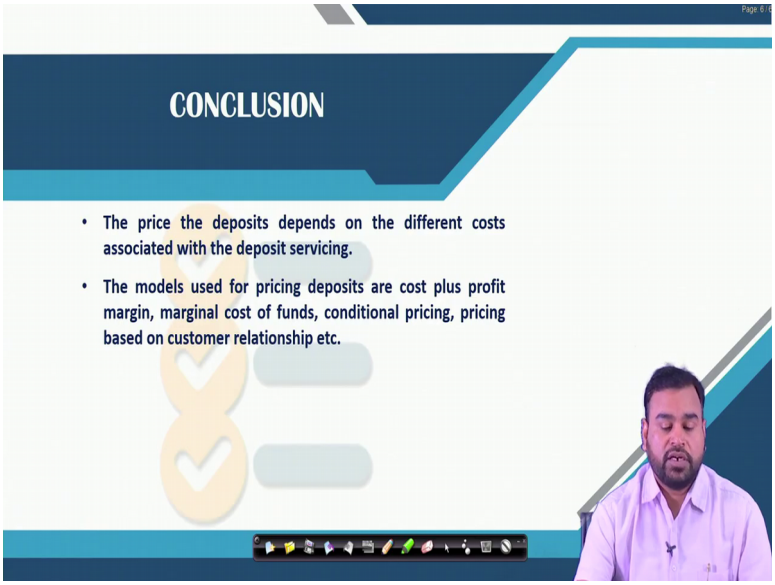

So, what basically we have discussed in today's session that the pricing of the deposit depends up on the different cost associated with the deposit servicing like your operating cost then the profit margin, all these things they have to consider. Then the models which are used for pricing the deposits are basically costs plus profit margin, marginal cost of the funds, conditional pricing, pricing based on the customer relationship, etc. And there are many factors the customer decide whenever they want to get the deposit services from the commercial banks.

Accordingly, the commercial banks decide that how much price they want to impose on that particular customer. But the customer also again consider different kind of factors to have this relationship with the commercial bank. So these are the references. You can go through for this particular topic. Thank you.