Financial Institutions and Markets
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Lecture – 24
Basel Accords

In the previous class, we discussed about the bank performance and as well as the financial statements of the commercial bank. Today, we will be discussing about the Basel norms or the Basel Accords on which the supervisory or regulatory norms of the commercial banks were based upon. Whenever the crisis has taken place or at different kind of financial crisis which affect the performance of the commercial bank; keeping those things in the mind since 1988, the Basel committee has recommended certain things on which the commercial banks can operate in a smooth way by that the financial stability of the system can be maintained.

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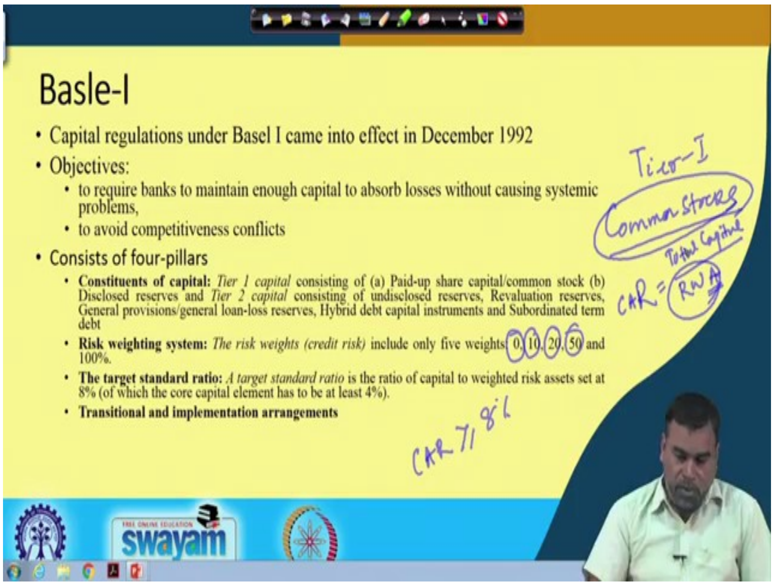

So, that is why the basic objective of the Basel was to maintain enough capital to observe the losses without causing any kind of systematic problems in the system and also to avoid the competitiveness and conflicts in the international scenario. That means, the competition should be healthy or the process of regulation also should be very much uniform across the different type of banks which are operating across the globe.

So, considering those things the committee has been formed in 1988 and there are 27 countries which are the members of that particular committee or particular Basel to form this Basel accord. So, in this context they have started this process since in 1988, but the actual effect has come into 1992. And it was started in India little bit late, but the actual implementation of the Basel I has come to the market in the year 1992.

So, already I told you that the basic objective of the Basel norm is to maintain enough capital to observe the losses and as well as to make this market competitive, but in a healthy way that mean the uniformity in terms of regulations should be there across the countries. So, whenever the Basel I was started the Basel I was based upon the four-pillars. There are four different dimensions four issues what the Basel I was trying to discuss or trying to always explore on which the banks can operative or banks can basically be regulated.

So, according to this the first one is the Basel has given a very formal definition of the capital or the capital ratio, but in our term what we call it. Then what is the Basel committee has said that the particular capital ratio of a particular bank or in our language we call it the capital adequacy ratio. So, the capital adequacy ratio should be always minimum or should cross a particular limit and every banks should target that particular capital adequacy ratio to minimize the probability of failure in the future.

So, that is why the capital adequacy ratio is formally basically considers as a stability ratio for the commercial banks. So, here they have defined there are two types of capital; one is your tier 1 capital, second one is the tier 2 capital. So, whenever you talk about the tier 1 capital; tier 1 capital is basically the common stocks. The common stocks are basically the tier 1 capital whatever the bank has and also some disclose reserves and surplus what is the commercial banks have.

So, these are basically the part one of the tier 1 capital. Then whenever we come to the tier 2 capital; tier 2 capital mostly consists of the undisclosed reserve, revaluation reserves and the provisions. Particularly the provisions in the previous class we are discussing the provisions the commercial banks made to get rid of any kind of losses, what they may incur against the loans what they have provided.

So, the loan loss reserves general loan loss reserves is a part of the tier 2 capital which is considered for calculation of the capital adequacy ratio and there are some subordinate debts and some hybrid instruments like the preference shares. So, preference shares and subordinate debt these are the part of the tier 2 capital and common equity which is a part of the tier 1 capital.

These are the different definitions where the Basel I has provided and accordingly what the bank has to do. The bank has to basically calculate the risk weighted asset and the capital adequacy ratio in general term is defined as let your CAR is equal to capital adequacy ratio, this is your total capital upon the risk weighted assets. The total assets or whatever the commercial banks have, the particular asset should be given certain weights and the Basel has given certain weights.

There are some assets which has 0 risk. So, that is why those particular has part, we are considered about the 0 percent weight is; some assets have little bit a higher risk than that, so, we are getting 10 percent, 20 percent, 50 percent and 100 percent depending upon the nature of the asset the weights can be given to the different type of assets of the commercial bank then finally, the weighted average of that particular asset can be calculated and once the weighted asset average of the asset can be calculated that basically can be used as to calculate the risk weighted asset.

So, that is why the total capital to total risk weighted asset should cross a certain limit or should be equal to a certain limit. Then what is that limit? So, that is why they have defined this target standard ratio the target standard ratio is basically 8 percent. That means, according to Basel I your CAR should be greater than or equal to 8 percent and CAR is nothing, but the total capital of upon the risk weighted assets and another condition what they have said of which the core capital element has to be at least 4 percent the core capital element in the sense we are referring to the common shares.

The tier 1 capital which is called as the core capital for the commercial bank of the return earnings which is the core capital of the commercial bank that should be minimum 4 percent and the total capital adequacy ratio should be more than or equal to 8 percent. So, that is the first thing what the Basel has provided in this particular context. Then we have the transitional and implementation arrangements and transitional and implementation arrangement means they talking about the supervision, they talk about the market discipline and the amendments from time to time what this particular calculation needs to observe any kind of future losses for the commercial bank may face.

So, this particular foundation was started since 1988 and after that what has happened the implementation was started in 1992 and although this was made for certain countries. So, every country was trying to follow as a guideline for them to minimize their instability in the financial system.

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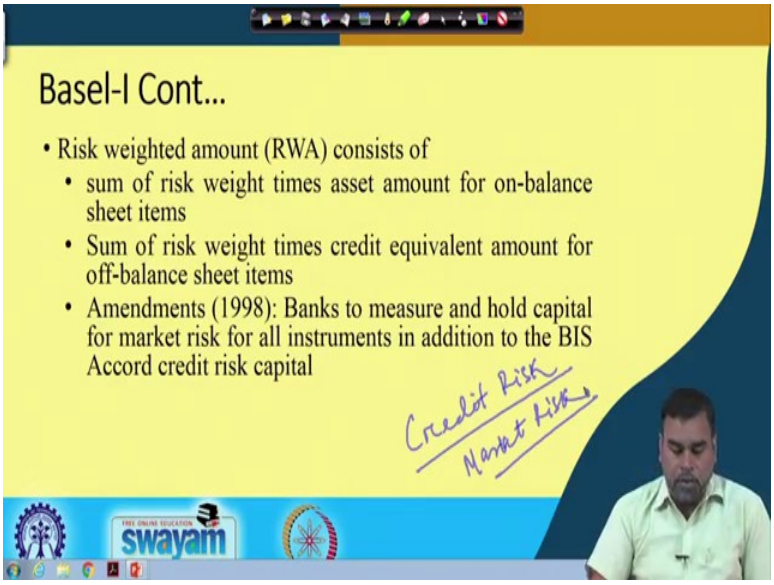

So, then if you see that how basically this Basel accord from time to time has changed and what are those different things which are involved in this. Already I told you that the risk weighted asset basically consist of the sum of risk weight times asset amount for on balance sheet items and the sum of risk weight times credit equivalent amount of the off-balance sheet. There are some asset which are off-balance sheet items like derivatives instrument, stocks and all this things. These are all the services what the commercial banks in valuation of intangibles and all those things which are coming under the off balance sheet items and there are some assets already what we have highlighted there coming into the on-balance sheet items.

So, the weights are given to the respective items on the basis of these four categories or four ways; 0 percent, 5 percent, 0 percent, 10 percent, 50 percent, 100 percent like this then accordingly the risk weighted asset can be calculated and the risk weighted assets should be divided with the capital to find out the capital adequacy ratio. Then after that the due to certain issues time to time there are certain amendments were required for the preliminary norms what the Basel has recommended.

So, that is why this amendment process was started in 1996 and this was implemented in 1998 and here what basically the amendments were given you see whenever we are providing the risk weights to the different assets the risk weights were given on the basis of the credit risk. The credit risk already we have defined, the credit risk is nothing, but the probability of default what that particular loan may incur or particular asset may incur in the future period due to the nonpayment of the cash flows to the particular commercial bank.

So, the credit risk is basically a probability of default what we have to consider or the probability of not repayment or probability of not getting that particular asset in the actual time period or in a specific time period. So, the weights were given on the basis of the credit risk, but because of the fluctuations in the market fundamentals the banks are also exposed to the market risk. So, whenever in 1998 the amendments were made in the amendment the commercial bank were instructed to give the weight for the market risk also.

So, in addition to the credit risk whatever weights were given to the assets see the weights basically not only to be given on the basis of the exposure towards the credit risk the weight should be also given on the basis of the market risk. So, that is why the market risk is the addition in the amendment. So, market risk should be considered while calculating the risk weighted asset for the commercial bank after these amendments are made on the Basel I.

So, then every two months the committee basically always sit for the discussion and try to find out that what are those loopholes and they try to recover they tried to implement certain kind of new guidelines to make this particular system more robust or more stronger.

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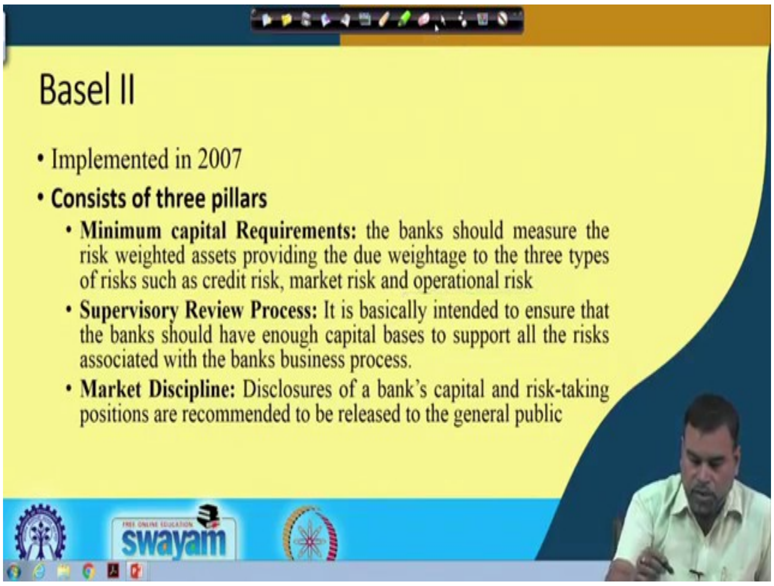

So, in this context what has happened the Basel II was implemented since 2007. And, particularly whenever the Basel was started implemented after the Basel I due to certain issues, so, in the Basel II we have three pillars. So, this pillars are first of all as per the Basel norms whenever we are talking about the minimum capital requirement this same minimum capital requirement concept was state by this Basel II. So, because that is basically the stability ratio what the Basel committee has recommended. So, because of that in the Basel II they have said that the minimum capital requirement should be retained and that particular amount is basically 8 percent. But, only one difference has been observed.

So, previously what we have seen in the beginning the credit risk was considered to provide the weight second they have added the market risk in the amendment and whenever they have started the Basel II accords as a Basel II norms, in the Basel II norms the operational risk was introduced. So, while calculating the capital adequacy ratio we have to consider also the operational risk. So, that is the guideline what the Basel II committee has recommended.

And, your second pillar was the supervisory review process and what is the supervisory review process it is basically intended to ensure that the banks should have enough capital base to support all type of risk associated with the bank in the business process. Then, whatever risk the bank has that sufficient amount of capital should be there with the commercial banks to observe any kind of risk or any kind of instability which may arise in the future. So, that is basically the measure theme of the supervisory review process. Then to make this particular system robust then what the Basel also has recommended the Basel committee has recommended also the concept of the market discipline. So, what do you mean by the market discipline?

The market discipline is the disclosure of the bank's capital and risk taking position from the time to time to all the market participants and it should be made public; that means, the people who are linked to this commercial bank, they should have enough idea that what is the amount of capital the commercial banks have and what is the amount of risk weighted assets they have. And what is the capital adequacy ratio of the commercial bank and all other financial information which are supposed to be required for participating in the investment process and as well as the business dealing with that particular commercial bank should be made public.

So, the market discipline is the third pillar in the Basel II norms. So, on the basis of this three norms the Basel two recommendations were implemented for the commercial banks and across the globe or across the world all the commercial banks or the regulators of the commercial banks were trying to impose or trying to use this Basel II norms since 2007; particularly in India also we have started it since 2007.

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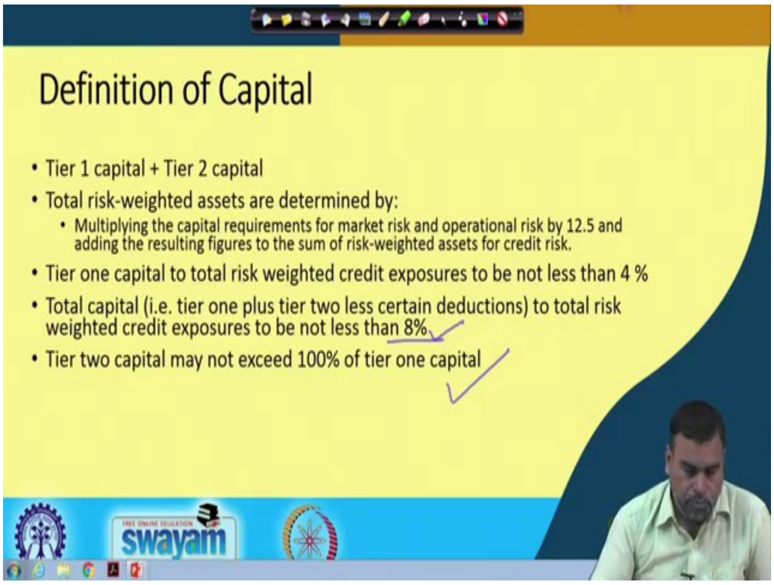

Then if you see that what are those things basically required for this. So, here also what the Basel committee has recommended how the capital can be defined. Here again they have written this tier 1 capital plus tier 2 capital, already we have explained what do you mean by the tier 1 capital and what do mean by the tier 2 capital.

So, here how the risk weighted assets are calculated. The risk weighted assets are calculated by this way Basel has given certain kind of guideline for this. You multiply the capital requirements for market risk and operational risk by 12.5. You calculate the operational risk, you calculate the market risk and you multiply 12.5 to that and add that particular thing to the sum of risk weighted asset for the credit risk.

So, whenever you have because you are exposures to market risk and the credit risk so, Basel has estimated that 12.5 should be multiplied with respect to the market risk and operational risk and that has to be added with the risk weighted asset for the credit risk. So, previously it was only credit risk and market risk after the amendments in the Basel I and now, they have added the operational risk and their giving 12.5 multiplier for the market risk and the operational risk and obviously, the credit risk were calculated on the basis of the different weights which were already decided by the Basel I.

Then, another recommendation what the particular committee has given; the tier 1 capital to total risk weighted credit exposure should not be less than 4 percent. They have written whatever way the Basel I has recommended, the core capital concept what they are talking about the core capital concept also was return by the Basel II committee and they have according to that particular norm the tier 1 capital to total risk weighted assets or risk exposure should not be less than 4 percent.

Then, here again the capital standard or the target capital adequacy ratio should be 8 percent or more than that; that particular thing what they have discussed in the Basel I that basically they have retained it. But, that varies from country to country in Indian context we have added some extra premium to that so, that is why for India it is 9 percent. The capital adequacy ratio for Indian context should be 9 percent because according to Basel it should be 8, but depending upon the different risk profile of the different system financial system the commercial banks or the regulator can impose some extra amount of ratio or extra amount of capital with respect to the risk exposure whatever they have. So, in this context we have 9 percent for the Indian banks.

And, the tier 2 capital may not exceed the 100 percent of the tier 1 capital which was not there before, then whatever capital base we have the tier 2 capital and tier 1 capital may be equal the amount of capital maybe equal the different types of capital over the banks have, but it should not exceed 100 percent or the tier 2 capital should not be more than the tier 1 capital.

So, because tier 1 capital is actually the safe capital what the banks have because this is their own money, their own return earnings, their own equity and whenever we are talking about the debt subordinate bonds and all other things that basically is not the owner's equity what the commercial banks can use whenever they want. So, because of that at any point of time the tier 2 capital should not exceed the hundred percent of the tier 1 capital. So, that is the extra recommendation whatever they have given whenever they have started the concept of the Basel II.

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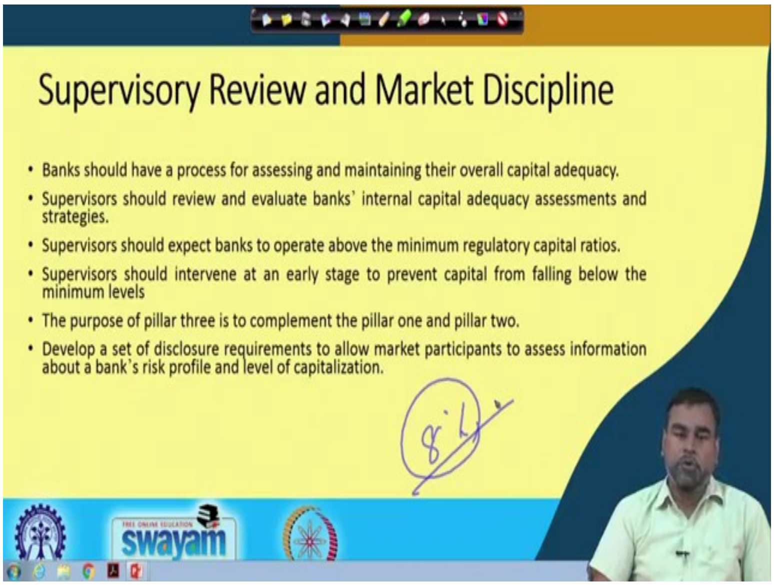

Then after that basically what has happened that other pillars already I told you that this the supervisory review process and market discipline though under the supervisory review process what they have said the banks should have a process for assessing and maintaining their overall capital adequacy ratio.

Then, the supervisors or the regulator should review and evaluate the banks internal capital assessment or capital adequacy assessment and this strategies; whatever strategies this banks are adopting to maintain that capital adequacy ratio or to smooth operation of that particular bank that also should be always reviewed or evaluated by the regulatory bodies or the supervisors in that particular system.

And the supervisor should expect banks to operate above the minimum regulatory capital ratio. It is always ensured that the minimum capital adequacy ratio already we have discussed that is 8 percent. But, the regulator or the supervisor always should ensured that every bank has minimum 8 percent, but it should be more than that and already I told you that for Indian context it is 9 percent or can be more than that. So, the whenever we talk about the at any point of time this would always ensure the capital adequacy ratio should not go below and if there is any possibility that capital adequacy ratio can go below then the regulator or the monetary authorities can intervene into that to make this particular ratio to a particular level by that the risk profile of the commercial bank can be maintained.

So, the purpose of the pillar three which is the market discipline the market discipline is basically your pillar three. So, market discipline is to compliment the pillar one and pillar two, because if there is no discipline than there is no such kind of market discipline will be imposed on them then what will happened that the commercial banks may not be able to the substance that minimum required amount of capital adequacy ratio what the Basel committee has recommended.

So, therefore, they have to they said according to this norm this would disclose all the requirements to access or to allow the market participants to understand or to assess the information about the banks risk profile and level of capitalization whatever what kind of risk the bank is facing and how much capital the bank has and whether this amount of capital is good enough to observe the shocks observe the losses if there is any because of exposure towards the risk. So, all this things are basically always done by through this market discipline.

So, time to time the market discipline concept or market discipline guidelines may change or the regulatory policies may change, but the basic objective is to ensure that at any point of time the capital adequacy ratio should not go below the 8 percent. So, that is basically the concept of the market discipline in the context of the Basel II norms.

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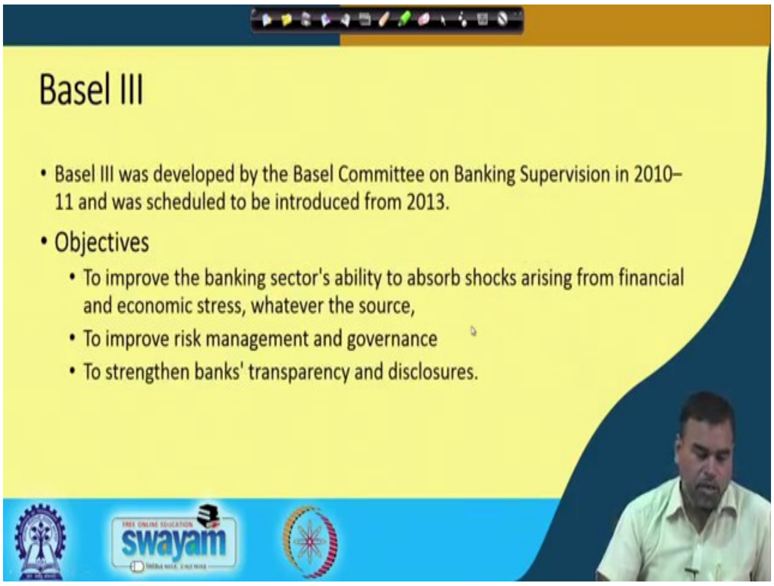

Then Basel III the operation was started since 2010, but it was schedule to introduced in 2013 particularly in the Indian context some of the banks were complying with that or some of the banks may not be although it was started in 2010 and 11 and was scheduled to be introduced from 2013 but, India also which trying to adopt the Basel III. But, there are certain kind of regulatory norms which were started in the concept of Basel III; we will be discussing certain major points what the Basel III is trying to explain or what kind of new changes which have taken place whenever the Basel III norms were started.

So, here the basic objective of Basel III was to observe the stocks arising from the financial and economic stress and to improve risk management and governance of the commercial bank and to strengthen the banks transparency and the disclosure. So, these are the major objectives of the Basel III.

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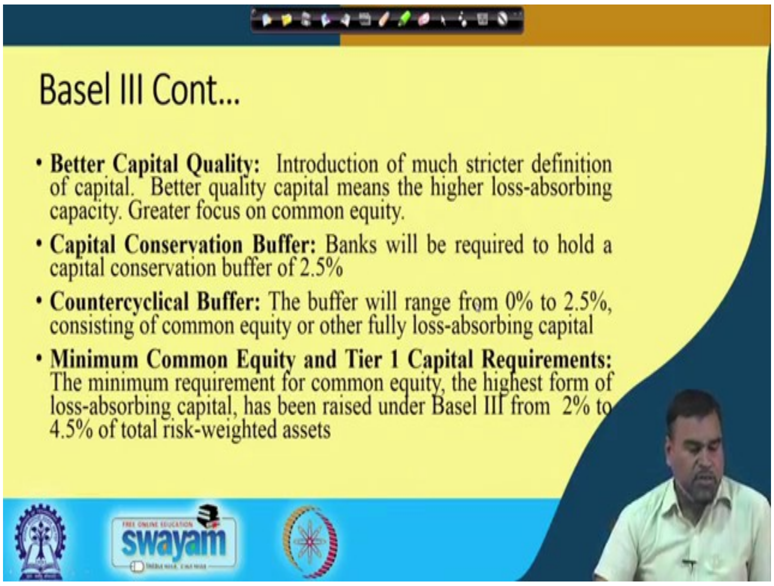

So, keeping these objectives in the mind Basel III has talked about certain things; one is they have introduce the much stricter definition of capital. Better quality capital means the higher loss absorbing capacity, so that is why they have given much focus on equity and they have started a concept of capital conservation buffer which is above this regulatory norms that is 8 percent. So, that is why the banks have to required to hold a capital conservation buffer of 2.5 percent which is above this regulatory norm of 8 percent.

And, this would also have a countercyclical buffer because of changes in the market fluctuations and all this things. So, buffer can range from 0 percent to 2.5 percent which should consist of common equity or any other the instrument which can absorb the full losses if there is any in the system. So, overall what basically we are trying to say that over and above the 8 percent of capital adequacy ratio there are certain other buffer capital ratio or the buffer capital has to be maintained by the commercial bank to absorb any kind of losses due to the cyclical changes in the economic system and other kind of risk what the commercial banks may face.

So, another thing they said also the minimum requirement for common equity which is the highest form of loss absorbing capital has been raised from 2 percent to 4.5 percent that amount of equity mandatory. Equity capital has also increased to 4.5 percent according to Basel norms. So, that means, above the 8 percent it at least 4.5 percent should come from tier 1 capital and mostly from the equity.

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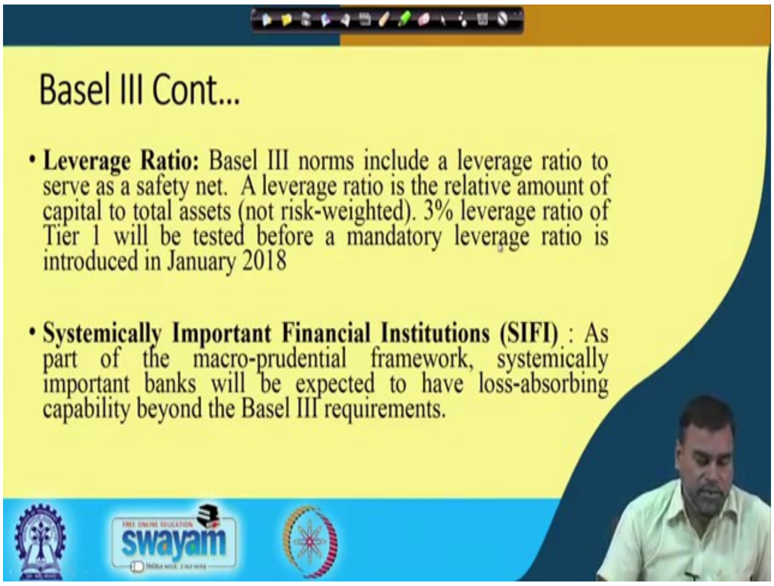

Then they have said that there is a leverage ratio. So, leverage ratio is basically what it basically as the relative amount of capital to total assets not the risk weighted asset. So, 3 percent leverage ratio of tier one will be tested before a mandatory leverage ratio is introduced in January 2018. So, that means, the capital ratio also should be at least 3 percent; the capital ratio means you are not providing the risk weights, the total capital upon the total assets that should be a minimum 3 percent of the total capital what basically the Basel III has introduced.

Then as part of the macro prudential framework, systematically important banks will be expected to have loss absorbing capacity beyond the Basel III requirements.

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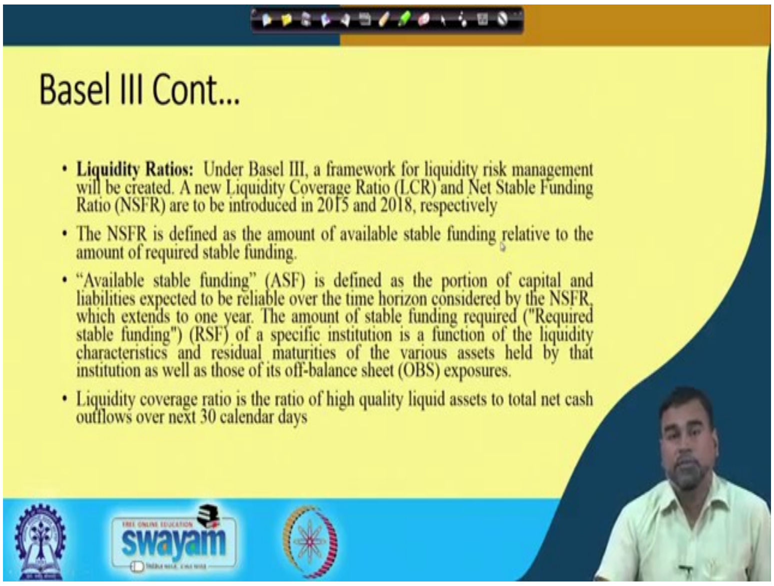

In another important thing what the Basel III has say they have added the concept of liquidity risk. So, on the basis of this what they have defined they have basically given two definitions of liquidity risk to or to measure the liquidity risk that is your liquidity coverage ratio and net stable funding ratio. And, if you see the net stable funding ratio is nothing, but or the it is a defined of proportion of capital and liabilities expected to be reliable over the time horizon.

And, the amount of stable funding required; that means, the amount of funding actual funding available stable funding whatever the banks have divided by the required funding that is basically you called the stable funding ratio it should be greater than or equal to 100 percent. But, the banks should always ensure and the required stable funding is a function of other liquidity characteristics or different kind of asset what the commercial banks have already have and liquidity coverage ratio is the ratio of high liquid assets to the total net cash outflows over the 30 calendar days what the commercial banks have.

That means enough liquidity the commercial bank has to maintain to fulfill the requirement of the customers in the short period of time. So, liquidity risk is an extra concept which was added in the Basel III.

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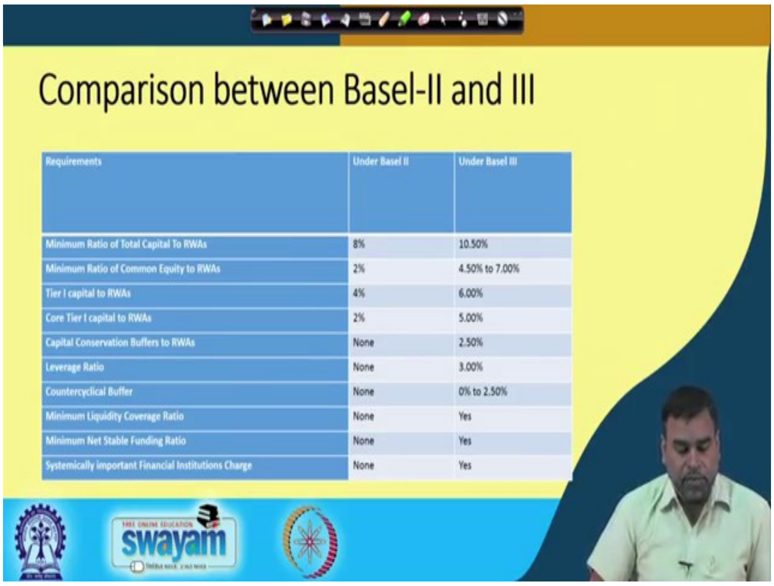

So, if you compare the Basel II and Basel III there are certain differences. Minimum ratio if you see here it was 8 percent, now it is 10.5 percent because there are some buffer capital we should have. Previously they said common equity to risk weighted asset was 2 percent, this was become 4.5 percent, but this can also change up to 7 percent. Tier 1 capital to risk weighted asset it was 4 percent it has become 6 percent. Tier 1 capital to core tier 1 capital to risk weighted asset was 2 percent it has become 5 percent.

Capital conservation of a conservation buffer was not there before, but it has become 2.5 percent now. Leverage ratio was not considered now it is 3 percent, countercyclical buffer it is 0 percent to 2.5 percent, minimum liquidity coverage ratio was not required according to Basel II, but it was there in Basel III minimum net stable funding ratio was not there in the Basel II. But, it was there in Basel III and systematically important financial institutions as it was not there in the Basel II, but this was new feature which were added in the Basel III.

So, these are the major difference what basically we have observed in the Basel III norms. So, what basically we have discuss this is the overview of the different norms Basel I, Basel II and Basel III and we are just briefly discussed about that how this particular norms are basically implemented and or maybe designed for the betterment of the commercial banks to manage their risk or to increase their sustainability in the market or to make this particular financial system more stable or to capture or to observe the probability or expected losses what they may incur in the future.

So, next class will be discussing about under these norms how the different type of risk basically are measure. So, how the risk are measured, different type of risk like credit risk, liquidity risk, your market risk are measured and what are the different methods are used for this.

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Please go through these particular references for this particular session.

Thank you.