**Management of Commercial Banking**
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**Lecture 55**
**Management of Off-Balance Sheet Activities 2**

Good morning. So, in the previous class, we started the discussion on the different off-balance sheet items what the Commercial Banks always have and because of their nature and because of the characteristics, those items never shown in the balance sheet, but they have also some implication on the profitability or the banking activities what the commercial banks always operate.

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So, in today's class, we will be discussing about the loan commitments, derivatives instrument what the commercial banks hold and with respect to the derivatives, they have developed certain kind of unique products like synthetic loans and the securitization.

So, in the previous class, we discussed about two things, one is your guarantees and the letter of credits, which are popularly used by the Commercial Banks as the off-balance sheet items and as today's class, we will be discussing some other things which is not yet realized by the Commercial Banks or not reflected in the balance sheet but still they have certain significance in terms of the performance or the profitability of the banking system. So, we will understand one by one what exactly it means and how it is going to affect the balance sheet of the commercial bank.

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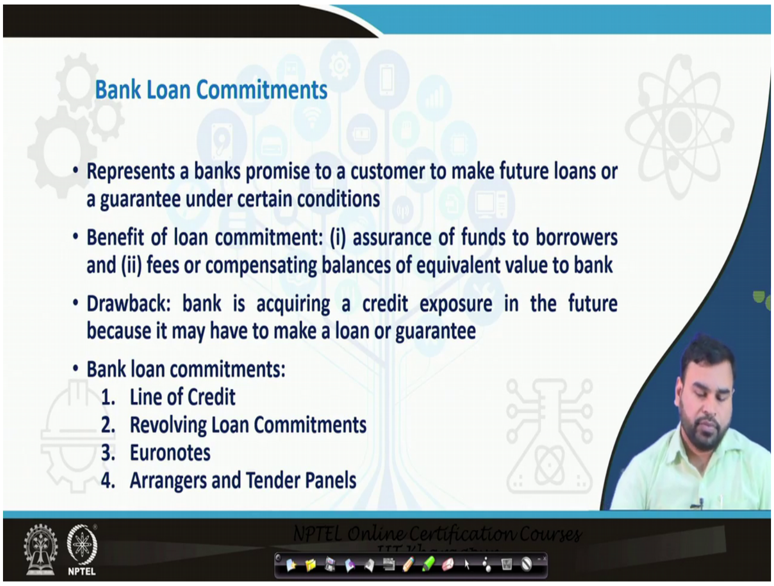


So, the first one is the loan commitments. So whenever we talk about the loan commitments, by name itself, what it signifies, it signifies that the bank has made a promise or bank has made a commitment to a particular customer to provide certain kind of loans if the particular customer is going to fail to repay that particular loan in the future.

That means, in the sense what we are trying to say, the bank is not exactly dispersing the money as the loan amount, but it has made the commitment with certain terms and conditions. The bank is basically is the guarantor, bank is basically the entity who is going to provide this kind of payments to that particular kind of entity from where the loan has been taken.

So, because of that, it represents the bank's promise to a customer to make the future loans or a guarantee under certain conditions. If there are certain conditions which will be upheld in that particular point of time, then the bank is ready to pay that particular money what the customer is supposed to pay. So, whenever the bank provide this loan commitments, it has certain kind of benefits, they always enjoy.

What kind of benefits they enjoy? The first benefit basically they enjoy, it is basically an assurance and there is no such immediate cash flow which is happening with respect to the loan commitments. So, in that sense it is not exactly affecting the tangible aspects of the balance sheet, the on-balance sheet items is not getting affected due to the commitments what the bank has made. Only on-balance sheet items will be affected whenever actually the commitment will be coming into the force. That is why this is basically assurance.

But again, it has basically had certain kind of fees to provide that guarantee or to provide that commitment. The Commercial Bank charges certain amount of fees which is basically a kind of income, generating source of the Commercial Bank. So, first of all, it has no tangible implications, number one, number two, the bank basically earns certain money against that particular commitment or the guarantee, what he has provided.

But the question here is there is a drawback, the drawback is, the bank is basically exposed to certain kind of credit exposure. In the future, if the bank has to make the loan or is going to exercise that guarantee, what he has given in the beginning. So, in that sense, it has certain kind of exposure, credit risk exposure in the future, but immediate benefits are there, the bank is able to generate certain revenue, certain income out of this.

So, that is basically the specific nature of the loan commitments and the loan commitments is one type of income what the bank can generate without affecting the tangible aspects of the different items of the balance sheet, whatever they have. So, there are different kind of commitments the bank can make, one is your line of credit, you have the revolving loan commitments, you can have the Euronotes, you can also have another concept called the arrangers or the tender panels.

So, these are the different kind of commitments or different ways the commitments have been made by the bank to provide this kind of a guarantee to the customer. So, this is the way the bank loan commitment is defined.

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So, one by one if you see that, what do you mean by the line of credit? The line of credit is basically agreement between a bank and a customer that bank will entertain the request for a loan from that particular customer in the future. But only difference of the normal commitment and the line of credit is, the line of credit is informal agreement and bank generally do not collect the fees for that particular service.

So, in that way, the bank is not in exactly generating any kind of income or the revenue out of this type of commitments. But these commitments has lot of implication from the customer point of view and if the customer has a good relationship with the commercial bank, then for those customers, the instrument like line of credit can come into picture.

So there, basically bank is providing the guarantee in informal way without any kind of formal arrangements and if the particular customer is not able to repay the loan, then the bank is basically, is going to provide that particular loan and in that sense, bank is exposed to certain credit risk.

But the probability of credit risk in terms of line of credit is relatively low, because the bank basically access that particular customer in such a way, by that the probability of default against that particular loan is almost nil. So, in that sense the line of credit concept basically works.

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Then the second one, we have the revolving loan commitments. The revolving loan commitments is basically a formal agreement between the bank and the customer who has asked for that kind of commitment from the commercial bank, number one and in the context of the revolving loan commitment, it obligates the bank to lend funds according to the terms of the contract.

The bank is obliged to provide that particular fund in the future and that particular provision is only applicable with certain terms and conditions and here, whenever the contract or the agreement is signed between the bank and the customer, the contract basically specifies the terms under which the loans will be made, including the maximum amount to be loaned, interest rate and the maturity.

All those things will be mentioned from the beginning, whenever the loan has been sanctioned or loan has been realized and accordingly, the bank will decide whether the commitments will be given against that particular loan or not. If the bank has given the commitment, then in the future, there is any certain kind of situation will arise, then bank is obliged to pay that particular money and for that banks charges certain kind of fee and the customer basically pays that fee to the bank and that fee concept is defined as the facility fee.

This particular fee is defined as the facility fee in popular term that because bank provides this kind of facility to the customer, so because of that we call it the facility fee. This particular commitment or the instrument basically protects the borrower from an availability the risk and the markup risk.

Markup risk means, it is basically a premium which is added on the reference rate to compensate the bank for a credit risk. So, some kind of premium will be added to that particular loan activities which the customer is basically is doing in that particular business, for that the bank basically charges certain kind of premium against that and that premium is basically given to compensate the credit risk, what the bank is supposed to take.

So, that is where they basically, it has certain advantage for the customer point of view, that the revolving loan commitments have certain advantage and here, also there are certain kind of option contract which is related to this, the bank must basically offer loan at agreed upon prices, which is already designed or already mentioned in the loan document whenever the loan has been issued or loan has been dispatched.

This particular activities is obviously, exposes the banks to the credit risk and the commitment fee is price to capture the bank risk. So, because there is a fee involved in that, it is basically, the bank is basically charging that particular fee to cover up the credit risk what they are going to be facing in the future against that kind of activity. So, that is what basically the revolving loan is all about and from the customer point of view, it has certain kind of advantage and from the banking point of view, it has advantage, because bank can generate certain kind of revenue against this particular services what they provide.

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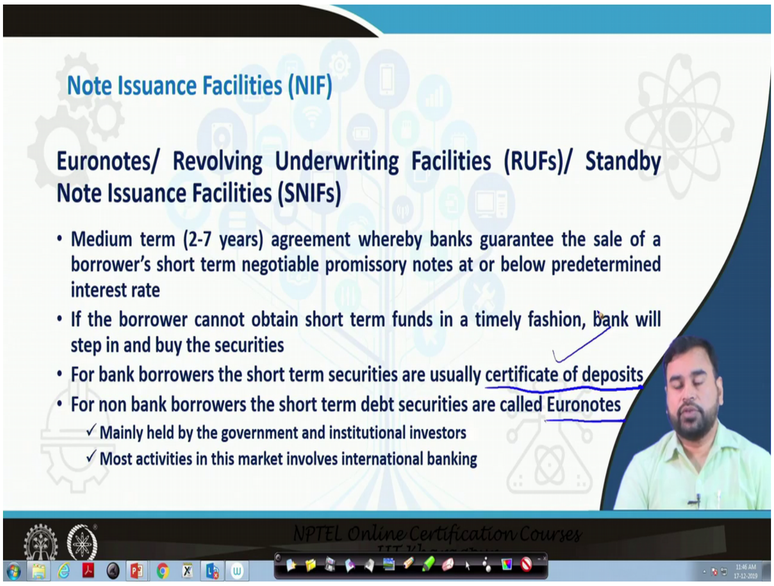


Then we have another instrument called the Note Issuance Facility and in note issuance facility, we have different type of issuance facility which is provided, we have the Euronotes, we have the Revolving Underwriting Facilities, we have the Standby Note Issuance Facilities. So, these are the different type of facilities which comes under the note issuance facilities which is given by the commercial bank.

Generally, whenever we use this one as an off-balance sheet items, here if you see, mostly the characteristics if you observe in terms of this kind of off-balance sheet items which is involved in the banking process, it has a medium term argument. The agreement is relatively longer in nature. It is 2 to 7 years and the bank basically guarantee the sale of a borrower's the short-term negotiable promissory notes at a below predetermined interest rate.

So, bank is basically, is giving the guarantee that, if the borrowers is holding a kind of negotiable promissory note and in the future if that particular note is not going to be sold, then the bank has given the guarantee that particular instrument will be bought by the banks and in, at that context whatever interest rate will be charged, it is little bit the lower than the interest rate which is prevailing in the market.

So, that because it is particular instrument is not going to be sold, but bank is giving the guarantee that if it will not be sold, then bank is obliged to buy that particular security from that particular customer. So, here if you see that if the borrower cannot obtain the short-term funds in a timely fashion, then the bank will basically step in and buy the securities and the money will be basically provided to that particular investor or particular customer.

So, in that sense, it has given certain kind of specific guarantee, certain kind of specific commitment, by that the instrument what this particular investor is holding, that particular thing can be, there is a guarantee that it will be sold in the market. For bank borrowers the short-term securities are usually the certificate of deposits, because there are many instrument the bank provides, for bank borrowers with the certificate of deposits and for the non-bank borrowers, it is basically the Euronotes.

So, whenever the bank deals with this kind of business or this kind of off-balance sheet activities with them and then we, they can use the CDs or the certificate of deposits, but if it is issued by the non-bank borrowers, then we can call them the Euronotes. So, mainly it is held by the government and the institutional investors and most activities in this market basically involves the international banking.

So, across the globe, this kind of activities, Euronotes are basically transacted across the international market or different type of, different markets which are existing in the system, financial system and the non-banking borrowers basically largely use this instrument as one type of off-balance sheet activities with them.

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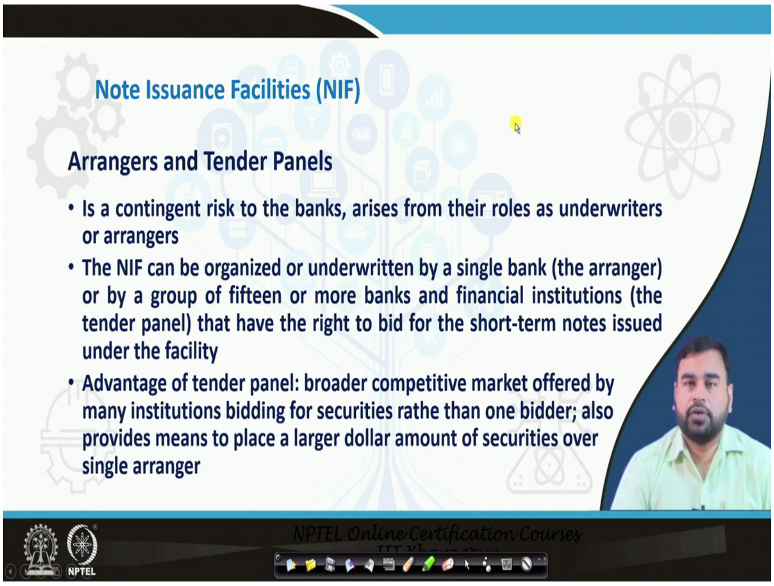


Then we have some other instruments like arrangers and tender panels, which also come down, come under the note issuance facilities. So, here whenever you talk about this, it is basically a contingent risk to the bank, which basically arise from the role as underwriters or the arrangers.

If the bank is providing some underwriting services. So, any kind of financial transactions which is supposed to be held, if there is some issue in terms of that particular transactions or there is some kind of risk involved in that particular transactions, then the bank will basically act as the underwriter.

So, the note issuance facility can be organized or underwritten by a single bank. Basically, what we call the arranger or by a group of banks or financial institutions, we call them the tender panel. So, the facility which is given by the underwriting services, which is given by the bank, if it is single bank, then we call it, we call them arranger and if it is, that particular guarantee is given by the underwriting services, is given by the group of the banks or the group of the financial institutions which exist in the system, then we call them the tender panel.

They have the right to bid for the short-term note issued under this particular facility. That already we have discussed, that this is basically a kind of guarantee which is given against the investment in terms of the short-term securities. So, if the short-term securities are not sold in the market, then the bank is obliged to.

So, you might have known that in the IPO issuance process whenever we see, if there is an underwriter, if IPO is not subscribed in the market, then the underwriter has the obligation to subscribe that particular asset on that predetermined price, which is decided by the process itself. So, in the same process, the note issuance facility also will work if the particular bank is acting as the underwriter in that particular process or in that particular business.

So, there is advantage in terms of the group of the banks or the tender panel, the reason is that, it provides a broader competitive market which is offered by many institutions which we, who are going for the building rather than a one bidder, that so market will be competitive and once the market will be competitive, then it has certain implications on the pricing of that particular product and it also provides the means to place a larger amount of securities over a single arranger.

Single arranger case may not be much amount will be subscribed in that particular system, but whenever a tender panel is existing or a group of banks or group of financial institutions are involved in that particular process, in that particular point of time, we can have a sense of the larger amount of money, which is available for that particular type of business. So, this is what basically the difference between the arrangers and the tender panels which work in the banking system as one of the, we can say that off-balance sheet items.

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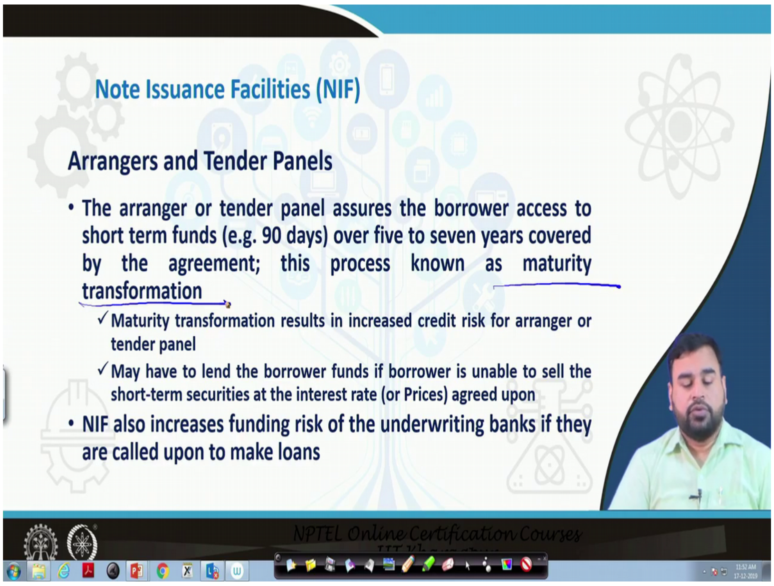


So, the arranger or the tender panel basically assures the borrower to access the short-term funds over 5 to 7 years covered by the agreement and this process is basically known as the maturity transformation.

If the arranger basically assures the borrower to access the certain funds over 5 to 7 years and generally the short-term funds maturity period is 90 days and it is basically cumulatively carry forward to 5 to 7 years period, then that particular process is known as the maturity transformation, because the short-term funds can be converted into the long-term funds and the long-term funds can be converted into the short-term funds, in that process we can say there is a maturity transformation which is happening with respect to that kind of process.

So, maturity transformation basically results in increased credit risk for arranger or the tender panel. Obviously, they have the credit risk because of at any point of time, the particular subscription is not happening or these particular funds are not sold or particular instruments are not sold, then in that particular point of time, they are obliged to do that particular business on behalf of the customer or the particular client, then they are exposed to certain amount of risk or mostly it is the credit risk.

They may have lend the money from the borrower funds, if the borrower is unable to sell the short term securities in the interest rate or the price which is agreed upon in the beginning.

Whenever this particular contract or the agreement has been signed, if the borrower is not able to sell that particular asset, then it is the bank's obligation basically to overcome that problem and subscribe that issue or subscribe that particular asset for their investments.

So, therefore, it will have definitely a larger implication on the tangible balance sheet items of the commercial banks, if at any point of time this situation will arise. It also increases the funding risk of the underwriting banks, if they are called upon the, called upon to make the loans.

So, again the funding risk is another problem will arise with respect to the banks, if the underwriting banks are basically is going to, are they called upon to make the loans from that particular process from that particular proceedings. So, this is why there are many advantages and disadvantages involved in terms of the note issuance facility and as well as with respect to the arrangers and the tender panels.

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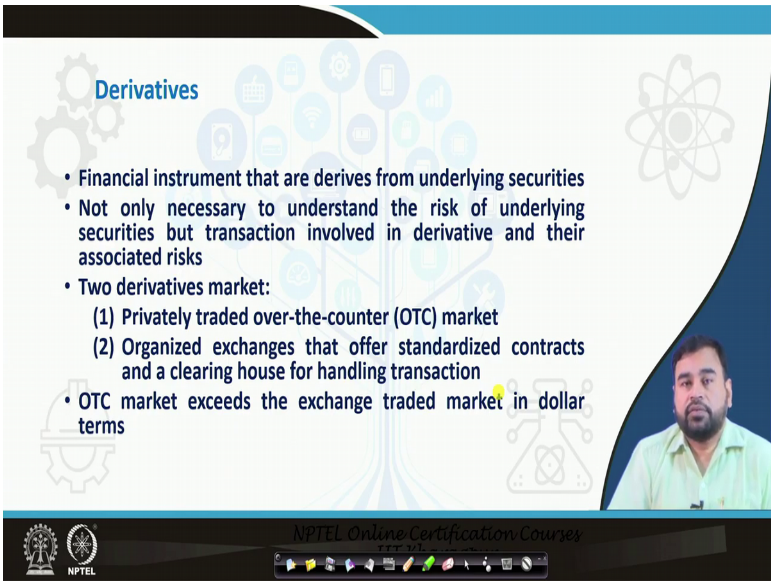


Then, we can have some other instruments and most important instruments in this particular segment, in the derivatives. So, that derivatives instrument, how it is used to, in the risk management process that already we have discussed before. But here we will be talking about briefly that how it is consider as an off-balance sheet item and what are those different kinds of markets and how the derivatives instruments are really used to manage the particular risk in this particular context or as like off-balance sheet items, that we can discuss it here.

So, already you know that derivatives is nothing but, it is a particular asset which price is derived upon any kind of underlying assets and in the banking case, mostly the underlying assets are the financial assets. So, the asset can be interest rate, the asset can be exchange rate, the asset can be stocks. If the underlying asset is the financial asset, we can call them the financial derivative, if the asset is backed by or maybe the underlying asset is a commodity, then we can call it as a commodity derivative.

In terms of derivatives, it not only necessary to understand the risk of underlying securities but the transactions which are involved in the derivatives and their associated risk also we have to understand, because in the derivatives market, we are basically taking the position anticipating that how this interest rate or the exchange rate is going to behave in the future.

But this particular anticipation may be realized, may not be realized. If this anticipation is not going to be realized, then that basically makes an issue in the sense that the particular bank is exposed to more risk, if they are holding the more derivatives instruments in their off-balance sheet activities.

So, there are two markets where this kind of derivatives are traded or derivatives are available for the trading. One is your OTC market and another one is your exchange traded or the organized exchanges that offer the standardized contracts and a clearing house for handling the transactions. So therefore, already we know this an OTC market basically is dominating in terms of the exchange traded, in comparison the exchange traded market in the developed countries or whenever we discuss about or we analyse about the derivatives instrument.

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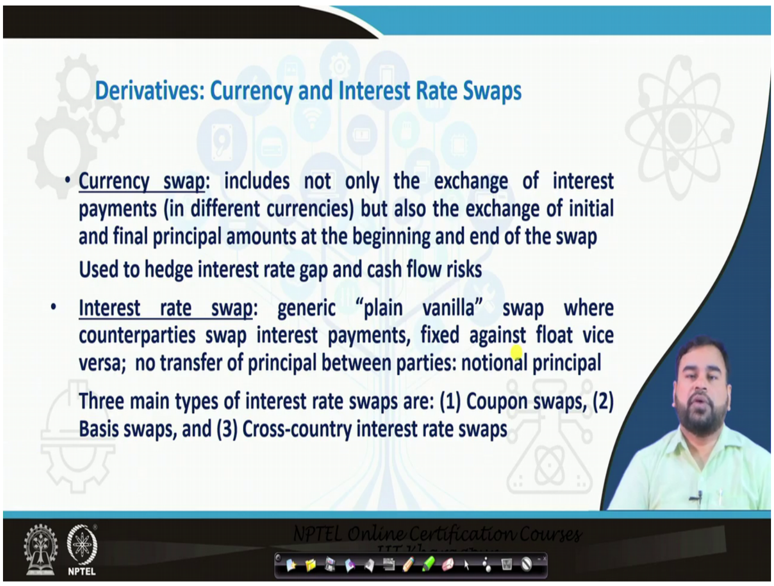


So, there are many types of derivatives instrument, already we have discussed but you can see that how it is different across each other. So, one is your currency swap, which is not only the exchange of interest payments, but also the exchange of the principal, initial money which is transacted in the beginning and at the end of the swap, this particular money also, in the cash flow process that particular money also involved in the cash flow analysis and generally, the currency swaps are used to hedge the interest rate gap and the cash flow risk which is happening in the market at a particular point of time.

So, mostly this particular instrument is used as hedging instrument and this hedging instrument is used in the sense, they are basically going to hedge the interest rate fluctuations or the direction of interest rate in the market and as well as the cash flow risk which is involved with respect to that particular business. Then we have another thing as interest rate swap.

Here, the principal amount is not a part of the transaction process. Only the interest payments are basically always floated or maybe as a part of the cash flow process, but the principal is not added into that. So, mostly it is called the plain vanilla swap, where the counterparties swap basically interest payments fixed, against floating to change their assets into fix, into or conversion of the floating rate assets into the fixed rate assets or maybe floating rate liability to the fixed rate liability.

So, the nature of the assets and liabilities can change whenever any particular Commercial Bank goes into any kind of swap process. So, here there are three types of interest rate swap in this particular context, one is your coupon swap, then you have the basis swap, then you have the cross-country interest rate swaps, so these are the different types of swaps which are a part of this particular management process by the commercial banks.

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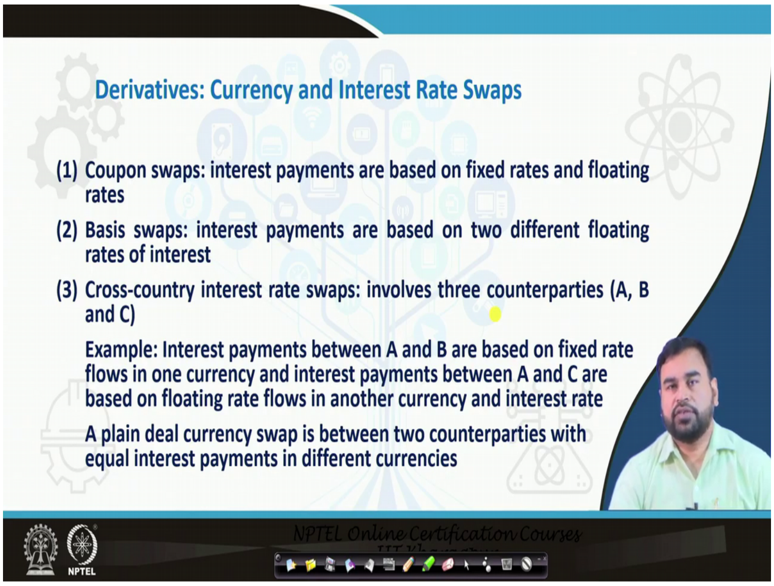


So, one by one if you see what do you mean by the coupon swap, in the context of coupon swap, the interest payments are basically based on the fixed rates and the floating rates. But in the context of basis swap, the interest payments are basically based on two different floating rates of the interest.

So, here in the coupon swap, we are basically trying to make a trade-off between the fixed rate versus floating rate loans, floating rate interest and the year, in this case, the basis swap case which is nothing but the difference between the future price and the spot price.

So, in that context basically what we are trying to do, we are basically making the payments on the basis of the different floating rates which is available in the system. Then we have the cross-country interest rate swap, it involves the three counterparties A, B and C. For example, the interest payments between A and B are based on the fixed rate flows in one currency and interest payment between A and C are based on the floating rate flows in another currency and the interest rate.

Then plain deal currency swap is between two counterparties with equal interest payments in different currencies is going to help, that how is basically they can convert from floating to fixed or fixed to floating.

So, in that context these are the three different type of swaps, which exist in the market and the banks basically are inclined to go for this kind of swap, because they want to hedge the risk in the commercial, in the financial market and as well as, what we can say that, although this particular risk may be realized, may not be realized, but this has certain implication on the total assets and liabilities of the commercial bank.

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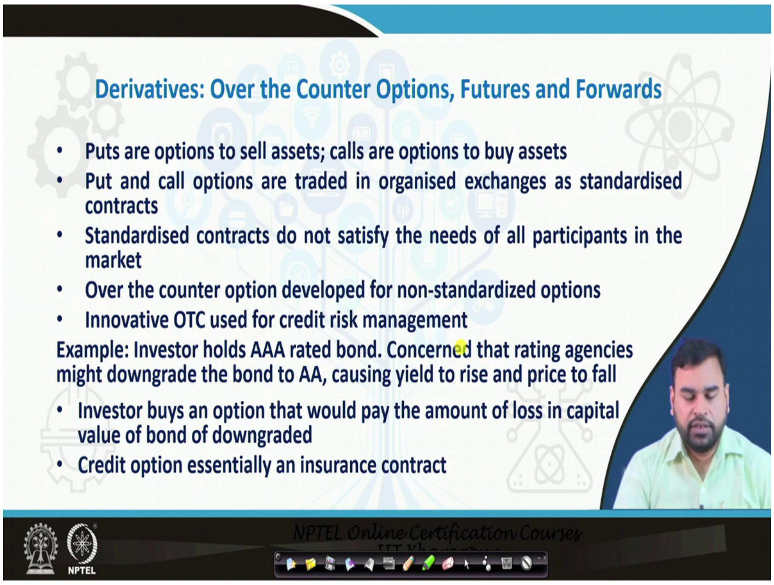


Then we have the options, futures and forwards. These are the other instruments that also can be used to hedge the risk. Then we have the put option, we have the call option. Puts are the options to sell the assets and calls are the options to buy the assets and put and call options are traded in the organized exchanges as a standardized contracts and the standardized contracts may not satisfy the needs of the participants in the market always.

That is why the, over the counter market developed or the non-standardization options. So, there the options are basically or the agreement has signed in a very informal way, there is informal arrangement between the buyers and sellers and accordingly the particular transaction can take place.

For example, there are many innovative OTC products are available for the credit risk management of the commercial bank. For example, if your investor holds a AAA rated bond and they are concerned that rating agencies may downgrade the bond to AA, which basically will cause the yield to rise and the price to fall.

In that particular point of time, what the investor can do? They buy, the investor buys an option that would pay the amount of loss in capital value of the bond which is going to be downgraded and credit options essentially an the insurance contract, because in one market whatever gain they do or gain they make, the same gain can be compensated by the loss in another market. So, here we have the two market, one is spot market, another is future market.

So, if you go for this kind of contract, then whatever gain you are making in one segment, that gain can be compensated by the loss, what you are making in the other markets. So, this is the way basically, the options are used as an off-balance sheet items and they are also has the implication on the balance sheet of the commercial bank.

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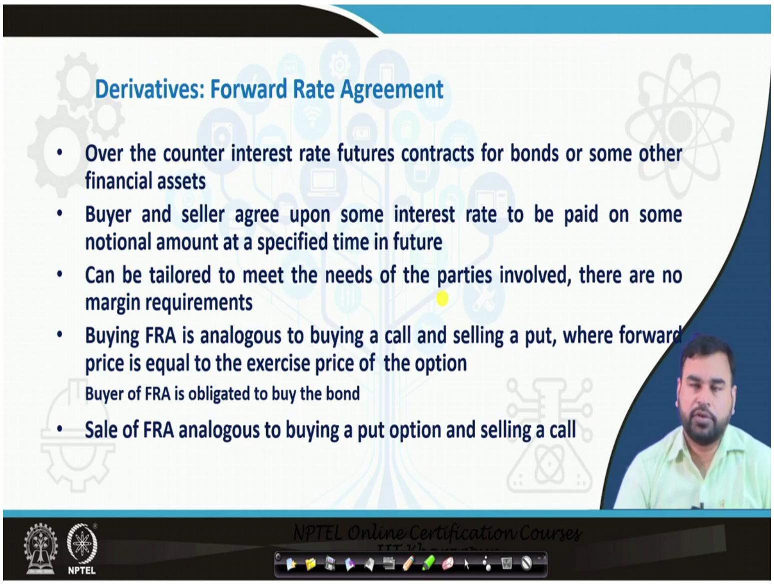


Then we have the interest rate futures contract or the bonds and there are some other financial assets. So, here in terms of the forward rate agreement if you talk about, the buyers and sellers basically agree upon some interest rate to be paid on some notional amount at a specified time in the future and can be tailored to meet the needs of the parties involved, there are, there is no margin requirements involved in this process.

Then buying this forward agreement is analogous to the buying the call and selling a put, where the forward price is equal to the exercise price of the option that means that particular option is in the money, that part already we have discussed.

The option will be in the money whenever the strike price of that particular option will be equal to the market price and the buyers of the forward rate agreements options, they are basically obliges to buy the bond at a particular point of time and the sale of this particular assets is nothing, but the analogous to buying a put option or selling a call option. More or less the concept is synonymous to that and this is the way the forward rate agreement also plays a role in this particular process.

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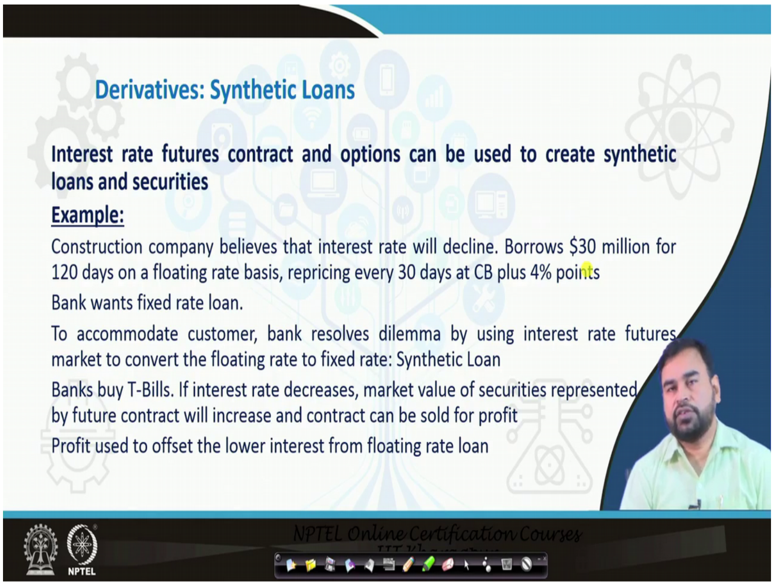


Then we have another instrument, a new instrument which is called the synthetic loan. The synthetic loan is basically what? It is an interest rate future contract and the options can be used to create synthetic loans and the securities. It is a combination of the different derivatives instrument what we have, those combination can also help the banks to hedge out the risk.

So for example, a construction company believes that the interest rate is going to decline, they can borrow the 30 million from 120 days for floating rate basis, which can be repriced in 30 days. So, then what basically the bank basically wants a fixed rate loan because bank has already provided a floating rate loan. In that particular point of time, the bank basically resolves that dilemma by using the interest rate futures market to convert the floating into the fixed rate.

That already we have discussed in the previous class also, how the fixed can be converted into the floating and floating can be converted into the fixed, so that particular loan is called as the synthetic loan. Bank buys the T-bills if the interest rate decreases and the market value of the securities represented by the future contract will increase and contract can be sold for the profit.

So, the profit which is used to offset the lower interest rate from the floating rate loan, what they could have realized in that particular time period. So, whatever loss they are making in terms of the floating rate loan, they can have another contract in the future market, which is based on this kind of characteristics. So, if you combine this then we can call it the synthetic loan and in that process, the bank can hedge out the risk what they are going to face, if there is a change in interest rates in the market.

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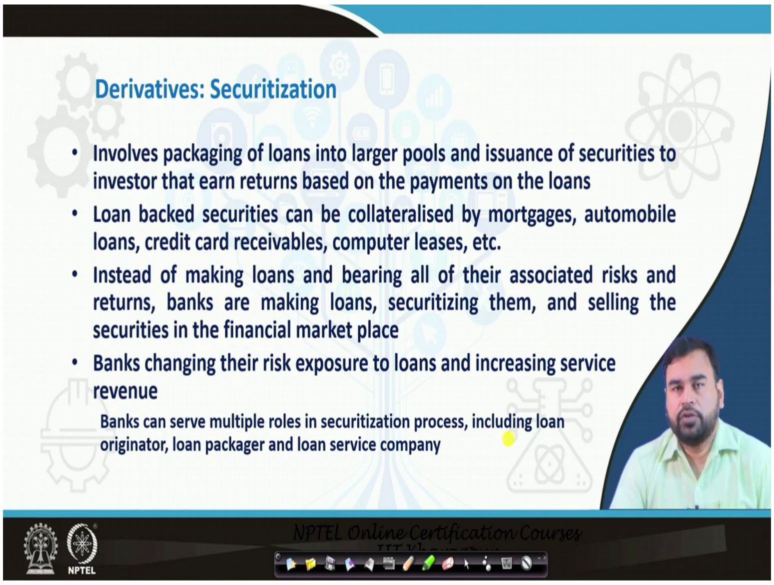


Then we have another one, the Securitization, that part already also we have discussed. It basically nothing but the packaging of a loan into larger pools and issuance of securities to the investor that can earn the return based on the payments on that particular loan. Then the loan backed securities can be collateralized by mortgages. automobile loans, credit cards and receivables, computer leases etc.

So, instead of making loan, bearing all of, for their associated risk and returns, banks are making loans, securitizing them and selling these securities in the financial market to hedge the particular risk. Although the securitization process is risky in nature, but as per expectation, if everything goes well and the expectation is basically realized in the market, then there is a chance that the bank can generate some revenue out of this.

The banks basically changing the risk exposure to loans and increasing the service revenue from this kind of activities and banks can serve multiple loans in the securitization process, including the loan originator, they can have the loan originator, also they can be loan packager and the loan service company in that particular point of time whenever the securitization take place. Whenever the securitization takes place, all those kinds of consideration will come into the picture.

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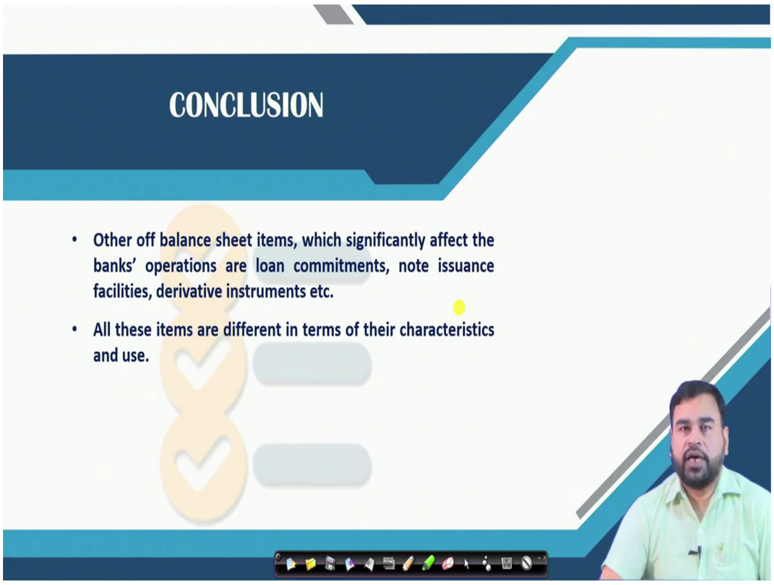


So, these are the things what we have discussed today, which includes the different type of off-balance sheet items which significantly affect the bank's operations. These are basically the loan commitment, note issuance facility, derivatives instruments, etc and which has a larger implication from the bank's performance point of view and all these items are different in terms of their characteristics and the use.

So, this is what basically we have discussed today and those instruments are really important whenever we discuss about or we think about the off-balance sheet items of a commercial bank.

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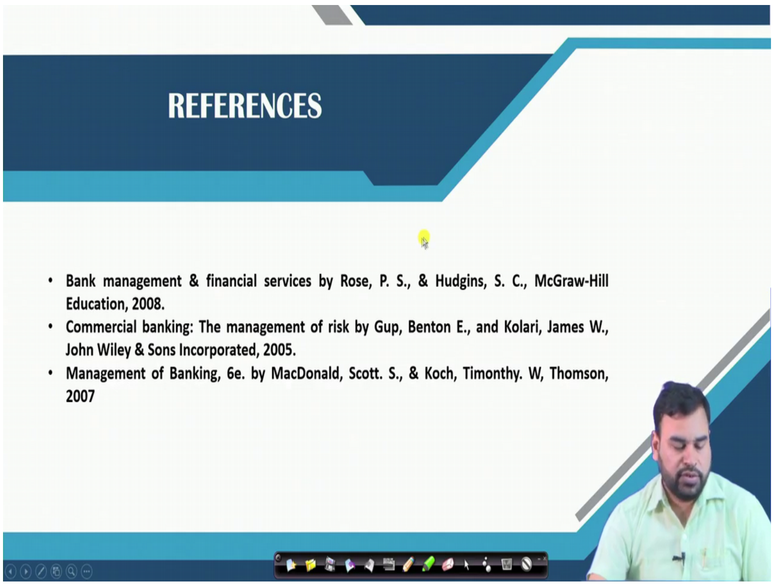


So, these are the references, you can go through this. Thank you.