Infrastructure Finance
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Lecture - 3
Basics of Financial Management - Part I

Hi, welcome back to our lecture three on Infrastructure Finance, what we are going to do in this lecture is to understand some of the basics of financial management. And basically I am going really look at it covering this topic of financial management over many parts, I understand this is not a course on financial management. But at the same time we are looking that a course on infrastructure finance, and for us to really be able to understand and appreciate the implications of various aspects of finance on infrastructure projects.

We will have to understand some of the basics of financial management, and that is the reason why we will have to look at some of this topics and concepts before we actually move on to handle, what is the core of this course, which is infrastructure finance. But, before we actually get into what we are planned to discuss for this session, I think we have looked at two tough questions in the previous lecture. So, let us try and discuss those questions first. So, the first thought question was what should be the role of government finance in infrastructure development, when private finances available.

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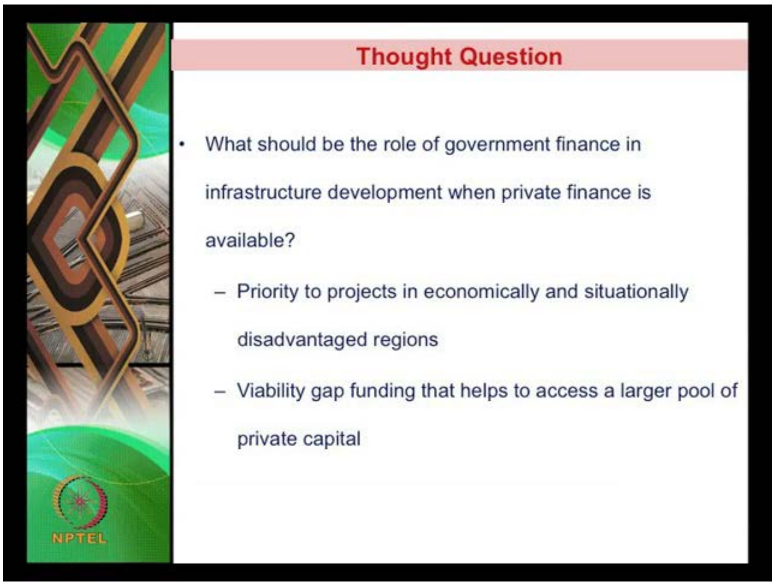

Remember, we looked at two's board sources of finance; one is public sector finances and private sector finance. And we have also seen that, over the last 3, 5 year plans the contribution of private sector finance is expected to increase, and though the overall contribution at a infrastructure is also expected to increase, the proportion of private sector is expected to increase considerably in the overall contribution. Now, we also realize that public sector finance is not available infinitely; there are restriction in terms of how much public sector can actually fund infrastructure projects, because of various reasons like physical deficit to be under control and so on.

So, the question here is, when we have both private sector and public sector capital available, what kind of focus should be given to public sector capital, first is public sector should actually be given priority. When we look at projects that are in economically and situation ally disadvantaged regions, of there are several regions that are not easily accessible, that are in what is called as in very remote corners of the country.

So, projects in those countries may not be commercially viable because of various reasons. It could be because of the fact that the area is very specially populated and users of this infrastructure projects may not be very large, it could also because of very tough terrain and navigating this difficult train, can actually be very costly. But, it is also very important that, these remote regions are connected to the mainland.

And they are connected through economic development, and it is very difficult to get private sector finance to investment in projects in such regions. So, therefore, when we really look at prioritizing public sector finance, public sector finance which be channelized to project's in economically and situation ally disadvantaged regions. The second priority for public sector projects could be in terms of providing, what is called as viability gap funding.

Now, what is this viability gap funding, when you want to attract private sector in infrastructure projects, there are some projects which if is entirely funded by the private sector, may not actually be financially viable. So, the private sector might not be in a position to get adequate financial returns, if it is completely founded by the private sector. Now, we all know that for private sector to make investment in infrastructure projects, they need to get adequate financial returns.

If the returns are going to be very difficult to come by or if they do not meet the benchmarks that are set by the private sector, then it is unlikely that any investment will happen. So, to ensure that there is private sector investment, in those projects that are not viable, if it is completely funded by the private sector the government can or in many instances it provides, what is called as viability gap funding. A major difference between public sector and private sector capital is the cost of capital, the private sector cost of capital is higher as compared to the public sector cost of capital.

So, your project if it point of entirely by the private sector, as to generate adequate returns to meet the cost of private capital, on the other hand if it is founded partly by public sector capital which is not, so expensive as compared to private sector capital. Then the returns need not be as high, as what it would need to be if it is funded entirely by private sector capital. So, this is a viability gap founding to ensure that the private sector returns or met, and this funding helps to bridge the gap in returns that would have otherwise, come up if is funded entirely by private sector.

In many cases, the viability gap funding is to the extent of 20 percent of the project cost. So, 20 percent of public sector funding leads to an investment of 80 percent of private capital, whenever there is a need this 20 percent can be increased by another 20 percent, by contribution by the state government. And therefore, 40 percent of government funding will help to attract 60 percent of private sector capital. Now, we have to remember that without that 20 percent or 40 percent viability gap funding, the entire project would not have been financed by the private sector. So, another role of public sector finance into day’s context is, to channelize private sector capital infrastructure by leveraging small amount of public sector capital.

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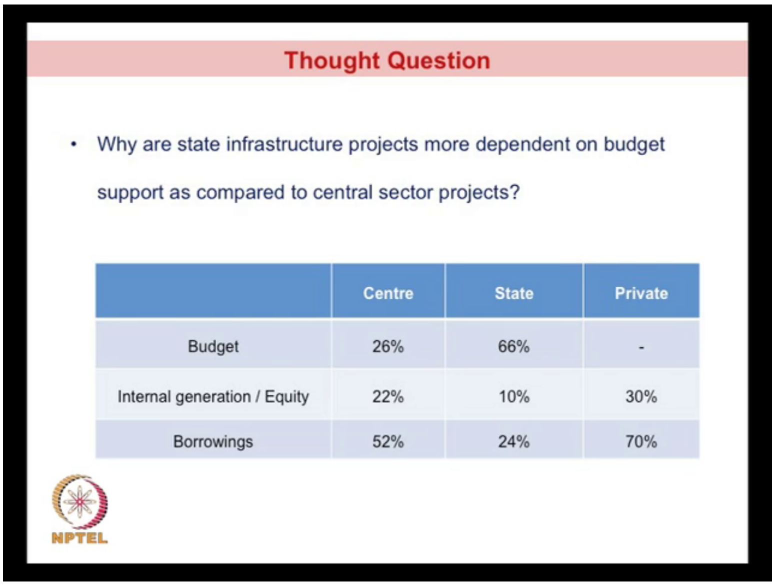

Now, let us go to the second thought question the second thought question that, it pose was why are state infrastructure projects more dependent on budget support as compared to central sector projects. We have seen that, broadly in terms of financing projects can be classified into three categories, centre projects, state projects and private sector projects. And the way in which these are being financed is also given in the table for example, the centre projects 26 percent of the cost is metro the budgetary outlays, the remaining 20 percent in terms of internal generation or through external equity.

And 52 percent is in terms of borrowings, but if we look at this state project 66 percent of the project cost is metro budgetary outlays, and 10 percent by internal generation or equity and 24 percent in terms of borrowings. So, if you look at the central projects and the state projects we find, a substantial difference in terms of the amount of investment from budgetary outlays, why is this what could be the reason.

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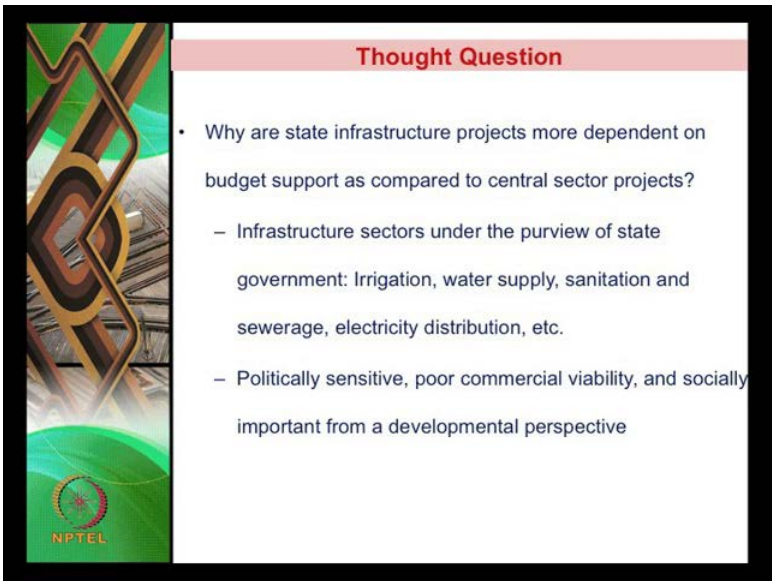

Before we actually look at the reasons let us also understand, the kind of projects that we actually see in the state sector, what are the infrastructure projects that come under the purview of state government. Normally this would include projects such as, irrigation, water supply, sanitation, sewerage, electricity distribution and so on. Now, what are the nature of this projects, if you look at the nature of this projects this projects are very politically sensitive, they do not have adequate commercial viability particularly in the Indian context.

For example, if we looked at water supply today in the Indian context there is become very difficult to actually price water to recover the cost. And more importantly, all of this are considered to be socially important from a developmental prospector, water supply sanitation sewerage access to electricity all of them contributes significantly to economic development. And access to this product and services should be widely available across all segments of the society.

So, when you look at projects such as this many of them may not be commercially viable to recover the returns by the private sector and therefore, they are all finance substantially by budgetary outlets. So, they will have to remember that there is a very tight linkage between, the sources of financing and characteristics of the projects, before we actually try and get in to details of how do we actually financing infrastructure projects. We should also consider the characteristics of this projects, the context have to be which this projects operate. And the important of this project to socio economic development because this factors can play a very important role in how this projects are going to be financed. Now, let us move to what we are supposed to cover in this lecture, which is to understand the basics of financial management.

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Before we actually get into the basics of financial management, we also have to understand. Firstly, what are the different forms of business organizations that we see today.

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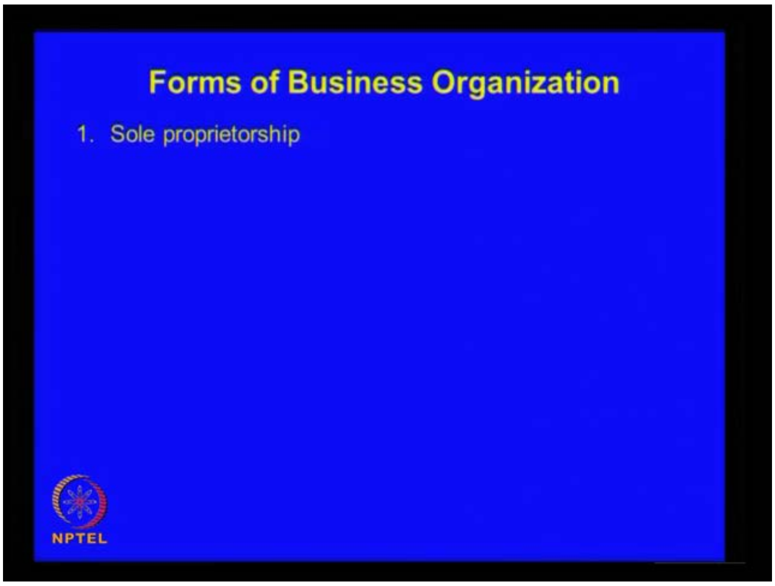

The first is what is called as your sole proprietorship, in a sole proprietorship there is what is called as single owner, the owner is the business, the business is not very distinct from owner. If we royally look at examples of sole proprietorship business, let us say the street corner kirana shop, this could be mostly on our sole proprietorship basis. The next form of business organization that we come across is called as your partnership, in a partnership firm of business organization there are more than one owners.

Like we have in the case of sole proprietorship, where the business has or the owners business has unlimited liability, in many forms of partnership you also have what is called as un liability, unlimited liability clause. There are different variants of partnership structure, which gives limited liability to the partners, but by enlarge we really look at it a partnership firm business organization, has what is called as a unlimited liability. What could be the common examples of partnership firm of business organization, many legal firms charted accounting firms, they all structure as a partnership basis.

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The third, and the communist form of business in the organization is what is called as a corporation, how is corporation different from the other forms of business organization that we talked about just now. What is a corporation, corporation is an entity that legally functions separately from the owners, unlike the proprietorship form of business here the owners and the business are separate. In fact, there is a very nice definition given by justice john Marshall on, a corporate form business organization.

He states that corporation is an artificial being invisible, intangible and existing only in the eyes of the law. So, unlike human beings a corporation does not have a physical entity, but at the same time it is considered as distinct entity in the eyes of the law, like individuals corporations can sue others. It can also sued, for any wrong doings it can purchase property, it can sell property it can own property.

So, like most of the other action done by individuals in terms of property as it ownership corporations can do the as well, and if there is any wrong doing by the offices of corporation, they can be subject to criminal punishment under the existing lows of the land.

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Why do we see a corporation is a most common forms of business organization, remember I want to stress the fact that we are talking about business organizations, there are other forms of organizations that we need to be cognizant of. For example, when we really look at non business organizations, it could be an educational institution, it could be a voluntary organization, it could be a non-governmental organization, it could be charitable organization and so on. So, they are commonly structured as a society, they are structured as a trust and so on.

But, we are going to mainly look at a business organization and when we look at a business organization, corporation is the most common form of business organization. Why is the most common firm because there are several advantages that come with the corporate form of business organization, it is nearness to say that there are advantages with the proprietorship and partnership firms organization business as well. But, when we really looking that the needs of the business, the corporate form is most suitable for the following reasons.

Reason number one, limited liability the investors liability is confined to the amount of investment in the company. So, the owner’s personal wealth is not affected if the firm experience as a loss, if the form has to be shut down for various reasons, then the investors will only lose that amount that he is invested in the company. So, the liability on the owners is limited, in the case of a corporate form of organization, let us say for example, if there are lenders who have given money to the business.

And if the business could not repay the lenders, then the lenders do not have access to the personal wealth of the shareholders or the owners of the business. So, this is a very important advantage that the corporate form of organization offers to the owners of the corporation. Reason number two, death of individual shareholders does not affect the company because the company is seen as a going concern, a shareholding ownership can be transferred from one person to the other, in much a simpler in much a easier fashion as compared to proprietorship form of business.

So, death of a owner or a couple of owners does not really affect the business in a significant way, reason number three is ease of rising capital. Remember, a growing corporation needs a lot of investment, and a corporate form of structure provides facilitates, to raise large sums of capital which my might not be possible to raise, either as a proprietorship or as a partnership. When you look at infrastructure projects, infrastructure projects required large amounts of capital.

And there are limitations in terms of how much we can actually raise in a partnership or a proprietorship form of organization structure. So, this three are some of the main advantages that we see in a corporate form of organization.

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Now, it is also really understand how is a corporation governed, like we have a government for the state we all, so have a very typical govern structure for a corporation. At the top level what we have is the owners, the owners who are also referred to as shareholders of the corporation. So, they direct and dictate the policies of the corporation, the owners determined what should be the corporation doing, what business should it actually in, how should be the business be conducted and so on and so forth.

Sometimes, the owners manage the business operations directly, but in many instances owners appoint a dedicated team to look at are managed the affairs of the corporation. At the first level the owners alike what is called as a board of directors to govern the corporation, the board of directors can constitute of owners, as well as non owners of business. But, the board of directors is constituted by the owners, and the board of directors is responsible for the governance of corporation.

But, the board of directors do not directly govern the operations of the firm, the board of directors in turn what do they is they select the offices of the corporation. The offices of the corporation could be chief executive officer, the president etcetera, who in turn attend to the day-to-day operations of the firm. So, in the sense what we have is a 3 tier structure, we have the owners who elect the board of directors, and the board of directors in turn elect the officers and the management of the company, to look after the day-to-day operations.

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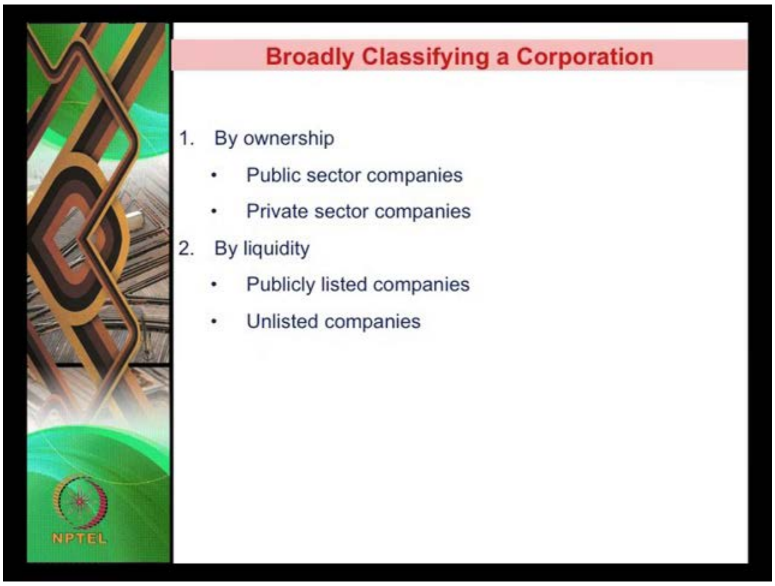

Let us also try and understand what are the different types of corporations, we can really look at it from many angles, but I am going to look at it from two angles that is very relevant for what we are look at in this course. At the first level, corporations can be classified by the type of ownership, when we look at the type of ownership, they can be classified into two categories. One is public sector companies, and second is private sector companies.

If companies are owned by government, then they are called as public sector companies. Remember, the government is a form of organization in itself, but then government also forms companies to deliver several products and services, so companies which are owned by the government, they are called as public sector companies. One example of a public sector company in India is BSNL, so BSNL is a public sector company which provides, telecommunication services.

Companies that are privately owned, they come under private sector companies for example, if we look at bharathi airtel, bharathi airtel which again provides telecommunication services is a private sector company. So, one way of classifying companies is by way of ownership, a public sector company and a private sector company. A second we have classifying the companies is by way of what is known as liquidity, under this company can be classified into two categories publicly listed companies and unlisted companies or private companies.

So, when we talk about publicly listed companies the shares of this are listed in recognized stock exchange. And therefore, it provides liquidity to the owners of the business, if existing owners want to sell their ownership, they can sell the shareholding in a stock exchange, to an another investor who wants to make in a investment in the company. In the case of unlisted company, this liquidity to owners is not, so easy because we do not really have a market place where the buyer and the seller, can buy and trade in a shares.

So, we can actually have a several examples of a public listed company, national thermal power corporation which is one the largest power generator, it is listed in the stock exchange. So, it can be called as public listed company, on the other hand if we look at Bangalore international airport limited, which is a company formed to manage and operate Bangalore international airport it is not listed in the stock exchange. So, therefore, it is an example of an unlisted or a private company.

So, if we look at several companies that provide infrastructure products and services, they can be classified under this four categories.

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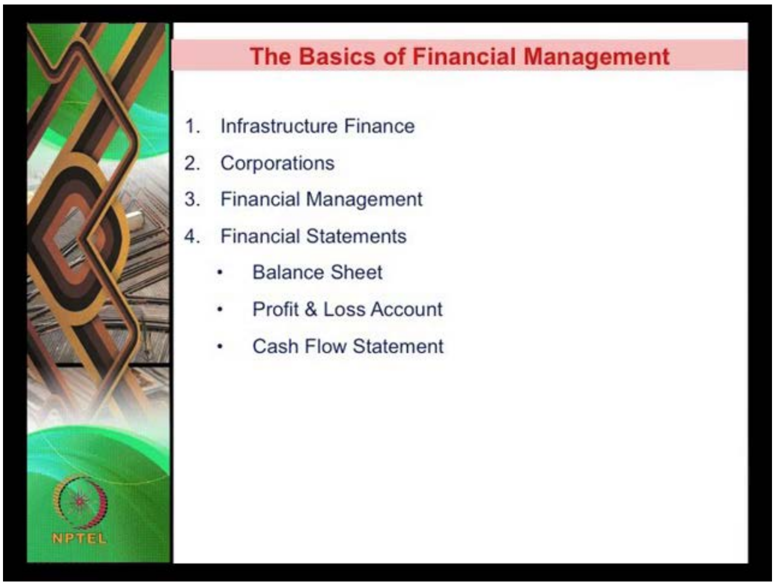

Now, let us look at what we called as basic financial management why do we have to really look at financial management, I have explained it briefly at the beginning of this lecture. Let me talked about it briefly once again, the very broad level the subject of this course is infrastructure finance, and there are several ways in which you look at infrastructure projects. But, has we have seen a very common form of a business organization is a corporation form.

So, therefore, when you are really looking at infrastructure finance as a topic, we are going to really look at infrastructure projects that are structured as a corporation infrastructure that actually operate in a company format. So, we are going to look at how do we actually finance infrastructure projects, in a corporation or a company format. So, therefore, we talked little bit about the corporations because we are going to look at a company that are operating in a corporation format.

So, we need to understand some of the basic advantages, and the features of a corporate form of business organization. And the courses all about financing infrastructure projects, before we talk about finance infrastructure projects, we also have to look at very broad elements of management which cuts across, across any sector. Once we are able to appreciate the basic elements of financial management, we will try and see how this apply in the case of infrastructure.

And therefore, the next few lectures is going to be terms of understanding some of this basics of financial management. Ones we are more comfortable in understanding terminology, in understanding the rational of two, why we do some things we actually get to applying in these concepts to the context of infrastructure. Now, what do we mean by actually financial management, when we mean by the financial management corporations normally look at making several investment decisions, and financing decisions.

So, fundamentally making investment and financing decisions comes under what is called as financial management, how do the company decide which projects to invest in that is one side of the coin. The second side of the coin is, how do they raise the capital to fund this projects, so these are two questions that a broadly come under the topic of financial management. But, before even look at financial management, we will have to understand something that is even more basic, which is to understand the financial statement of a company.

A financial statement is an indicator of a financial position of the firm or a corporation. So, the information connect, the information is available in the financial statements form a very important input in financial management decision making, so therefore, we will have to first understand financial statement, and the elements at going to the financial statements, which will help us to in turn to understand financial management. And understanding financial management will help us to apply this, in the context of infrastructure.

So, first understanding the basics of financial management would mean, also trying to understand the basics of financial statements. Many of you would come from engineering background and you may probably not have had exposed to some of this financial concept. So, I am going to cover it up in a very brief fashion, this is not a course on financial management, so therefore, the discussion on many of this going to fairly brief, just sufficient to help you to understand the terminologies and it is significance as we going to the later part of this course.

When we look at financial statements, there are broadly three types of financial statements, have the balance sheet, and then we have the profit and loss account, and then finally, we have what is called as your cash flow statement. Let us look at understanding, what do we mean or what do we actually find in each of the financial statements separately, first let us take up the balance sheet. While doing, so I am going to actually take an example of a company, while discussing many of these elements of the balance sheet. And since it is a course on infrastructure, let us take an example of an infrastructure company, and look at some of the elements that we see in a typical balance sheet. And a company that I am going to take is national thermal power corporation.

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If you want know little bit about financial thermal power corporation, here are the details it is India's largest power generation company, and it is owned by the government of India. So, in essence it is a public sector company, the company was set up in 1975 with the objective of accelerating power development, in India. Today NTPC one of the largest organizations, it is the largest power generated in India, but it is also one of the large organization globally.

For example, if you look at the Forbes global ranking it is ranked 337 out of the 2000 corporations that figure in this fourth-list. In December 2012 it had a generating capacity of about 3900 mega watts of electricity and it employed about 26000 people. So, it is a fairly large corporation, it employees substantial number of employees it has large number of generating capacity, under various power stations distributed throughout India. Now, let us look at the balance sheet of NTPC.

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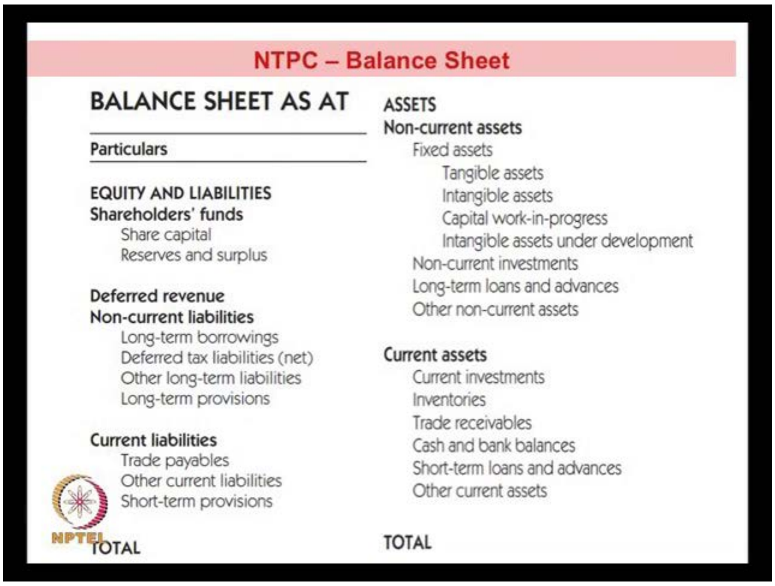

So, what we I am showing here is a snap shot of the various line items that we see in a balance sheet, remember this balance sheet publicly available in the internet. And I would suggest that you download the 2012 balance sheet to understand some of the discussion that we are going to do from here on. The first thing that you will notice in the balance sheet, in the left hand column is titled as balance sheets as at, what do we mean by balance sheet as at.

So, as at it indicates the balance sheet captures the financial information as on a particular date, in India most of the companies have a financial year that ends on the 31'st march. So, therefore, when you look at the company's balance sheet it actually gives the financial information has of 31'st March 2012, so balance sheet is a snap shot of a financial information on a particular date. So, this is a very important point that you need to keep in mind.

Next, if you look at the balance sheet if broadly comprises of two parts, and the left hand side we have what is called as equity and liabilities, and on the right hand side you have what is called as the assets. Now, equity and liabilities is also called as the sources of funds, remember a business invest many projects, but for the investment to happen it needs capital. So, it need funds now what are the sources of funds, so the information as to what are the sources of funds, is captured under equity and liabilities.

What is equity and what is liability, equity is the investment that is brighten by the owners of the business. Remember, we will also call the owners has the shareholders, in some cases we also call the owners and responses and so on, so these are terminologies that we will keep using inter changeably. And the funds that are contributed by the owners, they are called as equity, they are also called as share capital, in some cases there are also called as net worth.

So, it is very important that you do not get confused with this change in terminology, all of them refers to a capital that are brought by the shareholders or the equity holders a or the owners or the sponsors. The next efforts to liabilities, why do we call liabilities, liabilities broadly refers to the amount that the firm as borrowed from lenders, so if a form has borrowed capital from the lenders, it is liable to pay them back on maturity. So, therefore, these are grouped under liabilities they are called as liabilities.

Because, the company is liable to pay, the person who has provided the funds, if we look at liabilities they can be classified into two categories. One is non current liabilities there also called as long term liabilities what is long term, so anything that is not due the next one year is called as your long term in a very general sense. So, if a company is actually borrowed money for a long period of time let us say 3 years, 5 years, 7 years and so on then it will be classified under your non current liabilities.

Whatever, the firm as to repay within a year is classified under current liabilities, if we look under non current liabilities there are several items, the first is your long term borrowings. So, has we will probably see later, long term borrowings will comprise a substantial portion of the amount under non current liabilities. So, these are all borrowings that company has got from various sources, it could be banks, it could be various retail investors, it could be institution investors and so on.

In addition to long term borrowings there are other items that we see, under non current liabilities, this include other long term liabilities long term provisions and so on. I am not going to get into details of those, but in case you happen to download the annual accounts of NTPC 2012, you will be able to find information on this line items in the statement. Next we go to what is called as current liabilities, current liabilities have three line items, the first is trade table payables.

Now, what is a trade payable the company obtains goods and services from various organizations, let us say for example, in the case of NTPC the company might be let us say purchasing telecommunication services. And in most of the cases, the purchases made or made on credit, that is the company gets some amount of time to pay the bill for the services that you have purchased. So, till that time the companies actually making a payment, the company in essence as borrowed from those who are actually supplying or providing a service.

So, this is an amount that reflected in trade payable, trade payable in some instances will also be denoted as an accounts payable. That is, this is an amount that the company host various suppliers, and service providers for the products and the services that it has consumed. This is in an amount that the company is obliged to pay to the suppliers and service providers in the short term, so that is referred to as trade payable or accounts payable.

Next we have other current liabilities, this could referred to short term bank loans that are due to paid within the next 6 months or an year, these are called current. Because, the liability would arise within the next 6 months to 1 year, and there are some other short term provisions that the company has made, which if it have to fulfill the your term. So, in essence if you look at it the companies sources of funds are largely threefold, one is the funds that is receiving from the shareholders of the owners, which is called a equity capital.

It need not get all the capital from owners, it can borrow some of it and the amount that the company chooses borrow will be classified again into a two categories, one is long term borrowing, and the short term borrowing. The long term borrowing will come under non current liabilities or long term liabilities, and the short term borrowing will come under current liabilities or will come under working capital. Next we at the right hand side column, in the right and said column is titled as it is, in some balance sheet it will also referred to as the uses of funds.

So, it complements the sources of funds, so on the one side we have sources of funds, and on the other side you have uses of funds. The company as rice capital from various sources, and how I have been funds these put into use, this information will be available under the asset column. Again assets are divided into two broad categories, non current assets and current assets, under non current assets again there are several line items, the most important is what is called as your fixed assets. So, these are assets or these are investments made in projects.

In constructing power plants in the case of NTPC, which helps to generate revenues for the business, in effect what we mean by fixed assets these assets that are created by the company or running the operations of the business, within fixed that they are various line items, starting from tangible assets, intangible assets and so on. So, tangible assets are those that can be physically located for example, we have turbines, we have pulling plans and so on.

So, these are all assets that can be physically located, all of this will come under tangible assets, what could be intangible assets intangible assets are those that may not really have physical form. For example, software remembered the computer itself tangible assets, but the software that results in the computer can be called as intangible assets. There are several other examples of intangible assets as well intellectual property rights, patents, trademarks obtained they all would be coming under intangible assets.

The next we have capital work in progress, remember if you look at tangible assets these are set that are in operation for running the business. But, at the same time many at the aspects take a long time before the actually come under operation for example, comes into power plans takes 3 years, takes 5 years. So, till that time the sets are completed, and commissioned to operate the investment that is made is classified under, your capital work in progress.

Once the projects are complete, then the assets under capital work in progress will actually the reflected under your tangible assets. Like we have capital work in progress, we also have intangible assets under development for example, developing a software are filing a patent, will involved considerable investment and the investment happens over a period of time. So, till the time the assets are created, the investment made in creating this intangible assets would be reflected under the intangible assets under development.

In addition under the non current assets we also have non current investments, so these are all investments that a company has made, in various avenues. For example, the surplus funds the company has could be invested in bank deposits, it could be invested in other return yielding in the investment, like government bonds and so on. So, these investments do not directly contribute to running the company's business, so therefore, they are classified separately under non current investments.

The third item is your long term loans and advances that company could actually provide loans and advances for various purposes for example, it could actually provide loan to the employees of the company to construct a house. So, advances made for such purposes will be classified under your long term loans and advances, next we look at the current assets, current assets they are current investments, which is a short-term investments made under various investment opportunities. Then we have inventories, inventories is reflect the raw materials that are company purchased.

But, it is not been used that for example, NTPC might actually need to purchase coal for generating power, the company at any point in time would need to have surplus amounts of coal. So, that there is no shortage of raw material to generate power, so the investment that is made in this raw material would be classified under an inventory. Remember this is a current asset, the investment made in coal is not expected to be there forever, but it expected to be use in generating power for the business operation. Then we have trade receivables, trade receivables is the opposite of trade payables.

In the case of trade receivables, NTPC generates power and it supplies power to various consumers. So, in this case it could be various state electricity boards or it could be large customers like the railways, now the customers that actually purchase power from NTPC also enjoy a credit period. So, trade receivables indicate the amount that the customers of the company are expected to pay 20 PC in the short term, that is this is an amount that the company expects to receive from it is customers for the products or services it is provided to them.

Then we also have cash and bank balances, any surplus amounts that they are in various bank accounts is reflected under this line item, there are several short term loans and advances that the company could have been made. If there are in any short term loans and advances, then if gets reflected under his line item of the current assets, so what we actually see is on one side, we have what is called as sources of funds. And on the other side, we have what is called as the uses of funds and the balance sheet provides information on what are the different sources of funds to the company.

And what are the uses of the funds that the company has put used to, so left hand sides reflects, the financing decisions made by the company how has the company finance and various projects. As it finance by way of equity, as it finance by way of borrowings, if it is finance by both equity and borrowings, what has been the proportion of the borrowings. As it finance it by long term borrowings or it as short term borrowings of the total borrowings how much of it short term, and how much of it is long-term and so on.

And the right on the side of balance sheet, it looks at what are the different areas in which the funds have been utilized, in essence the right hand side of the balance sheet locks at the investment decisions at the company has made. So, there is a financing decision, and there is investment decision and information in the balance sheet, reflects both the decisions put together in a single place. So, before we end this lecture thought questions for this lecture.

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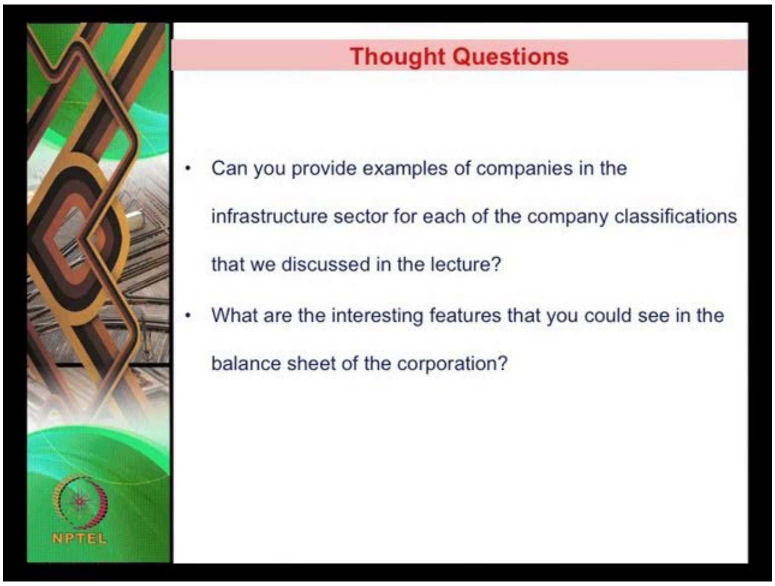

Question number 1, can you provide examples of companies in the infrastructure sector for each of the company classifications that we discussed in the lecture. Remember we talked about four classifications, public sector companies, private sector companies, publicly listed companies and unlisted companies. So, for these four types of classifications can you provide examples of companies.

Question number 2, we have had on overview of balance sheet now take some time look at the balance sheet of NTPC. And then are there thing is a very interesting you can observe in the balance sheet of the corporation. So, think on these two questions and we will discuss in the next lecture.