

Security Analysis and Portfolio Management

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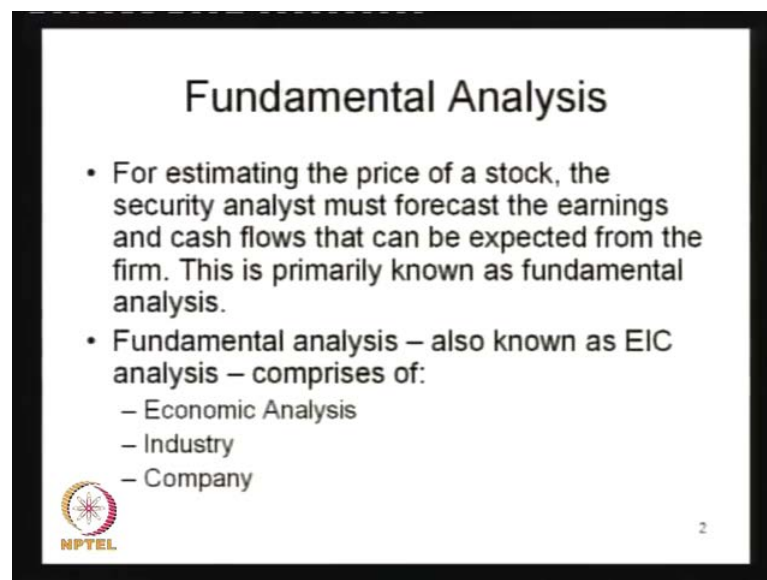
Indian Institute of Technology, Kharagpur

Lecture No. # 13

Economic Analysis – I


Hello, in this session of security analysis and portfolio management. We are going to talk about the fundamental factors that affect the security prices in the market. And this particular system is known as economic analysis - is a part of broad analysis called economic industry and company analysis. Before we talk about they how the stock price will be there, how the valuation of a particular stock is going to be there. We should be aware of the things, that is happening across the industry in that particular company belongs to, as well as the overall economy that the industry belongs to. So, that has to be analyzed for a proper valuation of stock forecasting of their financial essence etcetera.

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Fundamental Analysis

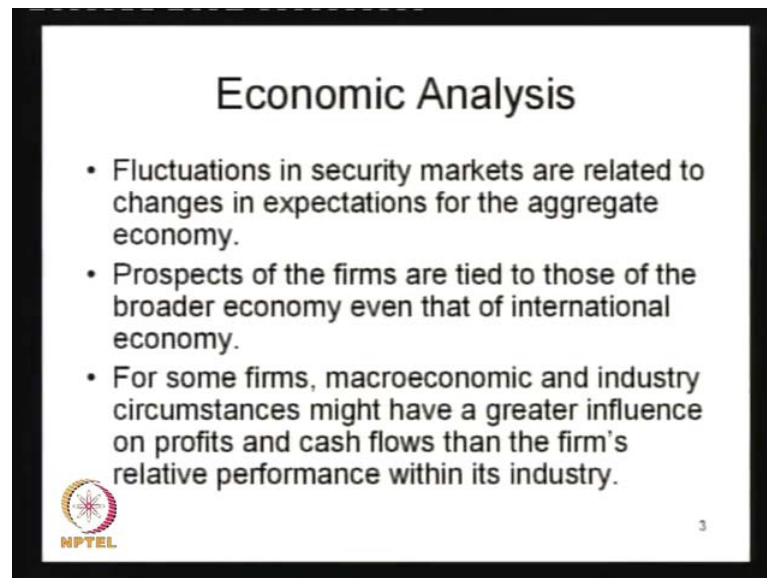
- For estimating the price of a stock, the security analyst must forecast the earnings and cash flows that can be expected from the firm. This is primarily known as fundamental analysis.
- Fundamental analysis – also known as EIC analysis – comprises of:
 - Economic Analysis
 - Industry
 - Company

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So, we move on to the fundamental analysis: This is a part of actually fundamental analysis - for fundamental analysis, we need to have the forecasted cash flow or forecasted profit of a particular company. And for that, one has to look at the earnings and cash flow, in that case that is also known that is known as fundamental analysis. And


this fundamental analysis also known as, **as** we discussed earlier it is EIC analysis which comprises of economic analysis, industry analysis, and company analysis. In this session, we will be focusing on economy analysis to some extent, and this session will be continuing for the next part, where we will also come to the economy analysis. After that we will be discussing industry analysis, and company analysis.

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Economic Analysis

- Fluctuations in security markets are related to changes in expectations for the aggregate economy.
- Prospects of the firms are tied to those of the broader economy even that of international economy.
- For some firms, macroeconomic and industry circumstances might have a greater influence on profits and cash flows than the firm's relative performance within its industry.

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Coming to the economic analysis: Any fluctuation in security market that happens, it will be related to the expectation in the aggregate economy. And obviously, the company's in **in** fact, the company's performance is tied to the economic performance - and the economic performance of particular country is also tied to the broader international economic condition.

And it is quite possible that in some cases, the macroeconomic factors may influence the company's performance more than the companies its own performance relative to the particular other firm **firm** performance in that particular sector.

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The slide is titled "The Global Economy" and contains a bulleted list of four points. The NPTEL logo is in the bottom left corner, and the number "4" is in the bottom right corner.

- The international economy can affect a firm's prospects, the price competition it faces from competitors, or the profits it makes on investments abroad.
- There can be variations in the economic performance across countries at any time.
- Political risks can be of greater magnitude in other countries compared to domestic political environment.
- Fluctuations in currency exchange rate can also be of importance.

So far, that matter the economic analysis is a (()) paramount. Importance, coming to the next one the part of (()) to different thing that is that, we are going to cover in economic analysis. As we have all of all of us know, the any domestic economy cannot be insulated from the factors, affecting in the international economy as such. Because we are living in an interdependency world, and so one essence economic factor can affect another essence economy factor. For instance, if not for instance if a particular is a country is importing a lot from different other countries, and that exporting countries economic condition can affect the importing countries economic conditions.

So, similarly if a particular company is having a lot of revenue from the export market - particularly in Indian countries, we look at the IT sector. So, they are heavily dependent upon the income from the onshore or offshore activities for that are better, but the clients are spread across the world. And in fact, there domestic sales may be very much lesser than the international sales - international revenue from the international market.

In such case, anything happening in their client's economy is going to affect their performance, because the client's economy may, and drive that particular company not for going for more production and all. In that case the demand for the services, the IT sector in India can come down. In that case, this these companies stock or the price price of the stock is going to reflect that particular thing. So, it is not possible to insulate the domestic economic from the international economic phenomena.

So in fact, one you go for economic analysis, you have to also look at how it is there in the other country access. So, in a broader perspective is somebody else going to do an economic analysis, it has to look at how this particular economy is interdependent other economy of the world. Then another thing that is there, in the economic analysis that one can have look at the political risks were also can be greater magnitude, it can affect.

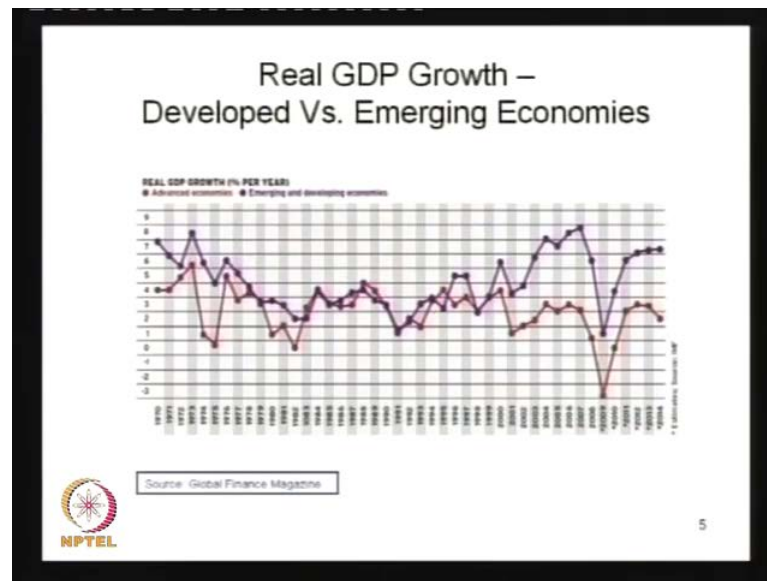
So, even if the industry condition might be good in a particular economy, but the political condition this democracy - this democratic set or the legal set of an all those things can also affect the economic analysis. And so that has, that is sometimes the in the industry condition, and the products of the particular market may be good, but because of the political condition, the exporter may not like to export that particular country. And if your performance is based on the export revenue in that case, that is going to affect a lot as such.

For instance, let us say something is happening in Iraq, and Iran for that matter or suppose if somebody something is an Afghanistan, and other parts of the country. If your products are sold in this particular segment, and there that particular countries of having a is vulnerable to political risk more than any other country, are the **are the** particular moment. So, in that case that is going to affect the economic condition there, and if it is also going to affect the economic analysis, that we are going to discuss as such.

Similarly, the profession in the exchange rates also can affect the economic analysis, because and in the company's performance. If there is a again, in the cost structure as a lot of thing that is, because of import or in the revenue structure there is a lot of thing because of which is driven by expert as such. Any fluctuation in the currency rate or the favorable unfavorable can affect adversely or favorably the company's performance.

So, that also has to be looked into, and that cannot be kept aside for analysis of the particular company's performance or stock or economic for that matter.

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So, having discussed of the global economy: Now we look at as we discussed that different countries can perform differently, this particular graph one if will one looks at. We can see that there are two set of countries - one is a red one is the advanced economies, and the violet color one is the emerging and developing economies like India, China, and Brazil and those countries.

Developing advanced economies will it really comprise US, Canada, (()) grouped countries, and all European union countries. One can look at since in 1970, this particular graph is there on till 2014 is forecasted. So, one can see here, till almost 1985 - the emerging the advanced economies are doing bad than this one. So, this a real GDP growth this is shown there. Emerging economy is doing little better in the growth parameter, and you can see here, one can see here that the there is a almost same performance in 1984 85, and it is almost same that the growth. Whereas, a post 2001 can see there is a very wide spread gap, where is a there is a very wide gap between the performance of advanced economy in terms of real GDP growth per annum, between advanced economy and the emerging economies.

And of course, one can see here there the moment in the things is more same. That means, say some economies in advanced economies doing well, and emerging also is doing well. If you have premise that the emerging economy's revenue is some, whenever there is a driver of from the other countries, that that particular countries economy is

going go to affect the, another the emerging economies country's companies for that matter.

In that case if that country is doing well, the emerging country economy can also do well. If there is a possible link, one can establish for that matter. Whatever we may say it also says that there are opportunities of good growth in emerging, and development this at this moment, and compare to the advanced countries. So, one can think of going for more of emerging countries economy stocks, because the economy is doing well compared to other countries. Obviously, in that case the companies in that particular sector suppose to be doing well, because economics performance is not on its own; the overall all sectors of production factors of production, how they do **how they do** that is going to drive the economic performance.

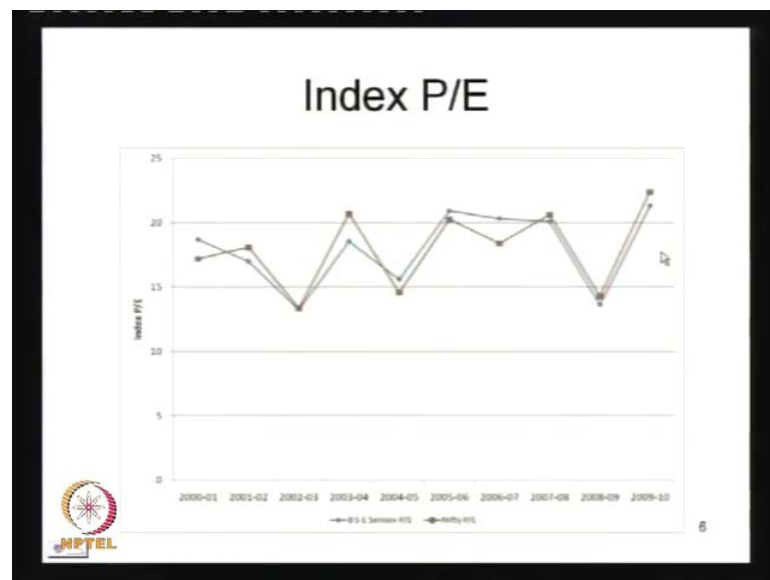
So, how the agriculture doing, how the industry is doing, how the service sector is doing - all those things combined together lead to the economic performance. So, one can look at opportunities in this way that, which particular country is doing well in economy. Then we can think of as an analyst of invest, as an investor analyst. We will we are searching for stocks to invest or the financial instruments to invest.

One can look at for the which economy is doing well, and accordingly we can go for that. Particularly those mutual funds or investment funds will allow to invest in other countries. In that case, they can they will for these things will it be going to be paramount importance as such. And one can see here, we are expecting that 2013, 2014 also the emerging country is going be doing better. In fact, there is a possibility that 2013 to 14, there is going to be decline, the lower growth rate compares to the previous years.

Whereas the in emerging countries, that **that** growth that fall into growth it is going to happen in case of advanced economies. Whereas, there is will be almost same or increase the growth rate, in case of emerging economy. So, that is an indicator there which country can go, and among these group of advanced countries - a group of emerging countries. For instance, in emerging countries we can see here that is china is leading them, it is almost having a double digit work for a several period of time. And followed by India which is also showing 7 to 8 or 9 percent growth in the recent past.

So, somebody who is like to invest in the different economies for that matter in emerging economies, he or she likely to give importance may be Chinese company stock than Indian company stock like that. It is not that only if the particular emerging countries are doing well means, all the countries are doing well. One country may be doing well, one and country doing **doing** well as such. So, but anyway one has to look at those economic performance, **economy's performance** before we proceed one to proceeds to the micro sector or micro companies for that matter. Micro company means, the single company what will they choose they should also look at how the economy is doing.

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And coming to the next one can see here, one of the **(())** this graph, we have a called index price running ratio. This is as we know the price running ratio is nothing but market price divide by earnings per share. So, combined this particular sense or nifty in Indian context have been taken divided by the, that they are market divided by the combined earnings, of this particular group of stock, let sense like 30 stock or in 90 you have 50 stocks.

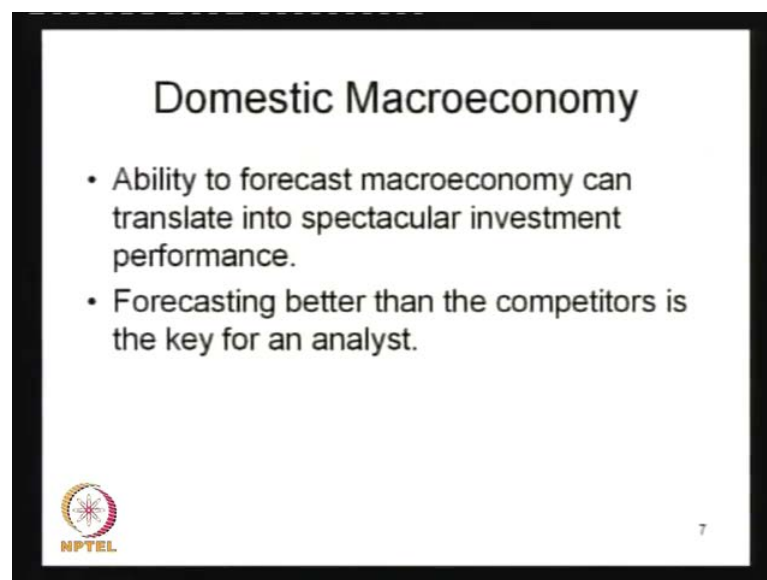
So, there is a combined p ratio of this particular census nifty. One can see here, that index PEE in India has was between 15 and 20, and in 2003 4 it cross 20. Then it has again come down to 2004 and 5, this we can see here there is a fallen 5, 6 has again gone up. Like that, so if you look at an overall trade here; that means, the index P E has over between something around 13 to 22, 23. So, that is the way the index is performing. That

means, the if the company's share is a let us say 5 rupees, and let us say if this overall index PE is going to happen, let us if it is 12 to 23. That means, 12 into 5 could be the lower price, and 23 into 5 could be the highest price for the particular stock.

If we assume that the p of these particular company is going to be the same as p of the index, the broad index as such. Actually this index, P E is a function of the company's performance - the company is doing well, then index will be doing well and the earnings, and the p is going to be affected by the company's earnings. As well as the price as such. And in fact, the earnings per share of a particular company can give an indicator, how it is how this stock is going to be happen in subsequent time as such.


So, the P or they expecting the good earnings per share in the subsequent time period, there is a forecasting of earning per share is going to better. In that case, the company's share may move up, because the there is a expecting in earnings is going to be better as such. So, the company's earnings per share is going to up, compare to other sector then price what you are going to pay for today is going to be higher than any other company as such. So, this is an indicator of how this company is going to this sector is going to be there, how it is linked to the earnings per share of the company as such.

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Domestic Macroeconomy

- Ability to forecast macroeconomy can translate into spectacular investment performance.
- Forecasting better than the competitors is the key for an analyst.

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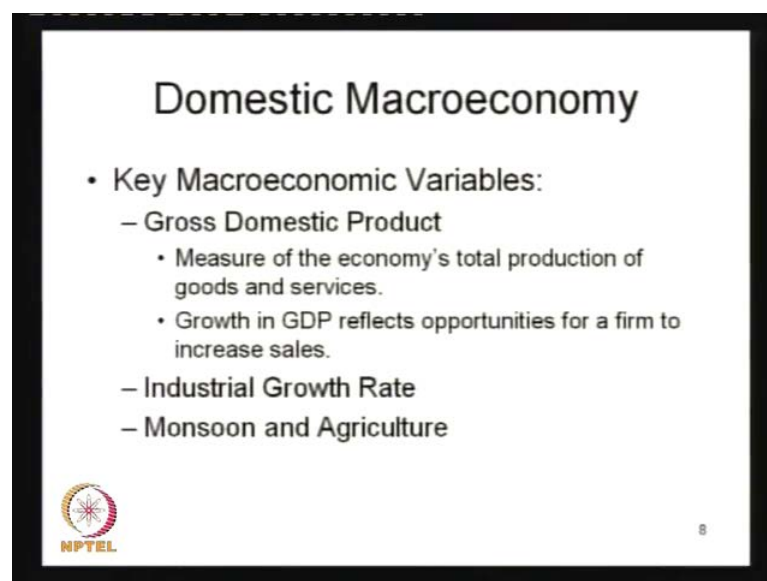
So, coming moving on to the next one, that you talk about the domestic macro economy, and in that macro economy analysis. So, what happens one has to look at how this

particular macro economy performance is going to be better? So, that one can look for better opportunities, and as an analyst we have to forecast the economy better than any other analyst has there is a, because this the information about the macroeconomic factors are available to all analysts.

It is the ability to the analyst, one of the own particular analyst to how well you can forecast by applying certain quantitative techniques or economic methods or time series analysis. Whatever techniques there could be the apply, and forecast how this particular company or for the economy is going to do in the future, and accordingly with company economy not going to do well. Then investor may be suggested analyst is may suggest the investor that to diversity in stocks, they have invested in that particular economy, and move to those economy where there is a possibility of higher growth as such.

So, that forecasting is the key thing in the as per the analysis concern. And the forecasting has to be better than the other competitors, as per the analysis concerned. Coming to the different factors of macro economy one has to look at one has to, in that case we are **we are** going to discuss in this case different factors like domestic product, interest rate, inflation all those things are going to discuss one by one. And one of the major parameter of the economy, and how the economy's rank for that matter is the gross domestic product.

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Domestic Macroeconomy

- **Key Macroeconomic Variables:**
 - **Gross Domestic Product**
 - Measure of the economy's total production of goods and services.
 - Growth in GDP reflects opportunities for a firm to increase sales.
 - **Industrial Growth Rate**
 - **Monsoon and Agriculture**

 NPTEL 8

And this measures the economy's total production of goods, and services. And of course, the GDP of a particular country is like an aggregate of the economic performance, in those country and GDP comprises of contribution from different factors production. It will comprise of agriculture, it will comprise of manufacturing sector, industrial sector; it will comprise of services sector, financial sector, and all and we will have different countries which have got GDP more contributed by services sector than to manufacture sector.

We can see, in Indian context that over the last few years or one or two decades. We can see that a services sector contribution is growing much higher than any other sector, like manufacturing agriculture sector in the total. Though the individual sector like agriculture manufacturing might be increasing on overall trend, the total **total** size of the contribution for that matter, but the proportion of the services sector is now increasing, it is **it is** higher than the other **other** sector. We can see that and so, if the growth is there in the GDP. So, it is reflect that the there is an opportunity for invest in a particular stock.

So, GDP growth is a broad indicator of how it is **it is**, GDP growth is let us say in one country it is 8 percent, another country is 4 percent. If everything is same, otherwise in that case this country is going to be attracting more investment than other country as such. So, GDP growth is a broad indicator of the economy, and every analyst every economist is always look at that particular factor like GDP, and its growth for analyzing, the economy.

And for the investment purposes, and the GDP growth is also affected by the industrial growth. Industrial growth means how this particular manufacturing sector is doing, because when you talk about the stock market - stock market is driven by the corporate performance, and when you say corporate performance. The corporate performance is nothing but the how well this particular company is a doing their producing, and may be producing goods and providing services. And these goods or service that is provided by them, is obviously, mostly that is there you can manufacturing sector.

So, define industrial how sectors, how **how** the IT sector is doing, how the power sector is doing, how the other manufacturing core sector, infrastructure sector, steel sector all those things are how they are doing overall, because those growth in that particular sector is going to drive the economy as such. Besides that obviously, we also have the agriculture, and agriculture is also affected by a living variable in case of at least Indian

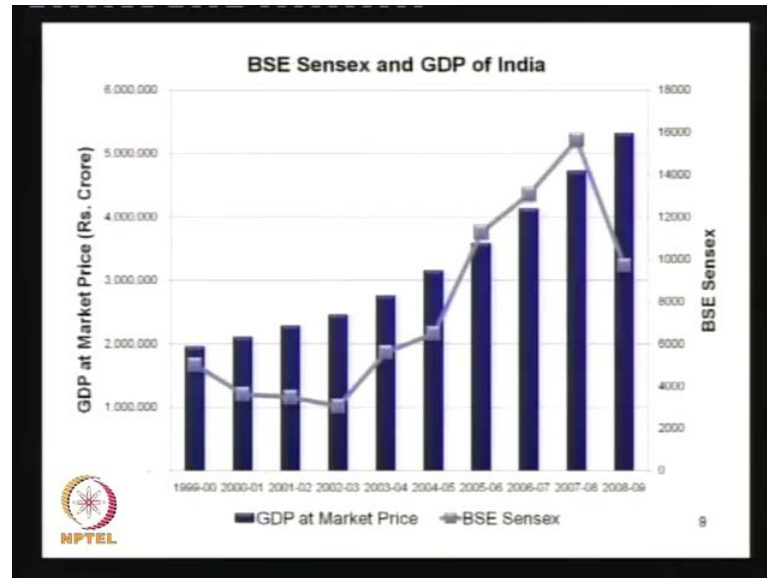
context, because as monsoon. And, because the irrigated land percentage is lower than the non irrigated land in Indian context.

So, agriculture how the agriculture is going to do, we will depend upon the how well the monsoon is going to be there. So, **so** there is a forecast of good monsoon of a particular at least in Indian context, then we can expect there is a agriculture production is going to be better as such. And such companies which are depend on agriculture further input, and that is definitely going to affect the companies agriculture is going to do that. For instance, if the sugarcane realization is going to be better, because of good monsoon or whatever for that matter, whatever facilities for that matter. Definitely sugar industries - sugar companies is going to be affected by that.

There could be a lead, and lag there that **yes**, the agriculture is doing better and the industry, that derive the inputs from this agriculture sector will be doing better may be subsequent time period. There could be a lead and lag, but the agriculture sector is going to drive also, the certain companies sector performance. Moreover, if the agriculture sector doing well, and there is a lot of production, in let us say the essential items for that matter. And that is going to do well then inflation is going to be lower, and inflation going to be lower can also lead to a better a consumer **(())** and all those things, and inflation is going to be lower also.

That indicates that the **the** company's the investors can invest in that particular sector, where inflation is going to be lower, because lower inflation is something which is economy always like to achieve. And the policy makers always focus that inflation should be very high, it should be moderate enough. And if that is affected by the agriculture sector substantially which is the case as such, and that is going to be better. So, agriculture sector is going to affect in a chain reaction that **that** does well this manufacture sector can certain sectors can do well, it also affects the inflation level in the country. And so, overall other factors are as affected. So, if the agriculture is doing well driven by a good monsoon is also going to be good indicator for the economy to invest in that country as such.

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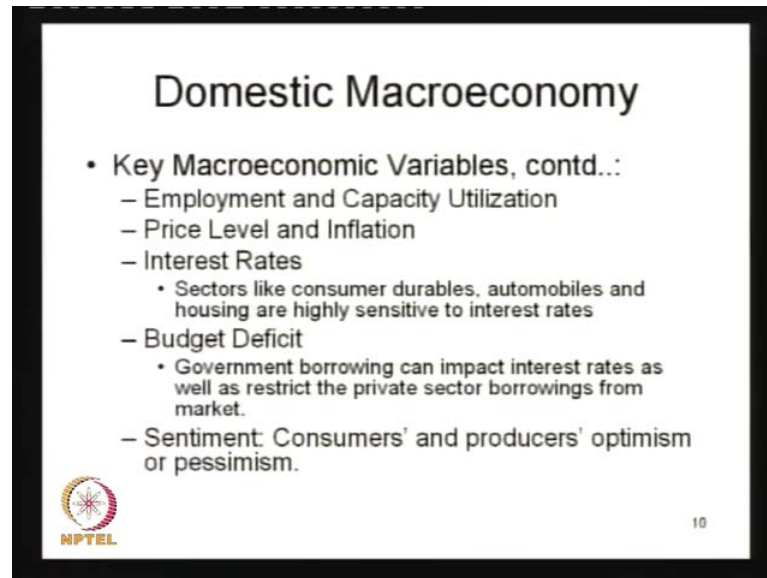
Next that we can see the graph. Here in Indian context this graph shows the GDP at market price that is the bars and from 1999, 2000 to 2008 2009. So, GDP is around 5 lakhs 25000 core for India as per 2008, 2009 is concerned. There is a steady growth one can see growth here, and there is a and this is also given provided by another graph. It is there which is their BSE sense - the sense value which was around five thousand, something five thousand plus has declined some then it has slowly and increase.

In fact, the increase much higher compare to growth in GDP, and there is a fall in the sense in 2008, 2009 which was driven by the likelihood recession. If we taken the Indian economy, and the share prices have fallen from 2007, 2008 peak to 2008 2009. and it has now increase if you **you** can forecast the if **if** you take at the sense value from two thousand eight nine to thousand nine ten. We can see there is a sense has actually increased in this time period.

So, this is an indication, how one can find out whether the GDP growth is happening before the sense has happened or sense is leading or the GDP is increase. So, if that is the case, if let us says it is proved that which also could be possibly true that the sense which is barometer of particular market. Let us say an Indian stock market, if it is going to do well, because the economy is going to do well. So, sense can be the leading indicator of what is economy. So, or somebody says a GDP is going to be better and appreciating that the share price of a particular markets, and stocks can also be higher and that will reflect

in higher sense. So, one can see here what is the relationship between the broad index factor the market factor, the market the capital market and the GDP of a particular country.

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The slide is titled "Domestic Macroeconomy" and lists several key macroeconomic variables. It includes a sub-heading "Key Macroeconomic Variables, contd...:" followed by a list of variables: Employment and Capacity Utilization, Price Level and Inflation, Interest Rates, Budget Deficit, and Sentiment. Each variable has a brief explanation or note. The slide also features the NPTEL logo in the bottom left corner and the number 10 in the bottom right corner.

Domestic Macroeconomy

- Key Macroeconomic Variables, contd...:
 - Employment and Capacity Utilization
 - Price Level and Inflation
 - Interest Rates
 - Sectors like consumer durables, automobiles and housing are highly sensitive to interest rates
 - Budget Deficit
 - Government borrowing can impact interest rates as well as restrict the private sector borrowings from market.
 - Sentiment: Consumers' and producers' optimism or pessimism.

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Then moving on to the next factors that which affect the domestic macroeconomy, which should be analyze, in case of economy analysis, the next thing that we have is employment. And capital utilization employment for that matter employment is for the labor force, and if for any reason if the an employment also can be discuss another way call unemployment rate. **Unemployment rate** is going to be higher, and that shows that there is no demand for the production in the country. That means, it could be something like this that.

Since, there is no likelihood demand from the particular products in the particular economy. So, the manufacturing facilities, and all these will be remaining idle. And the labor force will also be idle, and there will be unemployment for that matter. So, the unemployment in a particular country which is high, obviously, that is not going to be a good sign for any analyst to go for that particular market. Only this employment condition moves, if the employment rate improves or unemployment rate declines that can be indication that, **yes** these companies this particular sector or this particular economy is going to do well in better, there if is likelihood that there will be demand for

the products, and services in the economy. And that is why there is a better utilization of the labor or employment facility.

These are also employment is one of the factor of production labor is another factor of production; whereas, other factor of productions are there we have is the capital capacity utilization of the capital goods as such. So, if there is a mess in a particular company, the capacity utilization is better in that case. Obviously, why the capacity is better by the production is improving production is higher. Now, and related to relative to the previous year's production, and production is higher, because the likely demand is going to be higher, and consumption is going to be higher, that is why production is higher.

So, the in increase in the in employment rate or decrease in unemployment rate, increase in capacity utilization can indicate that the this particular economy or this particular stock or this particular industry is going to do well in better. That is one of the fix one the as an analyst, one can have a look at. Next thing that you have is the price level, and inflation. Any economy which is affected more where a high inflation as a overrated economy, where a inflation is very high.

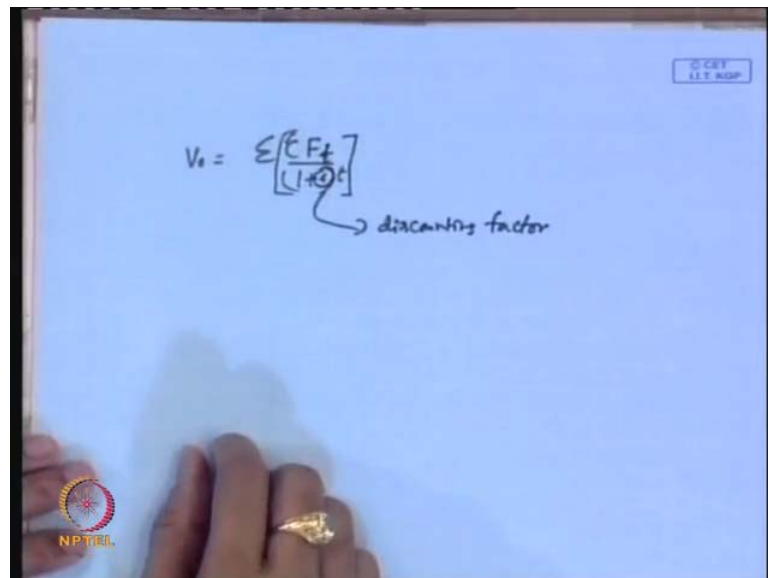
Those economies are not advisable to invest in as such. So, because inflation is something which is not usually anyway like way. You know, because this **this** indicates this price arise in the price is going to be the of course, one can explain economy to grow at the same inflation to be there to be moderate. Because inflation reflect the price raise. Obviously, we cannot expect that the price of a particular product as remain constant over a period of time, because there is always a greater demand from the labor for the this employment, emoluments, salary wages and all those things that is going to be higher.

In that case the factor of production cost, that we are going to pay for that is also going to be higher, and for that matter the inflation can also be there. So, that is one of the things which can be indicating, how the economy is going to do. And we will be discussing, more about the statistics of this particular factors like price level inflation, and the second part of this economy analysis. Next thing that we have here is the interest rates, and what happen to interest rate. If the interest rate is something, the overall the borrowing that is taking place by the companies or by the particular authorities - government authorities

which borrow to take care of their deficit or whatever the requirement. They have and if the interest is going to be higher certainly for certain sector, it may not be good as such.

Moreover for valuing the future or bringing down, the future economic performance of a particular stock like cash flow or something like. If we have to bring it to today, one of you discount it by particular rate of factor typically, what we have when we as we discuss in the earlier session or we will be discuss in subsequent sessions.

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$$V_0 = \sum \left[\frac{CF_t}{(1+i)^t} \right]$$

discounting factor

We see that any value today is nothing, but summation of let us say if it is based on the cash flow. So, this t is the time, and the summation of this thing that we have in the over a period of time, summation of this cash flow. And this i is the discounting factor to discount the future value, and bring it to present value. And the discounting factor depends upon the overall interest rate in the economy as such. So, the interest rate is going to be higher. So, discounting rate is going to be higher, in that case the value of the particular stock which is dependent on the future performance like, a let us say for example, in the cash flow in that case the value is going to be lower as such.

So, high interest rate is something which can affect the value of the stock to the lower as such. And another thing that you have certain things like, there are certain industries in the sector in the economy like automobile. Then we have consumer durable housing for

that matter, these things are driven more by the how easily the loans are available how is borrowings available, and how is **is** the interest rate as well how good is the interest rate. The interest rate is if lower there is the demand for the products in this sector is going to be higher, because the consumer can borrow at a lower interest rate, and buy this particular item.

So, these sectors were going to do well. Like let us say passenger car segment for that matter. The passenger car segment is going to do well when the interest on the **sorry** passenger loan passenger car loan is going to be lower. Then obviously, demand for that, because people have easy access to credit for this particular or buying this particular asset. The same way some other items, like consumer durables also then you have housing which are also affected by the interest rate. They are sensitive high interest rate will reduce the demand for the particular sector products as such. Then we have got another thing, that is called the budget deficit the deficit is something which is, because government has certain expenditure requirement.

But the revenue for that particular thing may not be sufficient to that. And to take care of their expenditure requirement which could be a capital expenditure requirement or revenue expenditure requirement. And which is now showing a which is not enough, taken care by the revenue. Then it will be the, whether it is a capital revenue from the recurring nature or the regular revenue like tax or any other revenue for the sale of assets by sale of stocks of the government sector, like debentures all those things capital receipts and everything. If that is not sufficient to take care of expenditure, there is a deficit that will arise.

And the deficit is actually can be financed by the borrowing by the particular country, like for instance government of india will borrow from the market to reserve bank of India. And by issuing short term instruments like treasury bill or long term instruments, like government securities dated securities can be there. And the government is going to be a more deficit, and it is also going to borrow more. And that is going to set the trend for interest and obviously, there is demand for money is more interest is going to be higher. If this money supply is not better, and is there is no much money available as such in that case, there is a interest is going to be higher.

Another thing is that the government keeps on borrowing more interest rate can be affected by that. Second thing is that it will also crowd out the corporate sector, which will also like to borrow government being a big player. If you borrow more the corporate sector, may not have that much resources left in the market to borrow as such. So, that is going to drive the interest rate as well as the ability of the private sector to borrow. They may have better loan servicing capacity, but the fact is that the most of the borrowing has been done by the government, lot of money may not be available. So, what will happen in that case, the there will be demand the, if there is a company which is requiring finances. And it was thinking of borrowing, and the borrowing is not available the company will eventually force to go for stock equity issue of equity share, before that also company can think of going for external commercial borrowing.

So, anything that is happening can have a chain reaction the government borrows more corporate sector, may not be able to borrow or corporate sector borrowing can be driven by the interest rate. That the government is borrowing at typically corporate sector, borrowing rate is going to be higher than the government borrowing rate. And the corporate is not having enough funds to borrowed in the market.

The corporate may go for alternate source of finance may be in domestic equity issue or may be going for a bonds or debentures issued. In the other country for that matter. So, that is the going to be affect, and other countries interest rate the currency rate between that countries and our country, that is also going to affect the... Now, the company's performance.

So, next thing that we have is the sentiment of the particular economy, and the consumer sentiment. And the producer sentiment, what happen there are if certain researcher certain agencies which make a survey of the consumer. In a particular sector, and they find out how do they feel about it, buying the things. If the consumers are feeling happy, the consumers happiness is much better consumer feeling happy means. They are going to purchase more, and they are going to purchase more than anticipating the good purchases, good demand from them the company can also produce better as such.

So, in that case if the consumers are feeling better, it is also a good thing for that matter. And similarly producers optimism, which is there the producers feel happy, because when they producers feel happy. When they feel that their order book has increased, let

us say one particular company is in a industrial goods sector or it is in commercial vehicle sector or is in power turbine production sector. Like we have BHEL is one company or L and T, we have a company or APP India there is an company which you have they are all heavy industry sector. And they are driven there one of the major product segment is selling of these are power turbines transformers, and all those things.

And then, there is a gestation period between the products demand on the, we are going to use a power turbine or the transformer heavy transformer for that matter. And when can be given as. So, if you I require a turbine after two years first, we will have to place the order today. So, in that case what happens the order book of this particular company, if we say that how many orders are there to be executed by this company over a period of time, can say how this particular sector is going to do as such.

And if the order book size is better in this particular sector this producers are; obviously, showing feeling going to feel happy about that. Similarly, if the input supplies are in good condition, that supply that the raw material are going to produce for that is also good condition. There assured supply, and that is also there is no uncertainty there, and those input prices also better than the earlier prices. So, all those things can lead to a producer's is they are going to do better, they are going to sell better as well as they are going to produce them at a better cost. So, that there will be pricing is going to be better, and the possibly benefits can be also given to the customer.

So, by making a survey there are certain agencies, who is do survey for this consumer shopping index is there how the producer's confidence index is there. How they have feel what is their feeling in them that, if they are going to feel well. Then, obviously that particular economy is going to be doing better in future. So, better such indices is an attractive proposition for the investor to invest in that sector or that particular economy for that matter.

If the people are pessimist that, if company is not the sector is not going to do better. Obviously, in that case that is an indication that if you have invested possibly what earns to interest from.

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**Analysing Macroeconomy:
Demand and Supply Shocks**

- Demand Shocks: an event that affects the demand for goods and services in the economy.
 - Reduction in Tax rates
 - Increase in money supply
 - Increases in government spending
- Demand shocks are characterized by aggregate output moving in the same direction as interest rates and inflation.

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That particular market for that particular industry going forward, we have got other thing that. We have here to analyze in the economy how the particular shocks that happen demand shock or supply shock.

So, one is a demand shock that is a different that affects the demand for goods, and services in the economy and demand for example, what you have here reduction the tax rate, if the tax rate in a particular country is reduced. Let us say the income tax rate for that matter the individual. Obviously, there will be a better consumer circulars to buy more, and it can lead to demand for goods and services. Let us say there is an reduction, in the indirect taxes like excise value added taxes, if those are things are going to be there like. We saw when the in the last fiscal, we have we will last two years, we saw that government has reduced certain rates and that has to stimulate the economy. So, that it can insulate to some extent the affect of recession that is happening elsewhere. We could see that, Indian economy did not suffer as any other **developing** developed economy for that matter though this growth in GDP. And everything is lower than the previous year's. Firstly, if we will see that to some to lot **lot** extent to very large extent the Indian economy could be insulated from that, because the government could take the right steps as such, and **and** that could be done.

See one can see that 1919, we had the ninety seven, ninety eight. We had the south east Asian financial crisis. So, they are the companies suffered a lot, but Indian economy was

not suffering like that though the company Indian economy still in liberalization. The initial stage of liberation that was happening then.

Similarly, now we can see that Indian economy is not done better than other economy, because that the government intervention. **Government intervention** can be there in case of reduction in the tax that indirect tax or direct tax government has spend more money government can go for more spending welfare sector, which will in like. We have got the real employment guarantee scheme, where the minimum wages or minimum which are given by the for a particular work. The beneficial is going to the get the minimum wages for a particular number days in a particular year.

So, that enhances their purchasing power, and the purchasing power is enhances their ability to buy the goods will be better. And if that is better the industry is going to do better. So, demand for the particular sector products is also going to be better. So, these are the things which you have got demand shock, and the demand shocks usually are characterized by the aggregate output moving in the same direction as interest rates.

So, the interest rate is going to be better than the borrowing capacity of a particular company is going to be better. And the borrowing is better than the products, the capital goods can be purchase in a better manner. It can be invested then, and the industry will do better. And like that, if there is a tie of course, ultimately it can lead to certain times you may lead to inflation, and then the there can be a decline in the economy also. So, demand shocks may do the things better for the economy, but can also lead to a subsequently that he has the demand for the particular sector. And all these things, may and decline, because of there is a inflation which is like a chain reaction can also happened.

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**Analysing Macroeconomy:
Demand and Supply Shocks**

- **Supply Shocks: an event that influences production capacity and costs**
 - Natural calamity
 - Changes in educational level of workforce
 - Changes in the wage rates
 - Changes in the price of imported oil
- **Supply shocks are usually characterized by aggregate output moving in the opposite direction of inflation and interest rates.**
- ***Analysts need to identify industries based on the demand and supply conditions.***

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And coming to the next thing that you have the supply shock: Supply shock is that shock that what happens the production capacity, and the cost are adversely affected. That means, costs are going to be higher, and production capacity is going to be lower, that could be the influencing there. So, let us see, there are a natural calamity drought famine flood, and all those things that are going to have an adverse effect on the production, and also on the cost as such.

Then the overall wage rates in the economy is affected adversely that also can lead to lower production, lower output, lower demand, and all those things. And see another important thing, that we have here is the price of the imported oil. If the economy is heavily dependent on the oil, and the oil is not produced or explored from the domestic sector, rather it is imported from the foreign for the other economies. Like India depends the majority extend of the oil demand from the from the import.

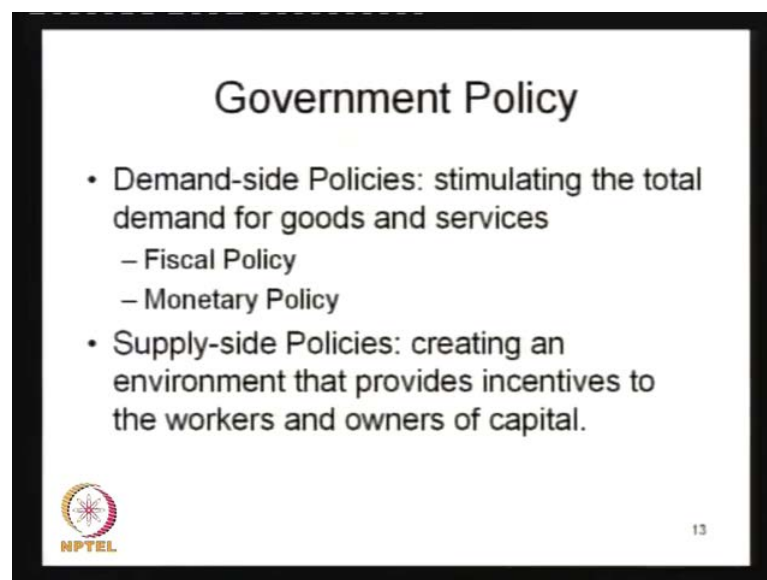
And in that case that is a price is going to be higher, that is going to have a cascading affect on the all these performance of the all these sector. For instance, if the oil price goes up, the transport sector is going to charge more. They are going to be affected, and the transport sector is going to charge higher than the transportation cost of a particular product is going to be higher. And that is ultimately going to be passed to the consumer, and in that case the price is going to be higher. And that is demand for the particular product is particular product going to be lower.

And it will be affecting all the products and services, whether directly or indirectly for that matter. And usually, it is seen that if the inflation in the this is going to be higher interest rate is going to be higher. The supply is going to be lower, earlier in the demands of we saw that inflation is going to be higher could be an indication. That the company in the economy is going to be better interest rate is going to be lower inflation is going to be lower economy is going to be better as such.

So, now there can be some of the industries which may go as the demand, and supply condition is moving or there may be some industry which may be just be contrarian as such. So, there may be condition that overall the economy is doing not better, but this particular sector may be doing better this industry or the stock (()), contrarian stocks as such that is also there. So, analyst has to find out which industries, which are going to be doing better are and demand, and supply condition.


For instance the interest rates are going to be lower. So, it is an indication for analyst to go for those companies like. We discussed in the previous slides, that housing sector automobile sector or passenger car sector all those industries is going to be doing better as such.

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Government Policy

- Demand-side Policies: stimulating the total demand for goods and services
 - Fiscal Policy
 - Monetary Policy
- Supply-side Policies: creating an environment that provides incentives to the workers and owners of capital.

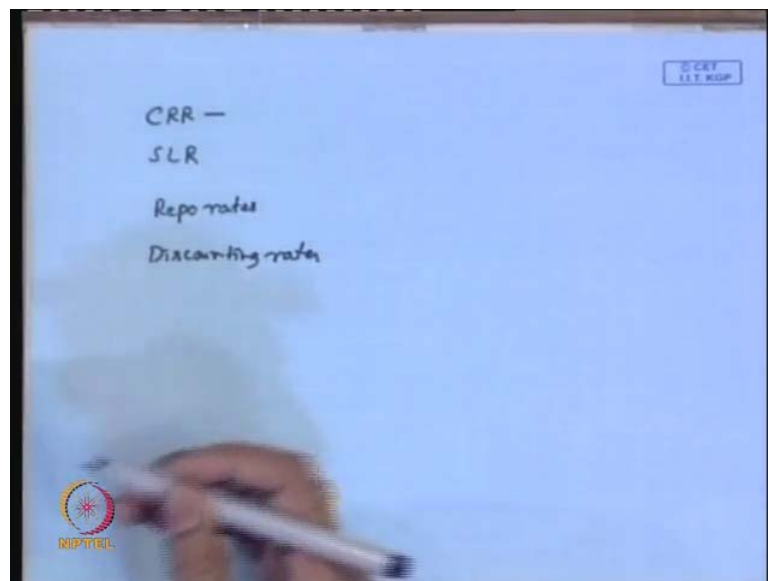
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So, it is better that one can invest in those particular sectors moving further, we have got the other thing that you have. Here is the government policy intervene that happens. So,

government's policies typically on the either, on the demand side policy or on the supply side policy, when is a demand side policy it is going to stimulate the demand for the goods. And services like, you have what fiscal policy as we have discussed earlier also the tax rate is a part of the fiscal policy of the government. The tax rate can be moderated, can be increased or can be decreased and by decreasing the tax rate the demand for the particular products can are going to be demand condition is going to be improved.

So, government may intervene with a particular fiscal policy depending on the conditions of economy, and making a going **going** for a proper balanced economy for that matter. Then in the monetary policy, which talks about the which is obviously, going affect the over interest rate in the economy for that matter. And monetary policies there are instruments in the economy like, that is given by the particular regulator like reserve bank of India in Indian context.

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Reserve bank of India periodically intervenes in the market by certain instruments called cash reserve ratio, then one has called something called statutory liquidity ratio. Then we have got rates like repo rates, then you have some instruments like discounting rates. So, what happens as per the cash reserve ratio, what happens is a in the cash reserve ratio the

banks, and are supposed to be required to maintain, a minimum cash of certain like 5 to 75 certain cash reserve ratio that is given by the particular regulator in the particular country.

They have going to maintain that particular cash, with the reserve bank or the designated banks for that matter with themselves. They are going to keep their cash or liquidity thing. So the for instance, if the cash reserve ratio is going to be higher. That means, the ability to lend money by the banker is going to be higher. So, the reserve bank of India feels that money supply is higher in the economy, and the money supply is higher also going to affect the inflation **inflation** is going to be higher. If that is the feeling that regulators, and the government feel as such the government through reserve bank of India or reserve bank of India on its own can the market by increasing the cash reserve ratio.

So, that the supply for money supply of this particular economy is reduced. And that can possible lead to certain reduction in the inflation all. And similarly, we have got something called statutory liquid ratio. So, statutory liquid ratio is something which is the mandate of the reserve bank of India to invest in a particular type of securities, which are liquid; so, that maintains the liquidity particular bank. So, that the because the investors have deposited something in the bank, they can withdrawal at any point of time. Of course, that may be certain terms, and conditions for that whatever there is demand for the money is going to be there from the bank itself.

See in that case, if we maintain that it will be the this particular securities can be realize into cash. Obviously, without decreasing the SLR for that matter, another thing by having indicated a particular SLR which is also, and those judging their securities like government securities. So, there is an incentive for the there is a requirement that the banks will be invest in those securities. And those securities will be obviously, issued by mostly by the government of India. So, government of borrowing is also facilitated at there, and there is also market for the government's borrowing schemes for that matter. Then next thing, that we have is a repo rates. **Repo rate** is something that the RBI indicates, and repo rate something when a particular investor can invest sale the security that the here the investor holds, the institution hold. And there is a condition, that this particular instrument is going to purchase back by the investor in future period.

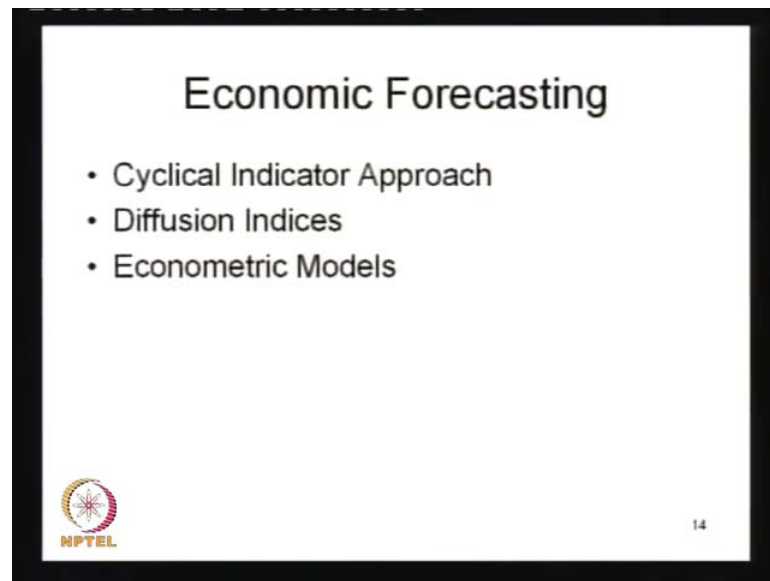
So, that is and that rate which is there in the is called repo rate as a repurchase rate. And the repurchase rate is indicated by the reserve bank of India, and in fact this repo rate is an indicator how the interest rate going to be, let us say repo rate decline the repo rate by the government of by the reserve bank of India, indicates that possibly the interest rate is higher or there is a requirement interest rate should be lower. As the interest is lower as you are discuss certain sectors, and overall all these sectors are affected directly or indirectly by the movement in the interest rate.

And, if the interest rate is lower perceive will be the demand for the particular product in a particular sector which affected by the interest rate more, and as you going to be higher for that matter. Similarly, we have got discounting this is also another indicator of interest rate, discount rates is something where the commercial banks can discount their bills of exchange or rediscount the bills of exchange with the reserve bank of India, and get the finances. So, these are all indicating indicator rates, as such and which is indicator that the interest rates likely or should be moving in future in the country as such.

Then coming to the supply side policies, **supply side policies** is that the government has to create an environment or good incentive. So, that the for the workers, and so that there is a good utilization of factors of production. So, owners of capital are likely to use their capital better, where you going to use their capital products better. They are going to have better capital utilization, workers are going to have a better wages or at least their unemployment rate is going to be lower. So, the government creates such incentives which will facilitate better supply of the particular goods, and products, **and goods products**, and services this is the government can intervene as such.


And government can look at providing incentives subsidies tax concessions, all those things can be there as a supply side booster from the economy, which we have **we have** seen in Indian context that has happened. In the last two years to withhold to reduce the effect of recession, that is happening in elsewhere as such.

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Economic Forecasting

- Cyclical Indicator Approach
- Diffusion Indices
- Econometric Models

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Moving on further, there are certain economic forecasting techniques. And what happens to economic forecasting techniques, we have got certain things like cyclical indicator approach. Then we have the diffusion indices, then we have got something called econometric models. These are the three ways, one can forecast how the economy is going to behave in future.

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Cyclical Indicator Approach

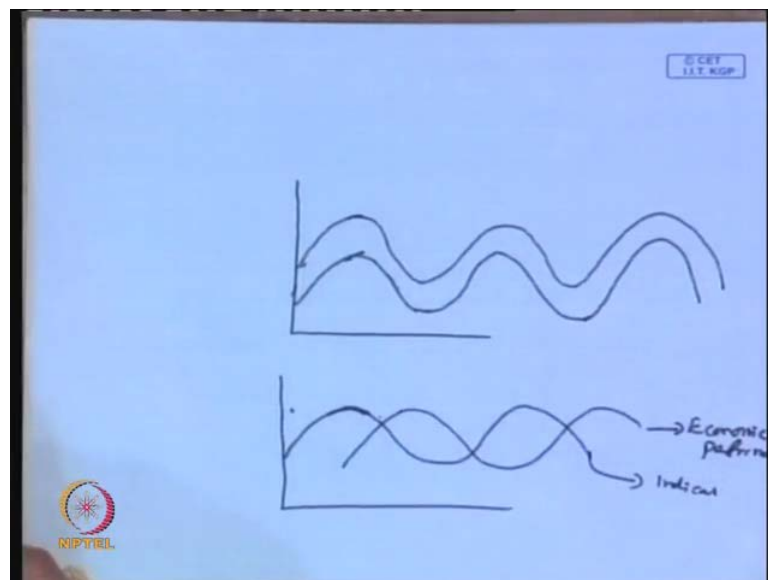
- Leading Indicators
 - economic series that usually reach peaks or troughs before corresponding peaks or troughs in aggregate economy activity
- List of Leading Indicators:
 - Average weekly hours, manufacturing
 - Average weekly initial claims for unemployment insurance
 - Manufacturers' new orders, consumer goods and materials
 - Vendor performance, slower deliveries diffusion index
 - Manufacturers' new orders, nondefense capital goods
 - Building permits, new private housing units
 - Stock prices, 500 common stocks
 - Money supply, M2
 - Interest rate spread, 10-year Treasury bonds less Federal funds (%)
 - Index of consumer expectations

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And cyclical indicator approach broadly talks about that how cyclical is that, and there are certain things which is going to happen today, which may lead something may happen in tomorrow. And cyclical indicators can be of different types, like we have got leading indicator, then you have got co-incidence indicator, then you have got lagging indicator.

When you say leading indicators, these are the indicators which will have certain peaks or troughs. And before the corresponding peaks, and troughs in aggregate economic activity. That means, if there is a upward movement.

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Let us say we have a cycle, that there is a peak going to happen, and there is a trough like that. These are the typically business cycle, we have got a peak then the falls. Then you have this is boom period, then we have a recession here. Now, what happens if it is a leading indicator. That means, the it is going to if this is going to be a leading indicator, that means, if there is a peak here. And this is going to happen before the peak happens in the other indicator, if that is affecting something like the economy for that matter.

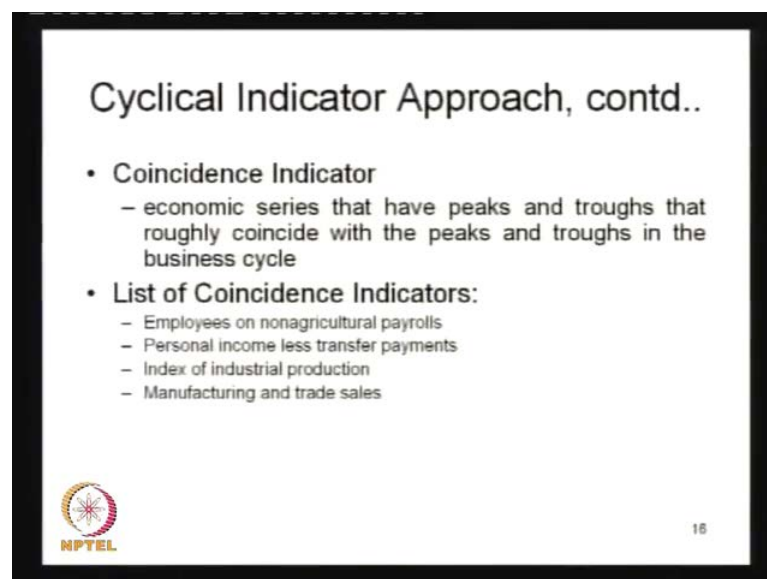
For instance, if the average weekly hours, and manufacturing is one of the these are these are certain factors within organization called conference board. In a western market in US, you have conference board which has given certain factors of leading indicators, and overall cyclic indicators. So, as per that for instance, if you have got something called

average weekly hours in manufacturing, how much hours are going to spend as such. And average weekly initial claims of unemployed insurance manufacturers, new orders consumer goods and markets.

Then you have vendor performance slower deliveries diffusion index, then you have got for manufacture new orders for non defense capital goods. Then you have got building formats, then you have got new private housing units. What happens? If they will for instance, if the order book is better now, that means economy has a particular economy is going to do better little later. So, this is a leading indicator, this if the manufacturing labor hours is going to be better. Obviously, in that case this is going to lead to indicate the years, there is a more production more labors are utilized. And that particular sector is going to doing better as such.


So, these are the leading indicators money supply interest rates spread between government securities, and the treasury bonds. Then index of consumer expectation, the consumer are expecting better now. That means, the economy is going to be better tomorrow, as such they are the indicators which sees lead that, he has the something better is going to happen tomorrow or it can be something. If something bad is happening in this, that means something bad is going to be happen in the economy (()), there is a fall in the particular indicator. That means, the overall indicator that is going to fall subsequently as such.

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Cyclical Indicator Approach, contd..

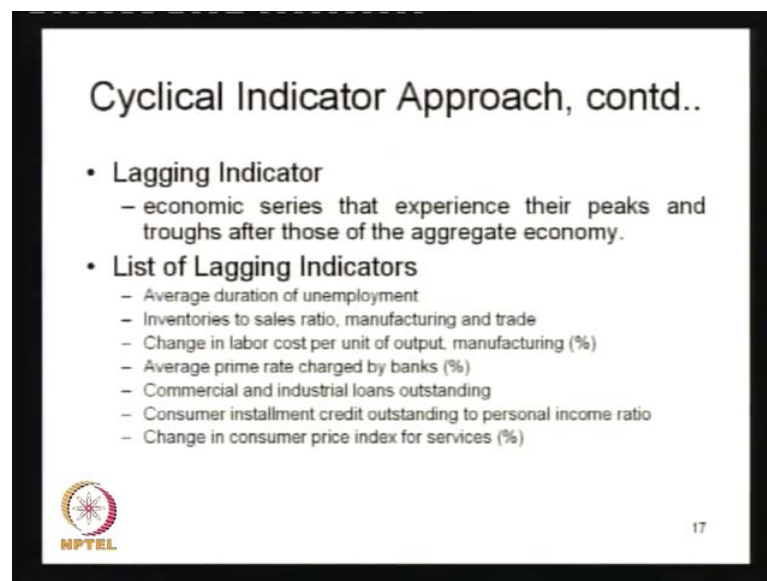
- **Coincidence Indicator**
 - economic series that have peaks and troughs that roughly coincide with the peaks and troughs in the business cycle
- **List of Coincidence Indicators:**
 - Employees on nonagricultural payrolls
 - Personal income less transfer payments
 - Index of industrial production
 - Manufacturing and trade sales

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Then we have got the next type of indicators called coincidence indicator. So, coincidence indicator something, the peaks in this indicator is accompanied by the peaks in the broad sector or broad economy as such. So, this is peak in this indicator, this is the indicator, this is the economy performance. Then there is a peak here, there is also peak here. So, there is a coincidence they are moving parallel as such.


For **for** example, you have got employees on nonagricultural payrolls, if they are going to get better salary. So, there is going to immediate demand for the products now. Then itself, if the personal income is better the consumer circulars is better; they are going to then it is going to lead to a better things in the economy, then only. Like that, we have got index of industrial production when it is derived out of the production that has happened, and better production means better GDP. And all that is immediately that is happening, because production today cannot be affecting GDP tomorrow as such.

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Cyclical Indicator Approach, contd..

- **Lagging Indicator**
 - economic series that experience their peaks and troughs after those of the aggregate economy.
- **List of Lagging Indicators**
 - Average duration of unemployment
 - Inventories to sales ratio, manufacturing and trade
 - Change in labor cost per unit of output, manufacturing (%)
 - Average prime rate charged by banks (%)
 - Commercial and industrial loans outstanding
 - Consumer installment credit outstanding to personal income ratio
 - Change in consumer price index for services (%)

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So, because production itself is a combined from different sectors GDP is found out. Then, we have got certain indicators called lagging indicator. In this case, we are talking about that is if there is a decrease, there is a movement - upward movement. In the indicator like this let us say, the economy will be moving in some other way like. There will be an could be a of this economy, this is the indicator, and this is the economic

performance of a particular country. Then if there is a peak here, which will be leading to a peak in this economy in the future as such.

If the indicator is a fall, which is indicating that there is going to be fall in the economic performance as such. So, **so** that is experience their peaks, and troughs after those of aggregate economy have happened. So, if the economy has done over's, then this particular indicator is going to be overt as such. And, so like unemployment is economy is not done well. So, unemployment is going to be over's there, and inventories to sales ratio then manufacturing, and trade labor cost per unit of output, manufacturing average prime rate charge by the banks commercial industrial loans or all these things.

In fact, this particular agencies has got a weight ages for different indicators, which then they composite index is found out. If not that all these are that, you talked about is they are having equal weight ages. So, in this session after this, we have talked about the indicators. We have talked about the major economic factor that affects the economy, as such. And how can the analyst look at how the particular economy is going to doing with based on different sectors, in the in the subsequent session. We are going to talk about more about, more other factors of economic indicators. We are also going to exhibit certain charts graphs. We can talk about this indicate that, we have discussed in this session, **thank you**.