Financial Institutions and Markets
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Lecture – 04
Measures of Financial Development

So, after discussing about the Financial Market Efficiency, today we will be discussing certain issues related to the Financial Market Development. Already in the beginning we also discussed that financial sector has lot of role for the different activities. Like it provides the medium of exchange, it also helps to bring this particular finance and other alternatives for investment etcetera.

So, in this context today we will be discussing about how basically we can measure the financial development in an aggregate and as well as in a particular market. Because, the financial development is very much required in the economy growth process what are the channel, through which the financial market helps to achieve economic development or economy growth that will be discussing in the next session. But, first of all today let us discuss certain issues related to the measures of the financial development.

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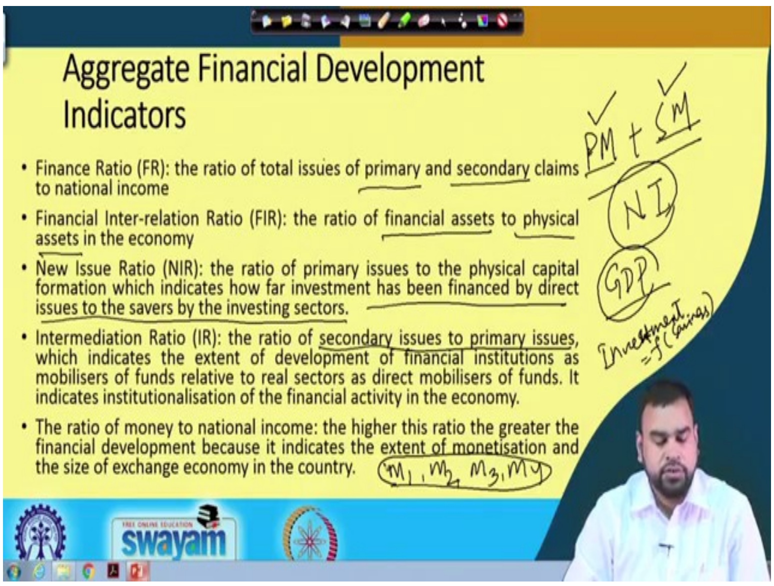

So what we will do today let us discuss certain indicators which measures the financial development in the aggregate sense. That means, we are talking aggregates sense in this sense I am referring to the aggregate economy, then we can move into the how the financial development can be measured from a particular market perspective or as well as from an institutional perspective.

So, whenever we talk about the financial development in the aggregate sense or whole economic sense, there are different quantitative measures and there are different qualitative measures. So, we will be discussing certain quantitative measures first then we will move into the qualitative measures.

So, whenever we talk about the quantitative measure, the first point which basically comes to our mind that is basically your finance ratio or the first measure which always used by the researchers and the academicians and as well as the policy makers to know that whether the financial market is developed or not that is basically your finance ratio. Then what is finance ratio? The finance ratio is the ratio of total issues of primary and secondary claims to the national income.

If you remember in the beginning in the introductory session we discussed about the market can be broadly defined into two ways, one is your we can say the primary market and other one is the secondary market. So, whenever we talk about the primary market and secondary market that means, whenever the particular security comes to the market in the first time we call it due to the instrument of the primary market. And once it is listed and it comes to the secondary market then automatically the price and demand and supply of that security depends upon supply and demand of that particular issue by the different market participants.

So, here that means it talks about the total primary market issuance then as well as we have the secondary market issuance divided by the national income. So, what exactly this national income means? You might have known about the GDP the Gross Domestic Product and here the gross domestic product can be measured in different ways some people use it NNP at a factor cost as a proxy for the GDP. But you can take also the GDP as a measure which is as a variable here in this case which is popularly or maybe very popular term used by the different people.

So, how many securities or flows how much amount of the flows come to the market, in terms of the primary issue, in terms of the secondary issue divided by the total national income that is basically give you an indicator. That means, remember that here we are referring to primary market and secondary market issuance with respect to the financial markets.

How many securities are issued in terms of the primary issues in the financial market itself that includes the money market includes the capital market or the stock market that also includes the bond market. So, it is we are basically confined our discussion with respect to the financial markets only. So, therefore, this is the first major which is a very broad measure people used. So, to define the concept of the finance ratio and which is popularly used as one of the broad indicators for financial development.

Then next one is the financial interrelation ratio which is basically nothing, but relatively how the financial market is developed with reference to the other markets or other sectors in the economy. So, therefore, it is the ratio of the financial assets with respect to the physical asset.

So, you see physical assets which we mean these are the instruments in the real sector economy like all kind of manufacturing sector it includes also the particular sector which produces some tangible products and those products also are demanded by the market participants or the consumers for certain requirements. So, if you see if the ratio is high that means, the financial assets percentages high with respect to the physical asset we can say relatively the financial asset is performing better in comparison to the physical assets existing in that particular economy. So, that is that ratio is used as kind of relative measure which measures the financial development for that particular system.

Then another one you have the new issue ratio because some people argue that the development of the new issue market or the primary market is more important in the sense that it provides the real value addition to the economy. That means, it basically it give some addition to the economy in the sense the secondary market valuations depends upon the demand and supply of that existing securities. But, whenever we talk about the new issue this particular issuance or particular securities, which is come to the market for the first time that means, it gives the addition to the system as a whole. So, because of that what basically you can say that the new issue is very important from the development perspective.

So, here if you see that the new issue ratio is nothing but it is the ratio of primary issues to physical capital formation. That means, what basically it gives that whenever we are providing the savings or any kind of capital to the economy final is the capital is basically used for the investment. So, the investment already we have discussed about that the investment is basically a function of the savings or the new capital which are or new saving or new kind of instrument which is coming to the market.

So, here if the primary issues are more that means, what you can say those kind of capital are mostly used by the investor for the investment which gives the value addition to the system. So, therefore, how far the investment has been financed by the direct issues to the savers by the investing sectors? That means, directly whatever savings is coming to the market in the first time how that particulars money or particular kind of resources financial resources are used to create the physical capital in the market or capital formation.

In the market that gives the idea that how the new issues are utilized in the market to generate certain kind of for revenue or the resources and finally, it has the implication of the total output and economy at a large. Therefore, that is another indicator for the measuring the financial development. The next one is intermediation ratio. The intermediation ratio is basically again it is a relative measure. It is basically measures with respect to secondary issues what is the development happening with respect to the primary issues.

So, therefore, it is the ratio of secondary issues to primary issues, how much secondary instruments are available, how much is the value of total money available in the secondary market and what are the value available in the primary market. So, if you take the ratio that basically gives you the intermediation ratio which indicates that the extent of development of the financial institutions as mobilizers of the funds related to real sector as direct mobilizers of the funds. It indicates the how the financial activity in the economy has been utilized or financial development how it is activity basically character by the mobilized. So, this is the way the intermediate ratio is defined.

And another broad measure if you see everybody uses that is money to the national income. Total amount of the money available to the economy, then the national income. I hope you must have known that the money can be defined in various ways. The definition of the money can be in terms of narrow way, in terms of the broadways. So, you have the measures like M 1, you have the measures like M 2, like M 3 and M 4 so, these are the different measures what RBI uses in terms in the context of India which defines the different measures of money supply. And this particular ratio or this particular indicators can be used the that how the money can be or how much money is flown to the system and what is the ratio of money to the total national income in the particular market or particular economy.

It indicates that the extent of monetization and the size of exchange economy in that country. More the money is circulated in the system we say that the behavior or the consumption behavior investment behavior of that system is basically increasing and finally, the flow or the exchange size of the exchange economy has been increasing. So, that also is one of the indicator which uses in the system in a larger sense.

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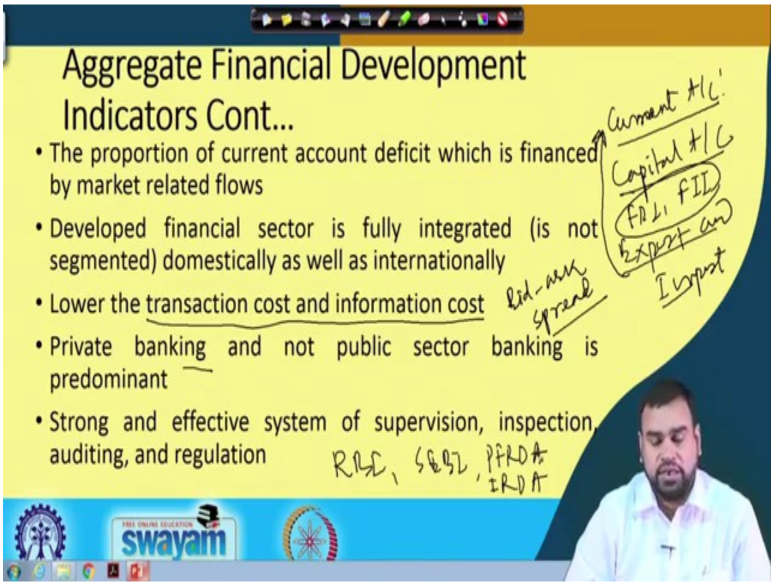

Then, we are coming to the next part that what are the other indicators. You see the another indicator we have the proportion of current account deficit, you know what do you mean by current account deficit we have the different kind of deficit already we have in terms of the balance of payments. So, we have a system where the always the asset should be equal to liabilities. Whenever you talk about the balance of payment there are different type of deficit we face, one is current account deficit another one is the capital account deficit. One is your current account and second one is your current account and another one is your capital account.

The current account basically nothing, but it is a difference between your export and import. But, whenever you talk about the capital account the capital account is basically nothing, but the difference between or how much inflow and outflow is there in terms of the capital. Capital means we are talking about the FDI and FII. So, the inflow and outflow differences in terms of FDI and FII is a part of capital account and export and import differences that is basically a we basically we will say that that is the current account.

So, in this context what we are trying to say that if there is a current account deficit then how the deficit is basically filled up? So, whether the deficit is filled up by the certain kind of government policy measures or by borrowing the money or by depreciating the money. If it is done by the government then it does not give you that idea that the market is developed and market is taking care of the particular system itself.

So, another way of a making this current account filling this current account deficit is basically development of the economic development of market related factors. May be the currency, fluctuations, the market basically responsible for the current fluctuations, and demand and supply factors which is affecting the export and demand activities, that takes care of that current account deficit. That means, we can say the market is matured enough, the market is developed enough to take care of the problems or the deficit what is happening in that system in that particular point of time.

So, therefore, if market mechanism itself is taking care of the deficit part or the proportion of current account deficit is financed by the market related flows then we can say that the market is developed. But, if the government has to intervene and governments has to take certain measures to fill that particular gap then we can say the market is not that matured, market is not that developed to take care of the whatever deficits they are facing in the system as a whole.

Another indicator is developed financial sector is fully integrated that means, there are different type of market which exist in the particular domestic economy like your debt market, equity market, money market that already again and again we have discussed. So, we should ensure that if the market is developed then there must be a proper integration and all the markets are highly integrated anything, anything goes wrong with the one market then generally that can spill over to another market, but one market if does well that also have the positive impact in another market.

So, because of that if the markets are integrated that is also good sign that the market is developed it can be domestically it can be internationally. Indian stock market can be integrated with US stock markets or any other emerging market stock market. So, if there is a integration happening within the domestic market within the market we call that also the market is developed. And we should ensure that our market also in this globalized economy or market should be also integrated with international market. So, the financial integration also can be used as a indicator for the developed or the indicator of the financial market development.

And again and again I am repeating that lower the transaction cost and information cost. That means whatever information we are getting from the market that information should be free and if this there is some cost basically involved in the information then it should be a minimal and that cost basically should be borne by all the market participants.

So, if you talk about the stock market. For example, whenever we talk about stock market the transaction cost is always reflected thorough the bid ask spread the transaction cost is always measures through the bid ask spread. So, here the bid ask spread is also measure of the liquidity. If the liquidity is high that means, this spread is low that means, which implies that the transaction cost in the market is low.

The transaction cost includes all type of cost it includes brokerage cost, it includes the cost for participating in the market in terms of a taking the positions in the stock market or bond market. So, whenever your whenever you transact anything, whenever you are opening the account, whenever you are basically making the insurance policy or you are going to invest in the stock market or you are going to invest in the bond market. Whatever cost you are bearing to take the position in that market that is basically nothing, but the transaction cost or the cost of the investment in the market. So, lower the transaction cost, lower the information cost higher the development.

So, we should ensure that transaction cost incurring in the market should be as much low as possible by that the more participation or more investors or more savers more kind of market participants should come to the market. And once more participation will be there the market will be more competitive and then the price will be highly competitive also.

And the price what we will get it that basically actual the reflection of the true value of that particular security in the system. So, therefore, transaction cost is very important.

Then another thing is whenever we have a banking system we should ensure that with the public sector bank private banking also should be developed. That means, the government should not basically own all the blanks which are operating in the system, all the banks should not be owned by the government, there must be some kind of private banking system to minimize risk in the particular system.

So, more the participation of the private banks you should ensure that the market become more transparent, the corporate governance system will be more robust. In that contest the investors or the market participants should create the confidence in the market which automatically ensure that the market is developed or the system is developed.

So, the private banking should be predominant, we should encourage or any developed financial system should always encourage that how the development in the private banking can take place. So, in that context we should ensure that the development of the private banking is also indicator of the financial development in that particular system. Then, obviously, it is the next point you should have a strong and effective system of supervision, inspection, auditing and regulation.

To create the confidence in the mind of the market participants the supervision is very much required and periodically it should be audited and regular regulatory norm should be very strong and very stringent. And all kind of grievances what the investor investors are all other market participants have that should be addressed also periodically in a better manner. So, are also periodic manner.

So, in that contest what we can say we should have a strong effective system for the supervision that is why we have a regulatory bodies like RBI, we have the bodies like a SEBI, we have the body is like PFRDA, the Pension Fund Regulatory Development Authority, then we have IRDA, Insurance Regulatory Development Authority. Whose job is basically to ensure that the market is well enough or market provides all kind of information to the system or information to the all the market participate in such a way that, the investor can use that information for their participation in the market and there is time to time the regulation has been taken for betterment of the system.

And as well as all the grievances have been addressed by the different regulatory bodies. So, that is why this industries confidence or the market participants confidence increases in that particular part. So, this is what basically we have in terms of the finance and development indicators.

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Then, we can of other some other indicators like presence of strong active large size non-banking financial sector which comprising the stock market, debt market, insurance companies, pension fund, mutual fund etcetera.

Then, we have should have a high level of current and capital account convertibility or the openness that mean market should be more open. And the restriction should be minimum these participation of the foreign investors basically should be minimum, foreign minimum restrictions should be there. The effective and quick enforcement of financial contracts and recovery of the loan should be there in the market.

We have a strong system to recover the loans and as well as we should have a effective and quick enforcement of the financial contracts. So, whatever contracts are there that contracts should come to the operations in an effective manner, in the quick manner. All the positions which are taken that should be liquid that should be that should converted into the liquid instruments and as well as at the time of requirement the market participants should be able to utilize the money whatever they have invest they have invested in the system and as well as the money can be easily converted into cash.

So, these are the things we should ensure that is why we say that it should be effective and quick enforcement of the financial contracts and the recovery of the loans. The recovery of loan process also should be effective and quick. We should ensure that the loans which we are giving they should follow the proper credit appraisal project policy. And the commercial banks should follow their actually issues or actual process by which the moral hazard problem should not be there, and the adverse selection problem should not be there because that problem basic finally, leads to the bankruptcy and liquidation of the system as a whole.

Then another point interesting point is we should a we should see that how this policy makers are using or RBI in terms of India are using their instruments monetary policy instrument to make the system stable or to increase the growth rate of the economy or to control inflation. So, you have direct instruments we have indirect instruments. So, according to the notion more the indirect instruments are used like your interest rate.

For example, we can take Repo what RBI following nowadays. So, Repo is basically indirect instrument. So, here what I am we are basically discussing if repo rate is increase it will have the impact upon the call money rate. And once the call money rate will increase it will have the impact upon other market interest rate and lending rate of the commercial banks. Then your money supply gets affected, then if money supply gets affected then investment gets affected this the investment the call money market rate will increase, then the money supply will basically decline, then investment will decline like that it can take a reverse trend.

So, here our objective is if you change the Repo rate; Repo rate is basically indirect instrument and like that you have many other indirect instrument like CRR is also indirect instrument, then other instruments. So, instead of directly changing the money supply if the RBI try to use or for the regulator basically try to use some indirect instrument to control the money supply and their effectiveness also to reach that outcome variables like your growth and inflation control or stability of the price then what we can say that system is better system to ensure that the market is highly developed. So, therefore, that also we can keep in the mind that how this whether the monetary policy instruments are direct or indirect.

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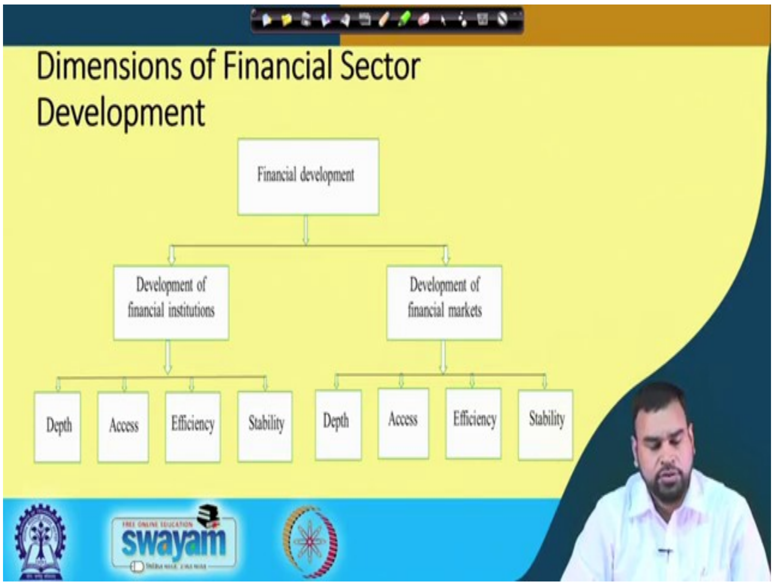

So, coming to this financial sector development if you see the specific kind of system specific kind of market or institutions. There are different dimensions we have depth, we have access, we have efficiency, we have stability and of the different parts. So, what the World Bank has given this guideline, that the development of that particular system should be measured in terms of all type of dimensions whether it is banking or whether it is the stock market and bond market etcetera. So, it should be considered from all 4 dimensions point of view.

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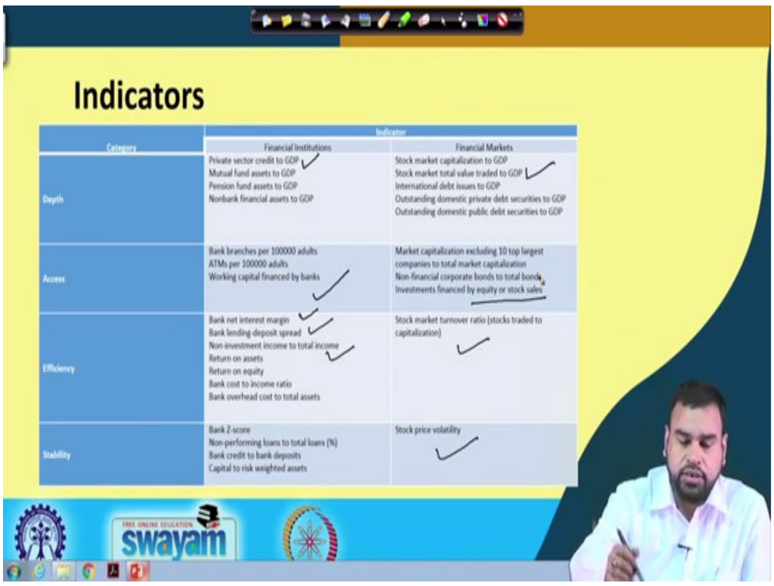

So, there are certain indicators they have given that how this depth, access, efficiency and stability of the financial system or financial institutions and markets can be considered whenever we measure the total index of a financial development in the country has a whole.

If you see we have if you talk about the debt for the financial institutions, we have the like private sector credit to GDP ratio, mutual fund assets, pension fund assets, non-banking financial attribute. These are all the measures which measures the depth of the financial institutions, you can consider any of the institutions. If you talk about the access then how many branches for 1 lakh adults, ATM's for 1 lakh adults, working capital, short term capital, finance by the banks.

Then, if you talk about the efficiency for the financial institutions part interest margin we will discuss more on banking part, lending deposit spread net investment income to total income, return on asset which is a measure of the profitability net income upon the total assets, return on equity this again net income upon the total equity, bank cost to income ratio bank z score, non-performing loans to total loans these are the measure of the stability. You remember those all those aspects will be extensibility we will discuss whenever we will specifically talk about the banking and as well as the efficiency measure or performance measure of that particular system in the respective sessions.

Then, if you talk about the depth, if it is in terms of the market, then you have the market capitalization to GDP. Market means price of the particular asset multiplied by the total number of stocks outstanding, traded value which is measure of liquidity, debt issue to the GDP, outstanding private debt security to GDP, domestic public debt security to GDP, etcetera.

Turnover ratio is a measure of a efficiency which is the liquidity measure and volatility is a measure of the stability of any market. Then we have the access market capitalization excluding 10, that means 10 top largest companies is to that means, the particular market should not be highly only concentrated there must be some access to the largest stakeholder, non-financial corporate bonds to total bonds, investment financed by the equity and the stock sales. So, these are the different proxies which are used to measure the development of the financial system or more particularly financial institutions and the markets.

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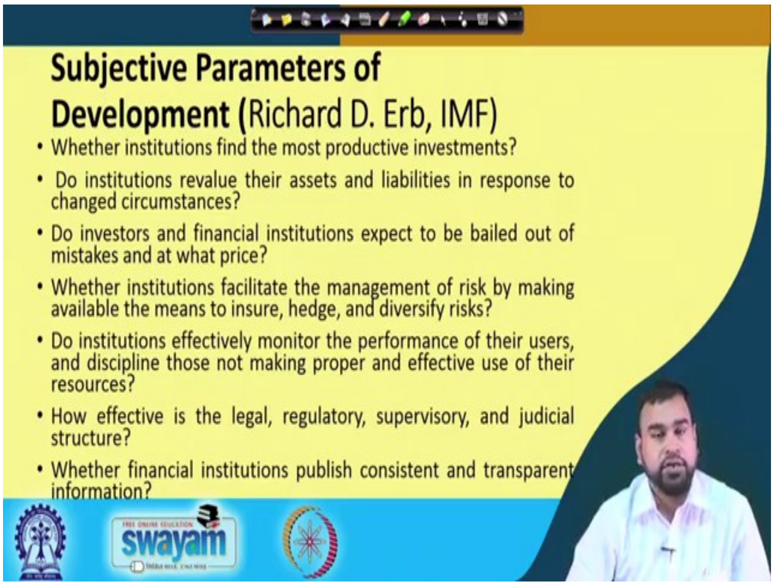

Then, if you see then there are some subjective indicators that already I told you that subjective indicators are given by the IMF. It is in the question form that what basically research are basically has raised the question whether institutions find the most productive investments. Do institutions revalue their assets and liabilities in response to changed circumstances? How feasible they have, but how comfortable they are for the changes whether they are adaptive towards the changes or not?

Do investors and financial institutions accept to be bend out of the mistakes and what price? If there is any problem, how easily or how feasibly they are basically coming out of this. Whether institutions facilitate the management of risk by making available the means to ensure headge and diversify risk? whether this kind of whether they are capable enough to manage the risk or not and all hedging activities diversifying activities are properly done or not?

Do institutions effectively monitor the performance of their users and discipline that means, regulation part whether they are properly monitoring them or not? And how they are they should monitor that how the particular resources are properly and effectively utilized by them? How effective is the legal regulatory, supervisory and judiciary structure in that particular country? And whether the financial institutions publish consistent transparent information, because information is quite important and that should be free of cost and are the information available to the all the in participates in the market also should be same and there should be uniformity among them.

So, these are the different indicators different kind of questions was raised by him. So, if you access all these things or if you are going to access them in a effective manner then it will be also give you the overall picture that how the finance and development market has been developed in that particular country. And whether it is we can say that the market is developed in that sense or not.

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Please go through this particular references for this particular session. Then next we will be talking about how the development is affecting the growth process.

Thank you.