Financial Institutions and Markets
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Lecture - 55
Derivatives Market – V

So, after discussing about the basics of the Derivatives Market or the Instrument which are traded in the derivatives market; so, today we will be discussing something related to the derivatives market in India. That what are those instrument which are available in the Indian market and what are those reform measures have been taken to develop the derivatives market in India? And as well as that sum of the facts related to this.

And in terms of the use of derivatives in the Indian context there are some critic or critical analysis already the researchers are made, we can explain those kind of critics what basically they are trying to explain in this context.

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So, if you see that the major participants in the Indian derivatives market are; obviously, this market is regulated by SEBI and also to some part it is RBI, but mostly it is regulated by SEBI, the Securities and Exchange Board of India. This derivatives are traded in the stock exchanges and the other financial institutions also play the role who invest and as well as participate in this particular market and as well as a retail investors.

So, these are the major stakeholder or major participants in terms of the operations of derivatives market in India. So, this is the way these are the participant who basically work in this particular segment.

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Then let us see that, whenever the derivatives market was started, although already I told you that the market is not very new, but it was formalized or it came to the financial market relatively little bit in the late time. So, for the development of the derivatives market over the years there are different committees have been established by the regulatory bodies and as well as government, to make kind of certain changes in the derivatives market and to find out the ways are the process through which the market can be developed.

In this context the first permanent committee which was established by SEBI in 1997 that is L C Gupta Committee and according to the L C Gupta Committee first of all the L C Gupta Committee has recommended the introduction of the financial derivatives. And here the financial derivatives instrument were not traded in the financial market before that. So, L C Gupta Committee has recommended for the introduction of that.

Then as well as this committee has recommended certain kind of instruments, which can be traded in this particular segment. Like you have the derivatives with respect to the stocks and as well as some kind of operational aspects that how the market can be regulated and how the particular market can be or the transactions can be settled all kind of a nitty gritty always if you observe you can go through the L c Gupta Committee, where you can find out that what are those kind of recommendations the committee has given.

Then again further in 1998 there was another committee was established that is called J R Varma committee, the Jayanth Varma committee which is basically was established to explore certain issues about the risk management in the derivatives market and as well as the concept of the margin trading, I discussed about the margin trading whenever we discuss about the equity market.

We have the concept of initial margin, you have the concept of the actual margin, then maintenance margin, then how much margin can be taken as maintenance margin, then when this margin will arrive all kind of concepts or all kind of issues were discussed with respect to derivatives market in the Jayanth Varma committee. And Jayanth Varma committee also try to explore, that what are those methods or techniques can be used to measure the risk in the derivatives market?

So, in this context this committee has certain kind of recommendations in terms of the management of the risk using the derivatives in the financial sector or financial system. Then after that again there is another committee was established in prominent committee that is V K Sharma Committee in 2007, here according to this V K Sharma Committee has recommended for the introduction of interest rate future market in India.

The interest rate future market was not introduced before, it was introduced to the Indian context and as well as certain kind of regulations, certain kind of reforms which have been taken care which have been always formulated to develop the particular market in terms of the interest rate future segment or interested future in the derivative segment.

So, like that within that there are some other M N Roy committee and other committee, there are small committees also there is whereas, where always form to day today may reform to take the day today reform measures for the development of the second derivatives market in India. But if you see all those recommendations were in favour of the operations of the derivatives market and tried to look for the different kind of market mechanism, through which the trading in the derivatives market can be enhanced.

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So, now if you see in today's context the financial derivatives which are traded in India these are mostly equity linked derivatives, currency derivatives and interest rate derivatives. These are the three major derivatives which are traded in the Indian context. The equity linked been either the derivatives with respect to the single stocks or they can be related to the indexes also.

Then you have the currency derivatives, then you have the interest rate derivatives, these are 3 major types of derivatives which are traded in India. And the major financial derivatives instrument which are traded in Indian market mostly index future, index options, stock futures, stock options, interest rate futures and rupee currency; currency derivatives particularly. So, these are the different major derivatives financial derivatives which are traded in the Indian market.

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So, now, if you see that whenever we talk about this kind of derivatives instruments. Then after this kind of committee's recommendation, actually derivative trading in India basically started in 2000 both in NSE and as well as the BSE. Particularly they have started with equity derivatives, the equity derivatives are basically used or started in 2000, already I told you that in terms of financial derivatives Indian market is relatively very new, in comparison to the other developed markets and as well as the other bigger emerging economies.

So, the currency derivative segment or the NSE started operations on August 29, 2018 which is reasonably quite new and basically whenever they have started this currency derivatives they started the trading in the US dollar and rupee only, which is the most used currency for the trading and in Indian context that is the US dollar rupee, the all those kind of derivatives based upon this exchange rate.

Other currency pairs also have been considered, but little bit late in started since February 1st, 2010, these are Euro rupees, then pound sterling versus rupees, then Japanese yen versus rupees. Those kind of exchange rates also are used for the derivative segment after 2010 in NSE.

An interest rate futures were introduced in August 31st, 2009 and the currency options in terms of the rupee versus dollar exchange rate was started in October 29, 2010. From this data why basically I am discussing this data, you can observe that how the immature derivatives market we have or we have a very new derivatives market in comparison to the other segments other economies in the world, where the financial derivatives market is quite strong or may be quite old quite matured in that particular context.

So, therefore, that whenever we talk about the trading in the derivatives we did not find much kind of trading takes place in the derivative segment, may be because of the market is immature or the people are reluctant to invest in the derivatives market because more risk is involved in that particular segment. So, anyway that is the different kind of issue, but with this data if you see the derivatives market is relatively a new market if you talk about the Indian financial system.

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Then within that segment if you see, that the futures and options which are traded in the NSE they are always traded through trading system, there is a trading system NSE has developed that is called NEAT-F&O Futures and Option trading system. And you remember it is a order driven system, I was explaining you about the order driven system in the previous class whenever we discussed about the equity derivatives or the market microstructure of the equity derivatives.

We have 2 types of system option driven system, then you have the code driven system. Here also in equity market we have an order driven system and also in the derivative segment also we have a order driven system and the code driven system works within the US market. And therefore, we are expecting that it provide the complete transparency, in terms of the operations in the derivative segment. And how basically the traits are takes place are settled in this particular segment?

The responsibilities with the National Securities Clearing Corporation of India Limited that is NSCCL, who undertakes the clearing and settlement of all trades executed on the futures and options segment of the NSE. And you know why actually we are talking about NSE? The share of derivatives trading in NSE is much higher than the share of trading in terms of the BSE.

So, therefore, much focus is always given on the trading of the derivatives in the context of the national stock exchange not in the context of the Bombay stock exchange. And another thing also the index as well as the stock options are the futures which are traded in the derivatives market in India, these are always cash settled.

The settlement as always made in terms of the cash; that means, through the exchange of the cash whenever this particular transactions takes place or this particular contracts is going to be matured, then all this things are basically cash settled. So, this is basically the financial derivatives what basically always are available in this particular segment and here this is the trading platform which is available in this.

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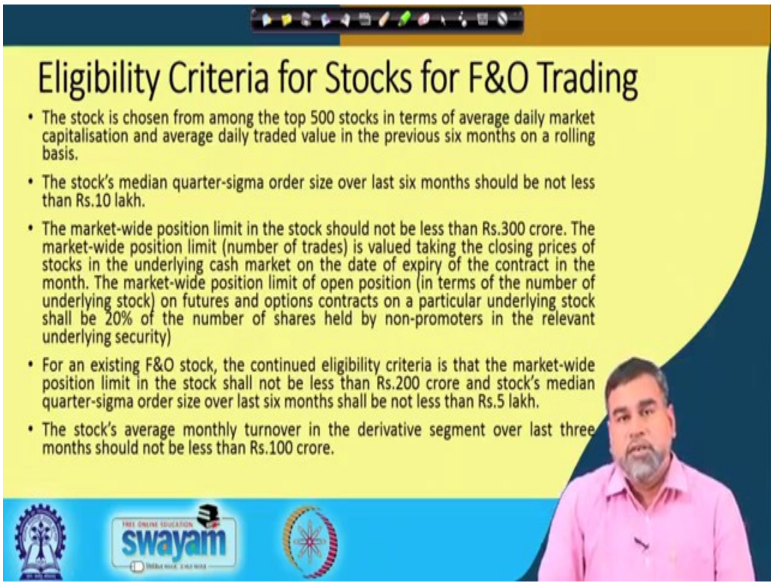

But there are certain criteria the companies are the stock have to follow if they go if they want to do this for futures and options trading in Indian stock market. Then how basically this conditions? The conditions are basically always put forth by the stock exchange and the regulators and the every company has to fulfill these criteria if they want to invest in the derivatives market in India. What are those?

First of all the stocks which are chosen among these 500 stocks in terms of average daily market capitalization and average daily traded value in the previous six months on a rolling basis. You see all of you know that, the market capitalization is a proxy for the size and average daily traded value is a proxy for the liquidity.

That means the size and liquidity is a major factor the companies always look, always should consider if they want to go for the futures and options trading in the Indian market that is number one. First of all second thing is, the stock's median quarters sigma order size over the last six months should not be less than 10 lakhs, the order side should not be less than of the 10 lakhs rupees.

So; that means, the order size the trading which is takes place for that particular security that actually should not be less than the 10 lakhs rupees in the market for the last six months. And the market wide position limit in the stock should not be less than 300 crore. What do you mean by this market wide position limit? The market wide position limit is basically always valued taking the closing prices of the stocks in the underlying cash market on the day of expiry of the contract in the month.

So, the market wide positions are always measured on the basis of the closing price of that particular underlying asset on the day of expiry of the contract of that particular month. And the market wide position limit of open position on futures and option contract in a particular underlying stock should be 20 of the number of shares held by the non promoters in the relevant underlying security.

So, the promoters holding should be on that particular underlying stock will be 20 percent of the total shares whatever the particular companies have. And for an existing futures and options stock, if somebody and one companies already issuing or already investing in the future and options, then the eligibility criteria is that the market wide position limit of the stock should not be less than 200 crore and stock's median quarter sigma size over the last six months should not be less than 5 lakhs.

So, there are some relaxation if the particular stock is already qualifying the criteria and they have already investing or already issuing this particular kind of contracts in the market. The stock's average monthly turnover in the derivative segment over last three months should not be less than the 100 crore, that actually is another criteria always the regulator have fixed.

That means, overall if you see that the particular stock should be liquid and this particular stock should be relatively bigger in size, then only those stocks will be eligible for derivatives trading in the Indian market. The reason is basically because this particular instrument is a risk instruments. So, the particular company should have certain kind of absorbing capacity risk, absorbing capacity, if there is any kind of failure happens in the market, then the company should not be complete liquidated at one go.

There should be some kind of precaution always the companies should take and those even if the company will take. The precaution will be better job still the company is liquidity and size is relatively more in the market. So, because of that there are some restrictions because the market is relatively mature there are not much trading takes place in the segment and also the market is highly risky.

So, because of that what is happening this regulators and the stock exchanges wanted to take some steps, by that this particular risk in the market can be minimized. So, this is the criteria for the futures and option trading in the Indian market.

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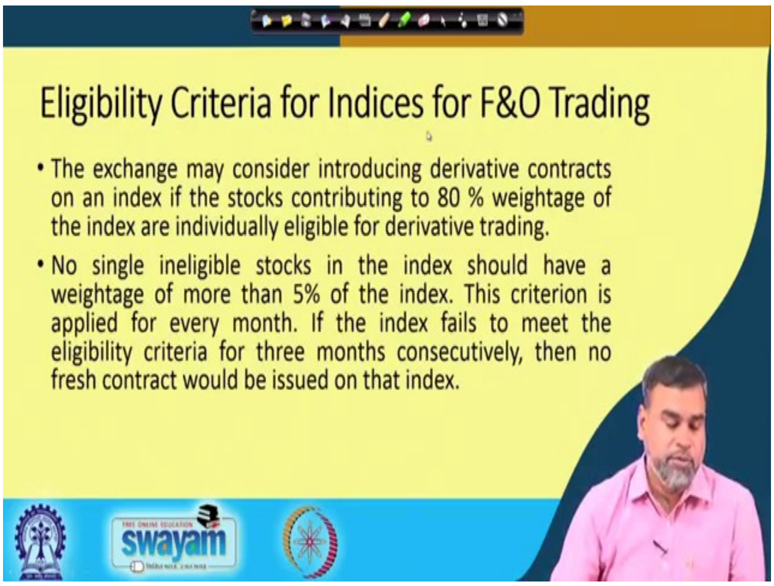

Then if you see that there are some other kind of criteria also we have. The exchange may consider introducing derivatives contract on an index if the stocks contributing to 80 percent weightage of the index are individual eligible for the derivative trading.

And no single ineligible stocks in the index should have a weightage more than 5 percent of the index and this criterion is applied for every month. If the index basically fails to meet the eligibility criteria for the three months consecutively there are no fresh contract would be issued on that particular index. Then which stocks are eligible for this derivatives for options and the futures.

So, these are the different things because here basically the underlying asset is the stock and if the underlying asset is not performing well and the companies who is basically issuing a stock their performance and size is not that good enough to observe that particular kind of risk in the market.

Then those particular companies are not eligible to go for issuing any kind of contracts in the future, in terms of futures or in terms of options are anything else. So, because of that these are the different things we have to consider, we have to look at whenever anybody wants to go for issuing the derivatives contracts against that stocks were there issuing in the spot market.

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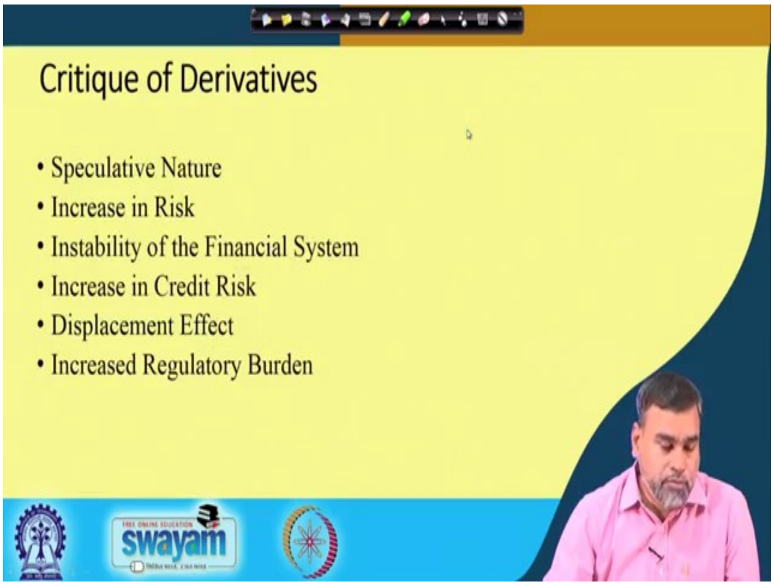

So, if you see the critique of the derivatives with reference to India, so what is happening, there are now number of papers and of number of studies have been carried out, why the derivatives is not very popular in the Indian market, why people are not that inclined to go for investing in the derivatives? So, globally there are certain kind of debate which is going on and already we have discussed also relatively this market is risky in comparison to the other markets because people are not using the derivative as hedging instrument people are mostly using the derivatives as a speculative instrument.

So, once there is a speculation; obviously, the risk will be more, that is inevitable. So, that is why first of all the derivatives instrument, the basic use of the derivatives which was supposed to be the hedging now that particular objective is totally lost, but that is not basically always the objective that we want to use the derivatives for hazing the risk and now does there using the derivatives only for the speculation. So, this speculation is that is basically creating the kind of risk in the market or increasing the risk in the market.

Then wherever there is speculation; obviously, the prediction increases the uncertainty and if there is an uncertainty then that basically leads to the risk. So, that is why it creates certain kind of risk in the market and that risk everybody was not able to absorb and all the investors if you go by the conventional traditional theories, then most of the investors in the market is risk averse.

So, you might have heard there are 3 types of investors we always find, we have the risk averse investors, we have risk seekers and we have the risk neutral. And the risk seeker and risk averse these are practically possible, but to the risk neutral investors are practically impossible, but theoretically the risk neutral investors exist in the market.

So, that is why if you assume that the investors are basically risk averse in nature go by the traditional or conventional theories of finance, then what we can say that derivatives are relatively more risky in nature that is why sometimes people are reluctant to go and invest in that kind of securities.

Then we have the instability of the financial system, you see that whenever we talk about the financial system to capture certain kind of thing are always if you want to see that any kind of risk any kind of shock the financial sector wants to capture, then the financial sector should be stable. The stability of the financial system can be measured by various ways. How this stock can be observed? Number 1.

Now there any kind of policy fluctuations happen, then how the market is able to capture that kind of stock in a short span of time. There is any global crisis happens that how the market is basically ready to capture that kind of disturbances in the market.

And as well as if you see that financial system instability is an issue all over the world that which the people are telling that because of certain kind of disturbances in all the n markets are integrated, if one market is disturbed and one market is unstable that leads to the instability also in other markets. So, that instability is basically again already existing in all kind of segments in the spot market itself.

So, again the derivatives market, inclusion of the derivatives is also creating more instability in the segment because the pricing is highly fluctuating and the investors are using it for the speculation. So, another thing if you see, the derivative segment trading is basically a virtual kind of trading and the total amount of trading in the virtual market is much more higher than the actual trading value which is happening in the spot market.

So, if anything goes wrong in this particular segment that totally destabilize this global financial system. So, that is what some people are reluctant to go for investing in the derivatives, but still people back lot of money using the derivatives, so that is why even if there is high risk there is a probability of high return so that is another thing.

And another thing is you see if you go by the nitty gritty, here this particular subject its beyond that particular scope we do not have that much scope to discuss all the details about the derivatives, but here if you see there are certain kind of products which are full of credit risk, there is always a probability of default, the particular contract may be exercised may not be exercised.

Again whenever that kind of provisions are there then that basically also increases the credit risk in the market and already the credit risk in the spot market whether in terms of the banking or in terms of any other bond market is already high. And now further inclusion of the credit derivatives into the market further enhances the probability of credit risk at probability of default.

So, that is why that also leads to the credit risk that is why this researcher argue that the credit risk and the probability of credit risk can increase if there is more derivative trading in this particular market. And there is another effect called the displacement effect, the displacement effect is basically what? That basically, displace certain kind of consumers from one particular segment to another segment and that segment is relatively risky segment within the market segmentation theory. And whenever the displacement effect works, that displacement effect may dominate the other kind of effects which always have a positive impact on the market stability.

So, here what basically we are trying to argue if the derivatives are introduced in the market some of the people they may not be that much prone to absorb the risk, but there is basically always move from one particular segment to another segment. Because of that the displacement happens in that particular part, but they are not basically able to capture that kind of losses in the market or they are not able to basically always tolerate that particular lost what they are going to get in the market.

So, then finally, what has happened? That the market becomes more volatile and the because of inequality or the liquidation of this particular assets of that particular company or particular individuals. And some people argue that because of this particular product is complex and there is some kind of other kind of functionalities involved in this particular product, this also increases the regulatory product.

Because some instruments which are related to interest rate, some instruments which are related to the other kind of assets. So, who are the regulators? Whether the regulatory body is RBI or regulatory body is the SEBI. So, again the regulations in terms of the different securities are different. So, once we have the different securities put in place, then what kind of the banking we have, for all type of banks we have a different kind of regulatory norms.

For all kind of financial other financial institutions we have a different kind of regulatory norm, but whenever you talk about the derivatives instrument. Because the instrument is varying in nature and as well as the complexity of the instrument is so diverse in nature, so in that context this also increases the regulatory burden.

So, that is another issue people always discuss whenever if anybody basically is the critique of this particular derivatives or they field that the derivatives market is not that conducive for the development of the financial system. So, these are the different kind of problems or may be the critique of the derivatives market what we are the researcher always argue on this particular points.

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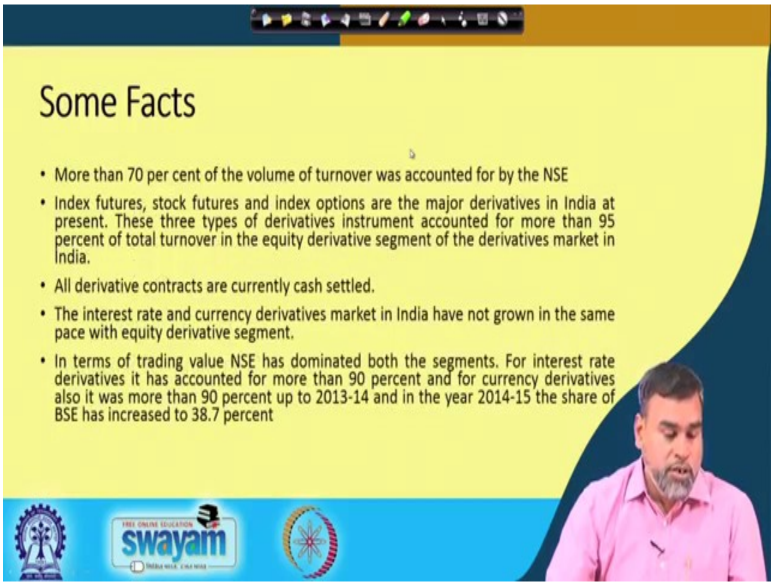

So, if you see the facts in terms of the derivatives up to 2013 and 14, this 99 percent of the turnover in terms of the derivatives market was accounted by NSE this National Stock Exchange. Only for last couple of years the BSE has improved in terms of the derivative trading, but still it is 70 percent now it is NSE also the share of NSE is 70 percent and another 30 percent is accounted to the Bombay stock exchange.

So, mostly the derivative trading is taking place in the national stock exchange in India. And in terms of if you compare the index futures, stock futures and index options are the major derivatives in India at present. These 3 types of derivatives particularly, the index future, stock futures and index options these are accounted for more than 95 percent of the total turnover in the equity derivative segment of the derivatives market in India. 95 percent is coming from the index futures, stock futures and index options.

And all derivatives contracts are currently cash settled and the interest rate and currency derivatives market in India have not grown in the same pace with equity derivatives. That means, whatever developments taken place in the derivatives market in India that is basically happening with respect to the equity market, it is not happening with respect to the other segments. So, that is why the development is mostly towards the equity derivatives, not with respect to the other financial derivatives which are supposed to be developed, but they have not yet developed in the Indian context.

Then, in terms of trading value NSE has dominated in both the segments for interest rate derivatives is accounted for more than 90 percent and for currency derivatives also it is more than 90 percent up to 2013 and 14, but since the year 2014 and 14; 14 and 15, the share of the BSE has increased to 38.7 percent. So, already I told you that BSE is moving up in terms of the derivative trading, but mostly the derivatives market in India is dominated by the NSE.

So, here what basically we can see that we have a long way to go if you talk about the development of the derivatives market in India, but still the instruments exist, those instruments basically play the significant role in the diversification of the risk in the portfolio management and also this is a kind of lucrative instrument always if anybody wants to maximize the return, even if the risk is relatively higher in this particular segment.

So, the basic objective of introducing this particular course they or discussing the sum of the basics of the derivatives in this particular subject, is basically to get an idea that what is the derivative is, although this particular syllabus is quite broad or there are so many complexities in terms of the concepts or so many complexities in terms of the different issues with respect to derivatives. So, here what we are trying to explain, we are trying to only introduce that what derivative is?

How the simple models are used for the pricing of this instrument and who are those kind of investors who participate in this particular market? And as well as to some extent about the concepts like moneyness, like your implied volatility like your open interest and all these things which can enhance the idea about reading more about the derivatives market in the future.

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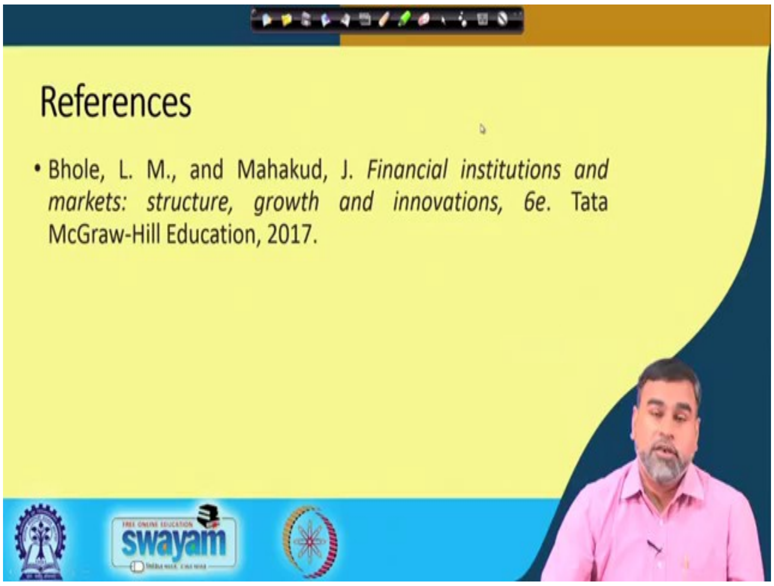

So, this is what about a derivatives market in India and this is the reference you can go through for this particular session.

And thank you very much.