**Microfoundations of Macroeconomics**
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**Module No # 07**
**Lecture No # 35**
**Monetary Policy V**

Welcome back. So we are going to talk about the, the topics that we left in the last session. So I will be completing this. And then we will be moving to the financial crisis. And we will be trying to also understand from deeper perspective that, how we can think about making the banking and monetary sector model more relevant to understand the bank run kind of scenarios. But in this session, will be focusing on the certain dynamics that are these days are quite popular.

And if you go through recent literature, then you find especially in the area of macro economics, so, the topics that we are going to deal with are of recent origin. And these topics also have a lot of relevance with regard to the monetary policy credibility nominal anchor we will be also adding the dimension of long run equilibrium. So, if you are talking about the long run.

So in the Keynesian context, mostly we talk about the short run scenarios, but will be adding the dimension of long run and we will also have the flavour of the economic growth models long term growth models. And then we will superimpose the condition that when we are talking about zero lower bound. And if you have the nominal interest rate increasing then what happens to the inflation rate because inflation is one of the important variables in our discussion.

So we will be trying to give a perspective towards the long run that how in the long run, the central bank decides about the nominal interest scenarios. Then we will try to understand from the equilibrium side that if we are adding the long term scenarios, then how the intertemporal substitution. So, normally, we believe that if the rate real rates of interest higher then you have more savings.

Because you feel that, if real interest rate is going to be higher than it is easier to save today. So that we will have better interest rate in the future and then we will have better consumption scenario in the future period. So, you will have the substitution of current consumption for future. So, we will be talking all those dimensions in the later section. But we will start with where we had left in the last session.

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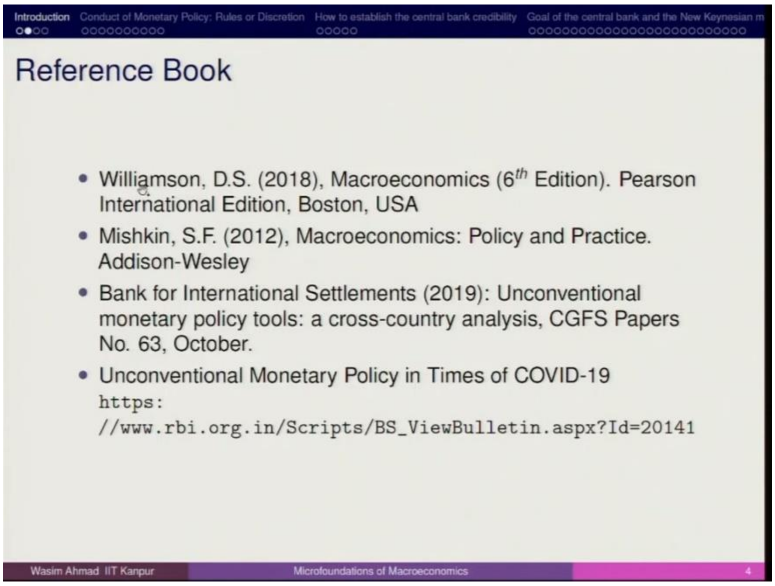


So, here we saw the references remain same, the, the book of Williamson and Mishkin and some more differences that I have just mentioned, about the Bank for International Settlements and the unconventional monetary policy that has been pursued by the India Central Bank, which is the Reserve Bank of India.

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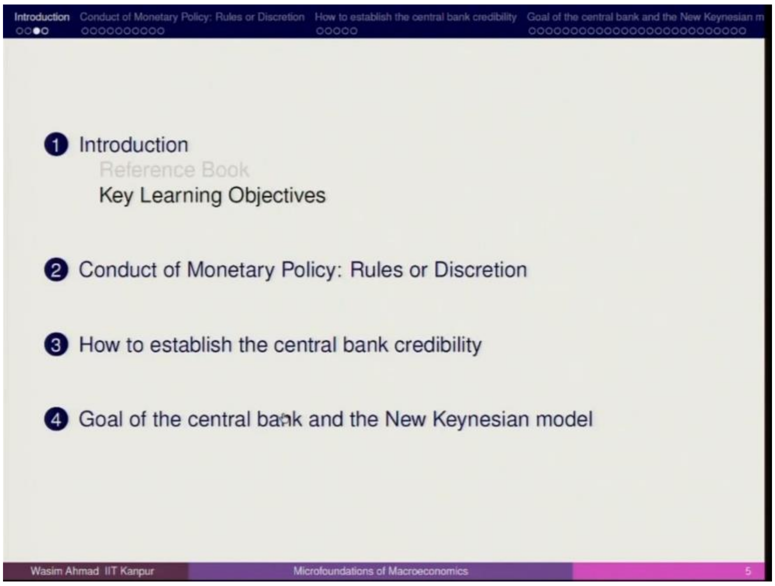


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Now, we will be focusing on the so were talking about the new Canadian setup and the new Canadian setup, we were focusing about these things. That if we think about what has actually caused the real interest rate to be really low in the modern era, so, people had a different perspective. So, for example, Bernanke, mentioned especially with regard to the Asia and with regard to Asian continent that in this particular content a continent you have a lot of savings and saving.

If you are saving more than it means that you are more concerned about your future period, if you are compromising on current period consumption, then what the Bernanke had the understanding that because of the uncertainty in these economies, and because of the high savings rate, the real interest rate is bound to be lower. Because if you have excess savings, then it is it is some kind of saving glut, then in order to deal with saving glut central bank react by reducing the interest.

So, that this money can be channelled to some other segments and with respect to with reference to Asian continent, what is the common understanding is that. You have very limited alternative investment opportunities, especially with regard to the stock market and some different base management investment activities. So, the major reliance of the commoners is on the banking sector.

So, banking sector attracts a lot of savings from the individuals and if the banking sector is having more saving more flow of cash and if it is not being disbursed easily into the economic activities. Then this is also one of the reasons for the saving glut Lauren summers mentioned about what is called the secular stagnation, what is the meaning of secular stagnation? Here, the summers argued that if you have the uncertainty in the economy.

Then what typically happens that your investment scenarios may not be bullish, you will be looking for attractive investment. But because of the limited opportunities it may happen that you may not be able to identify those activities and ultimately it will create trouble for your investment. So, if you have a subsequent happening then what typically happens is that what we have seen in the case of coordination failure models that if investment is not reaping the exact benefit.

Then of course, this will have further impact and you may attract the riskier investments which is not good for the economy. So, if you have a very uncertain scenarios then strategic complementarities that we have already read in the case of Keynesian coordination failure models, that the secular stagnation becomes the inevitable outcome, which means that you cannot deny.

Now another aspect that is: very crucial and that we will be discussing in the next session. So, hopefully, we will be having a separate session on financial crisis and under that these things will be coming up again. We have already dealt these things in the case when we are talking about the credit market imperfections. So in case of credit market imperfections, what typically happens that because of the asymmetric information and moral hazard, you have these 2 terms play into play.

And then the borrower is having more information and the lender is having limited information then what typically happens that. There will be a, chances of default and the banks always enjoy a higher interest rate on the disbursement of loan because they charge default premium. So, I had given the example of good borrower and bad borrowers so if we have in the economy a, less good borrowers and more bad borrowers.

Then it is more likely that there will be more dispersion between the deposit rate and the borrowing rate. So, if you are saving your money in the bank, you will get a lesser rate of interest, but if you are borrowing from the bank, you will be charged hefty rate of interest. So, such scenarios are possible only when you have a less number of good borrowers. If we have a sufficiently large number of good borrowers, then the default may not arise and this may not create problem for the functioning of the financial system as a whole.

So, post 2007-8 global financial crisis, we have seen that throughout the globe, we have a certain awareness about the what we normally call it as the systemic risk, what is the systemic risk? Systemic this it tells about that the trigger of shock due to the failure of one major financial institution to or I would say spread of shocks because of the failure of one financial institution.

So, systemic risk has become one of the important components and you will find that the real interest rate scenarios are also impacted by this because if you have a dearth of opportunities. You already have saving alert you already have secular stagnation, then market financial market friction becomes inevitable. Because if you have a less number of activities, then it is less likely that banks may not be able to charge higher rate of interest.

So, overall, it depends upon that how your economic outlook is revealing the optimistic scenario. If it is having more of optimistic scenarios, then you will not have any problem these financial market imperfections will be lower. If you have a less of optimistic scenarios then it is bound to have impact on the low real interest rate.

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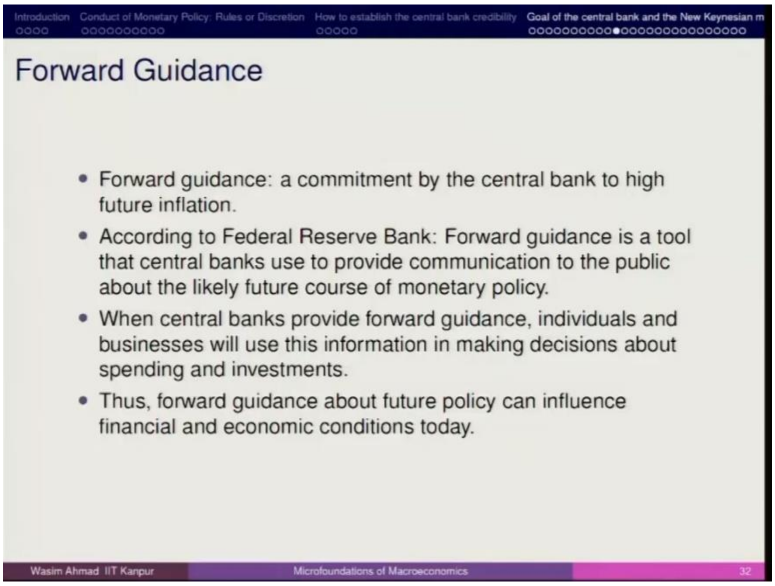


Now in recent years, there has been argument in the financial market segment that in most of the first world economies, where you have the almost the nominal interest rate near 0. It still these economies are not facing inflationary pressure, because the conventionally as we have also mentioned in in last few sessions also. That conventionally we believe that if you have lower rate of interest, the money supply will increase and this money supply will increase will have positive impact on the inflation.

But in most of the first world countries had it has been the case that even with the lower rate of interest, these economies have not experienced higher inflation. And this has brought to the notice of the macro economists and they have argued on different fronts that let us not talk about the lower bound. Let us talk about how we can bring a, towards a dimension through which we can think about controlling the, a nominal interest rate in such a manner that inflation will also have some kind of upward trend.

So, this has been argued by many economist what they have suggested is that if the central bank is having proper communication channel, if the central bank uses the proper communication channel. Then there is a higher likelihood that the inflation will also shoot up how it can be done? It can be done in the sense that if the central bank is communicating to the common masses, that the rate of interest is going to be higher in future in different reports.

So, in India, you have a monetary policy report also mentions about the forward looking scenarios. So, the central bank signals in that direction that the rate of inflation is going to be higher than the agents in the economy household forms market will accept that as an a signal. And they will also have the higher expectation of about the future inflation; if we have the higher expectation then it may lead to increase in inflation rate.

So, one of the suggestions that the economist have suggested is using the forward guidance what is that? A commitment by the central bank to high future inflation, which means whether it will be realized or not, that is a different case, but signalling must be there about the higher inflation rate. So, that is what we try and understand in this context. I also found some interesting observations from the Fed Reserve Bank of US.

That forward guidance is a tool that Central banks use to provide communication to the public about likely future course of monetary policy.  So, if you read the documents of the monetary policy statement or even the statement of the RBI governor, you will find that they always signal about the future course of action about the interest rate. Which means that if they expect that the there will be moderate outlook, which means that this moderate outlook will provide limited opportunity for the central bank to have higher nominal interest rates.

So, in that case, the market will react in the same manner that let us not think about the rate of interest increase. Because we have a stable economic outlook and inflation scenario is also quite convenient for the central bank. So, these things are added here, when central banks provide forward guidance individuals and businesses will use these information in making decisions about spending and investment.

So, if you have higher inflationary scenarios as conveyed by the central bank, then the most likely scenario is that the firms which are planning to make investment in future they will be thinking about that let us take the decision right now. Because if the rate of inflation is going to be higher in future, then it may be highly likely that the nominal interest rate will also increase and we will incur the extra cost.

So, they will be preponing it and they will be if the scenario is good, they will be preponing it. And then they will be making investment decision in the current period itself and which in turn will boost the business cycle. So, forward guidance matters a lot forward guidance about future policy can influence the financial and economic conditions today. As I mentioned that if firms are expecting that the rate of interest is going to be higher in future.

And rest of the macroeconomic variables are intact, then with the higher inflationary trend, the form will always think about making decision today itself about investment in the current period itself, they will not wait for the future period. But if you have inverse scenario, right, if you have if you think that the inflation is going to be lower. Which; means that the nominal interest rate will also.

We will have some kind of adjustment, then the individuals will not be or the firm may not be taken decision about investment in the current period, it will postpone to the future period. So, these dimensions are important to understand and how it works.

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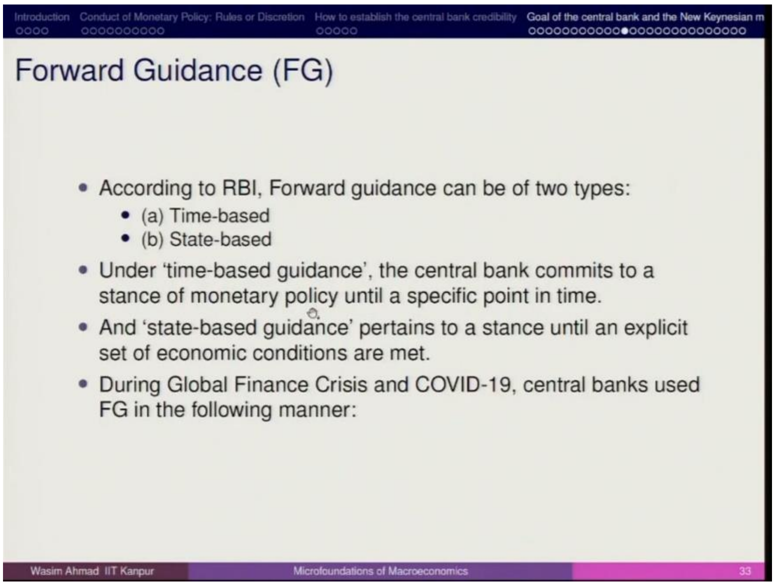


I also looked at the RBI website, where I have mentioned you in the reference the unconventional monetary policy pursued. During COVID-19 period what we have seen is that most of the central banks had the forward guidance about the low rate of interest they have gone for continuous revision in the policy rates. So, in India also we saw around 115 basis points decrease in the rate of interest, which is the repo rate.

And this has monetary policy transmission to all the different segments and banks have also revised their deposits rates. And borrowing rates borrowing rates are much lower on deposits also you have been offered a lower rate of interest. So, we have seen that during COVID-19 majority of the central banks had the forward guidance about the lower interest rates. So that there will be impetus to the investment activities and economy may not linger for a longer time in the low growth zones.

So to break the shackles of the low growth zone they have always given some kind of our guidance about the higher the lower rate of interest. So, here we mentioned about then here we have the as per of the RBI website. So, they use the forward guidance in 2 ways one is about the time based and second is about the state base. Under time based guidance the central bank commits to a stance of the monetary policy.

Until a specified time is a specified point of time, which means that central bank will be at least giving the signal that till this point there will not be any decision or there will be decisions. So, some kind of time based mechanism they try to reveal and with that the agents in the economy will also be digesting that kind of information then you have the state based. Normally in the economy, you have two estates the recession and expansion.

So, in which state the economy is moving forward, then that will also reflect the mood of the central bank that whether central bank is going on hawkish on inflation or they are just remain they just remain neutral. Explicit set of economic conditions are met, which means that they will be mentioning that, for the next quarter. The growth outlook seems to be really strong and we are going to achieve the higher growth rate.

Which means that you have a more demand and if they have proper demand and supply mechanism, then they will be also signalling that despite this higher growth, we will we are not seeing a surge in inflationary scenarios. So, the interested rate outlook may not be changing or may not be reconsidered.  So, if you have a that kind of signalling, then forward guidance is it means that forward guidance is giving you some kind of signal that there will not be any rate change in future or in the next quarter.

So, this is how we talk about economic conditions that how are the economic outlook of the economy. During global financial crisis and COVID-19 central banks used forward guidance in the following manner.

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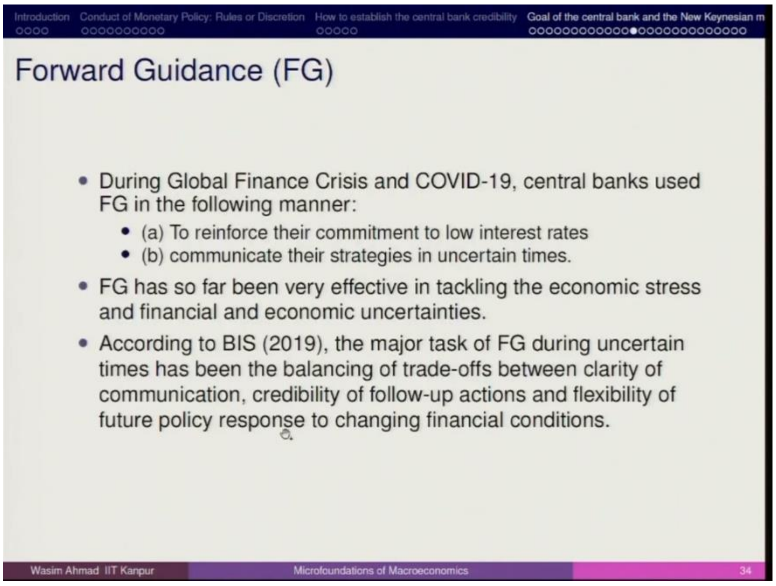


So, one was to as I mentioned that to reinforce their commitment to low interest rates, communicate their strategies in uncertain times. So, to reinforce, so as we mentioned the credible as we have discussed already about the credibility of the Central bank. So, in case of forward guidance, it matters a lot that whether the Central bank is having higher credibility or not. If the commitments made by central bank are having no value and if, the central bank does not take a stand.

Then people or the agents may not be taking seriously the forward guidance scenarios of the central bank. So, in during COVID-19 what we found that the central bank have always gone for communicating to the different agents that the rate of interest scenarios in future look more towards on a downward trend. Which means that; if you are having good scenarios; of investment please take decisions and think about.

If you are if you are running short of money, then you can also think about good borrowing scenarios are going to be a bit favourable. So this is what the government they have always communicated then communicate is their surgeries in uncertain time communication becomes important and that is what we have a lot of studies these days talking about tone of the central bank. So, tone of the central bank in the sense that what is the tone of the central bank about the future inflation so, how they are mentioning about.

So, you must be reading in each paper media that people are talking about and trying to estimate certain type of toning of the central bank that. Whether; the tone of the central bank is coming out more toward the forward guidance scenario that whether it is going more in the direction of higher inflation rate lower inflation rate. And one of the important or the critical factor that we have to one of the critical factors, that we have to always keep in mind that this forward guidance it is not just the blank promise, it is also that you have to pursue that.

So, if central banks have reinforced their commitment to low interest rate it means that they have actually gone for we have seen that almost more than 100 Almost 115 basis points in India, we have revised the interest rate we have almost even we have gone more than that I am having the impression that it was around 115 basis points. It may be higher, but the low interest scenario that I mentioned the central bank has pursued which means that it is some kind of credible information.

So, if individuals are going to assimilate this information into their expectation, then this has to be credible. For example, if the teacher in class if he or she is taking an examination; he or she announces some kind of assignment requirement or some kind of presentation requirement in class. And if he does not actually attend that or if; he does not care about those assignments and the quizzes during the course.

Then the students will also realize that whatever announcement that he is going to make in future students will always realize that, it is not going to materialize. So, they will not be taking that seriously. In the same way that if you are making a promise, then it has to be it has to be credible, then only people will have seriousness about the policy stat in case of central bank also it matters that in under forward guidance.

If they are signalling something, then it has to be credible, it has to be backed by otherwise the central bank credibility will be much lower and people will have a different opinion. So, as I mentioned about the aggregate demand shocks or aggregate supply shock, we discussed in the last session, that from point 2 to point 1, we were trying to come.

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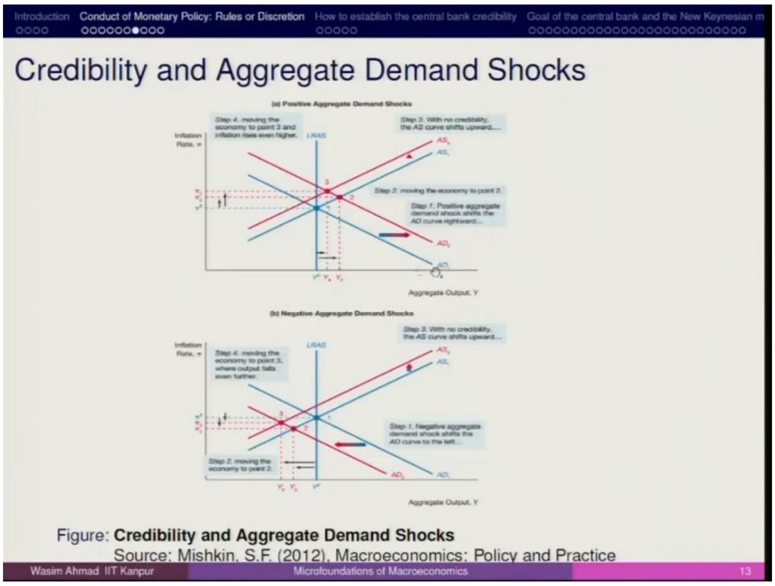


So, here it is about the credibility. So, this is what we want to mention from point 2 to point 1, it is linked with credibility. If it is credible, then only it will come back otherwise you will never so these are the ideas that we thought that we should be discussing it here and this is how we are mentioning it. For guidance has so far been very effective in tackling the economic stress and financial and economic uncertainties.

Especially during uncertain period when people have limited information about the causes and the consequences of the particular shock then during that time, effective communication becomes really important for the central bank. So, the conventional monetary policy that we have about the money supply demand for money, you can see that going ahead, we are going to add some more dimensions.

So now we are not just thinking about demand for money and supply for money, we are talking about how the central bank has to act under certain expectationary scenarios. Whether the timing consistency problem should be taken care, how the central bank is going to take up the challenges in future. So, this is how it matters for the central bank according to BIS right. So, here what they mentioned that the major task of the forward guidance during uncertain times has been the balancing of trade-off.

Between clarity of communication, as I, mentioned, credibility of follow up actions and flexibility of future policy response to changing economic conditions. So, this is what we what BIS Bureau of International Settlements, what they mentioned about it is quite acceptable.

That in reality the forward guidance has indeed worked in favour of the general expectation and what we have seen is that there has not been much deviation to the to the inflationary scenario or interest rate targets. Most of the global economies have been able to bear the cost of the COVID-19 and there has not been I would say much deviation from the monetary and physical policy side.

Because they have always been there has always been a stand up the government to push forward the income generating activities they have gone for generating economy activity. So if you read the economic survey of this year, the 2021-22 you will find that they are given a very good idea about how they have spent the money during COVID-19? How the government has spent money in different month's different quarters? And how from 2020 March 2020 till September October 2021 they; have mentioned about.

So, forward guidance works really in favour of the central bank monetary policy mechanism. And it has to deal with three important factors one is that the clarity of communication how central bank is communicating about the future course of action about the inflation and the interest rates. In case of India you can think about the reported scenarios liquidity adjustment facility that we normally mentioned LAF.

Credibility have a follow of actions that how credible is Central Bank is saying that rate of interest is going to be lower than how they are going to adjust the flexibility of future policy response to changing financial conditions. So, this is what we have the flexibility of future policy response to changing the financial economic conditions are really important.

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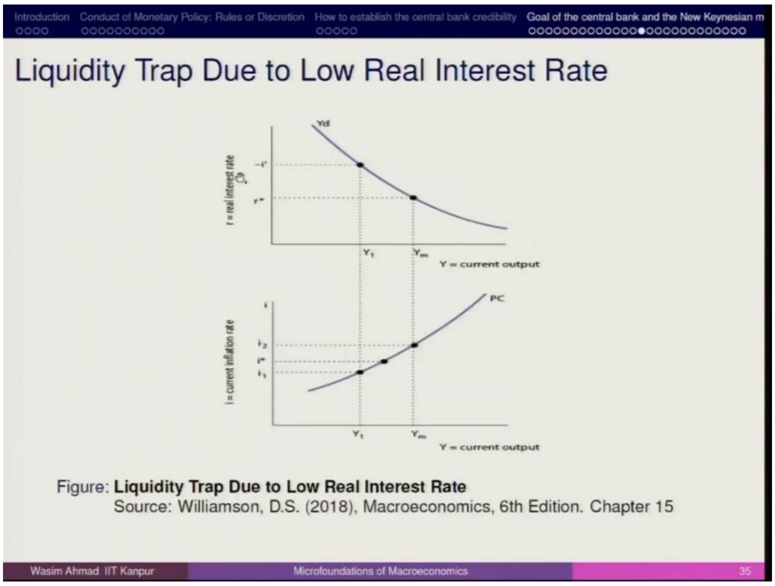


In the next session, we will be talking about liquidity trap due to low real interest rate and then here we will understand that how forward guidance is important.

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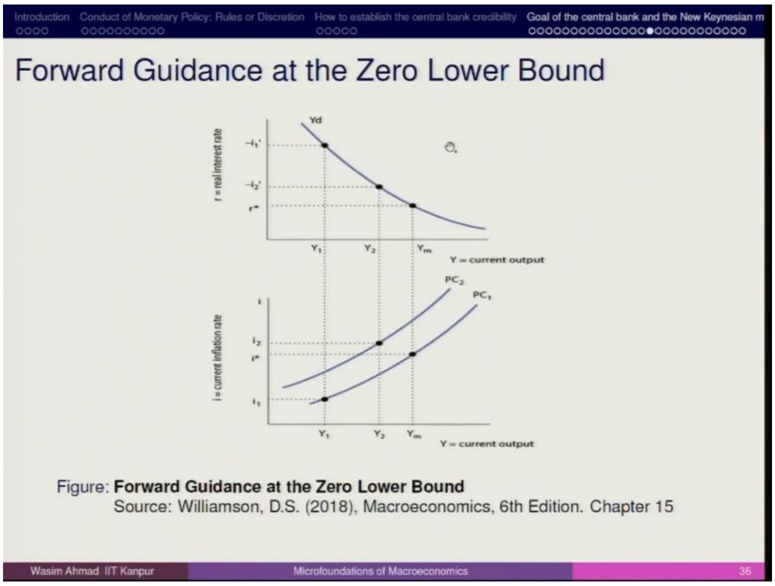


And then we will be also trying to see that how forward guidance works at the zero lower bound in which all context it is better? Where the central bank should be focusing on? So all these dimensions I will be covering in the next part. I hope the forward guidance it is worth investigating this particular topic. And if you are interested in monetary economics, especially the central banking.

Then you should spend some time and read from here the source that I have mentioned that this particular source is really important. The unconventional monetary policy in times of COVID-19 and bank for international settlements the argument that they provide. It is also very helpful in understanding the forward guidance scenario. So I am stopping it here and thank you so much for your attention.