Infrastructure Finance
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Lecture - 4
Basics of Financial Management-Part 2

Hi there, welcome to a lecture 4 of this course on Infrastructure Finance. What will do in this lecture is we will try and continue, what we have been discussing in lecture 3, that is to understand some of the basics of financial management. But before we do that we will try and discuss the thought questions that, we put 4th at the end of lecture 3. We had two thought questions that we want to discuss at the end of lecture 3.

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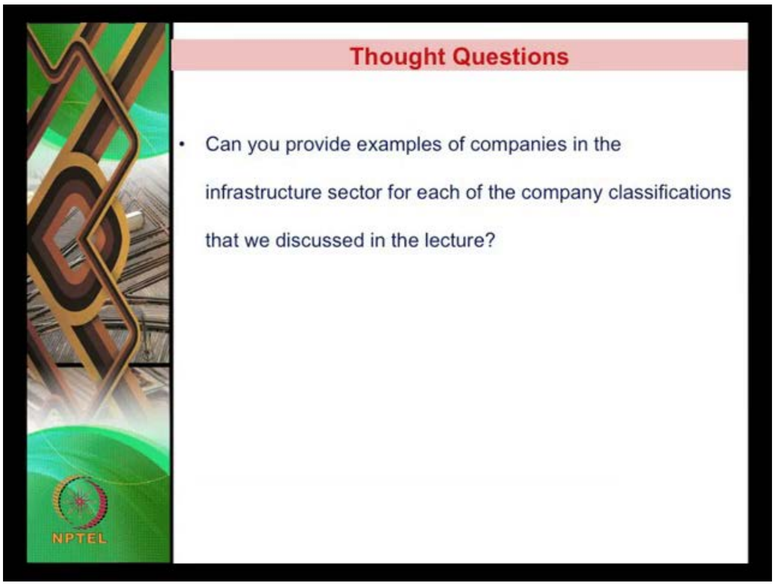

Question number 1, can you think of some examples of companies in the infrastructure sectors specifically, for each of the classifications that we discussed, if you like to refresh, we classified companies across 2 categories. The first category is by ownership, there we said companies could be categories into two kinds, one is public sector companies that is companies that are dominantly owned by the government.

And the second as private sector companies, which are fully owned by the private sector, the second classification that we had was, to look at companies based on whether, they are been listed in this stock exchanges or whether they are privately held. So, if you look at classifying the companies in a matrix form.

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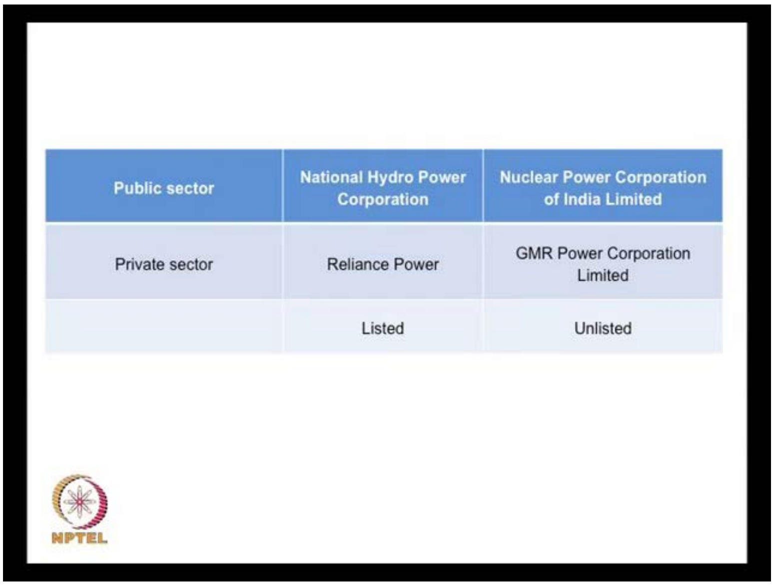

On the x axis, we have classified companies based on whether, they have been listed in the stock exchange and on the y axis, we classify companies based on the type of ownership. So, what we have is, we have a very simple 2 by 2 kind of a matrix structure and I have given an example in each of the quadrants, at the topmost quadrant on the left hand side, we are talking about the company, which is a public sector company and it is also listed in the stock exchanges. Know, if you notice all the 4 examples that I have given are essentially, companies that are operating in the power sector. The first example of a company in the public sector, which is also listed, is national hydro power corporation.

So, this is a company that is owned by the government of India and the shares are also listed in the stock exchanges, next we look at an example of a private sector company, which is also listed. The example that comes to may mind is reliance power and it is a private sector company, but it is also listed in the stock exchanges. Now, let us look at the category of unlisted companies, in the case of unlisted companies the shares of these companies are not listed in any of the stock exchanges, they are privately held.

So, therefore, the liquidity of this companies are not, as high as we see in the case of public sector forms, in the unlisted company in the public sector category, we have nuclear power corporation of India. Remember this is also a power generating company, but this is not listed in any of the stock exchanges, but it is owned by the government.

So, therefore, it comes under as a public sector company, the example of an unlisted company in the private sector is G M R power corporation.

G M R power corporation is as a small company, which operates a power generating station in TamilNadu, this is a subsidiary of a larger company called G M R infrastructure. Now, some of you may know that, G M R infrastructure is listed in the stock exchange, but the subsidiary company is of G M R infrastructures are not listed in the stock exchange.

So, in this case G M R power corporation limited is not listed in the stock exchange, tough the parent company is listed in the stock exchange. In fact, I would encourage, you to look at, many more such examples in each of the quadrants, so that you get a lot more understanding and classifying companies based on ownership as well as based on whether they are listed or not.

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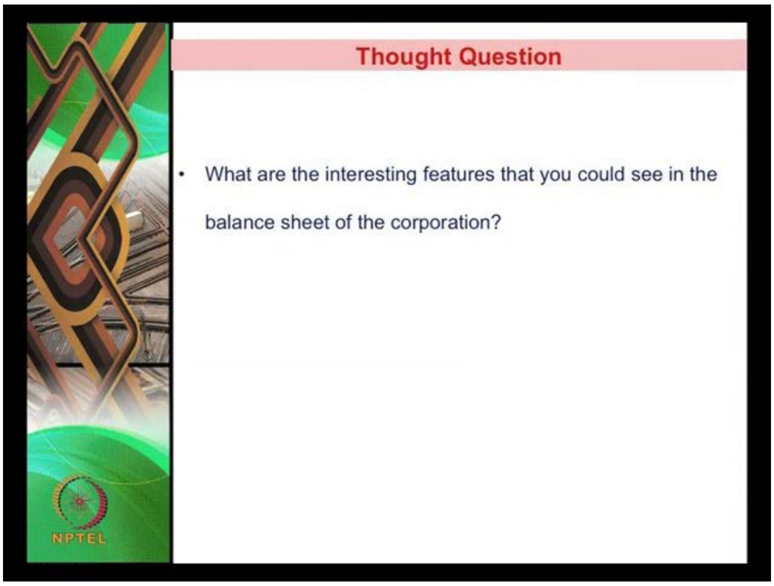

Now, let us go to the second thought question, the second thought question that, put forward was what were the interesting features that, you can see in the balance sheet of the corporation. To refresh in lecture 3, we look that financial statements and specifically the balance sheets, financial statement consist of 3 main statements, one is the balance sheet, second is the profit and loss statement, and the third is a cash flow statement.

So, we started our discussion on the basics of financial management on the balance sheet and what I had put forward as a thought question is there anything interesting that you could see in the balance sheet of the corporation. Have you been able to look at the balance sheet of N T P C and do you have any thoughts on this, let me start with a very simple feature that you may see.

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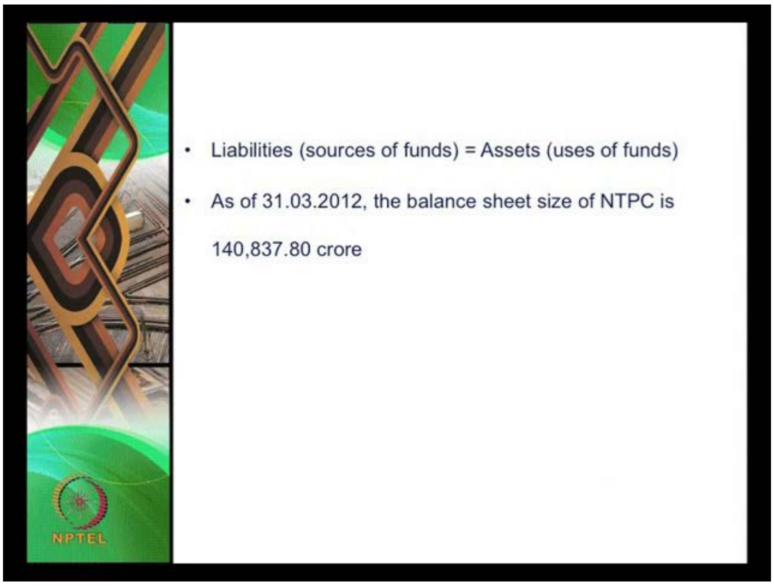

If you are noticed the liabilities or the sources of funds, matches with that of assets or the uses of funds, so this is a very essential element of the balance sheet, the liabilities should match with that of the assets, if you had download at the annual accounts, for the year 2012 of N T P C, you will find that the balance sheet size of N T P C is 140, 837, 80 crore. So, what we mean by a balance sheet sizes, we are looking at the total value of the liabilities or the total value of the assets and both of them should be equal.

So, that is what we call as a balance sheets size, so in any balance sheet, this is a very important feature that, you should not miss. In fact, if you are able to do a accounts correctly, the sources should match with that of the assets, in this lecture, we will look at several other features that, we see in the balance sheet.

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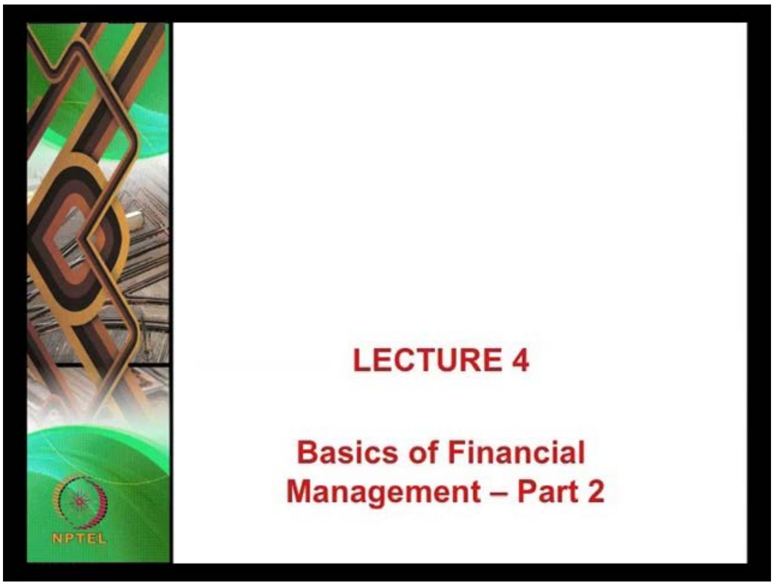

So, we will continue, what we left in the lecture 3 that is the basics of financial management, in this lecture we will try and understand, some of the elements of balance sheet in a little bit more detail.

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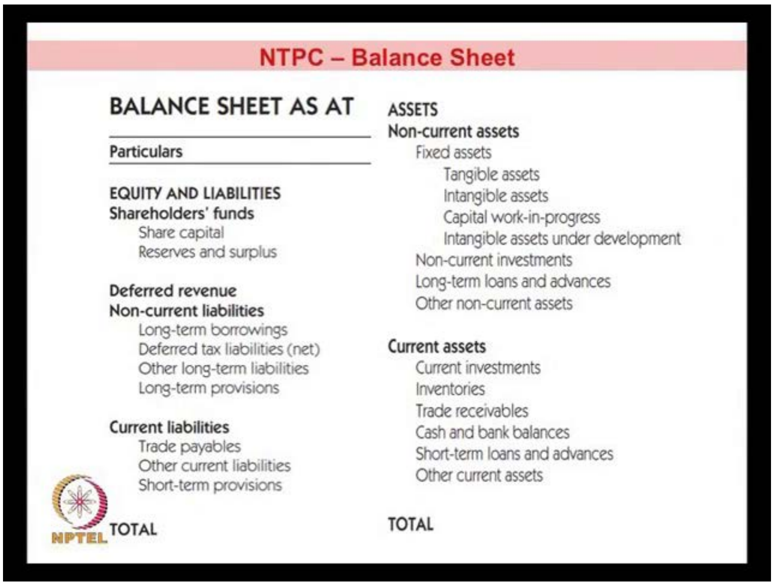

This is what we saw in the balance sheet of N T P C, just take a look for a couple of minutes, broadly balance sheet consist of 2 aspects, on the left hand side, you have what is called as your liabilities are the sources of funds. And on the right-hand side, you have the assets can be classified into 2 broad heads, first is your non-current assets, non-current assets are essentially a long-term in nature. The benefits of the assets occurred over a period of many years, current assets are fairly short-term in nature and current assets in some sense do not yield inheritance.

Under non-current assets, we have several categories, we have fixed assets, we have a long-term and non-current investments, so the difference between a fixed assets and an investment is that. A fixed asset is used or these are investments made by the company in assets that are essential for being used in the operations of the business. Whereas non-current investments are financial investments made by the company, of the surplus cash that, it would have and these give returns.

But, these are financial returns, essentially, this could be in terms of interest on the loans that the on the loan investment are the company has made, whereas fixed assets are assets that are used in running the operations of the company. If you look at fixed assets, again there are several categories, there is a tangible assets and intangible assets. Tangible assets are those that are physically have that have a physical form, intangible assets are those that have value, but there will not have a physical form.

One example of intangible assets could be intellectual property, another example could be software, now let us look at the sources of funds, the sources of funds were the company can be broadly classified into 2 categories. Now, within these 2 categories, there are several variations, as we go to the latest stages of this course, we will have an opportunity to look at the variations between, these 2 broad categories of funds, the 2 broad categories of funds are equity.

Equity is essentially to reflect the contribution or the investment made by the owners of a form, the owners of the form are also known as the shareholders, they are also called as promoters, they can be called as members. In addition to getting capital from the owners, the business can also borrow capital from financial institutions, from banks and for the public.

So, these are called as your debt, so the sources of funds essentially consists of debt and equity, short-term, dead is called as current liabilities, current liabilities also include amounts that the business owes to other parties, such as suppliers and so on. Now, we will look at some additional aspects that, we can see in the balance sheet.

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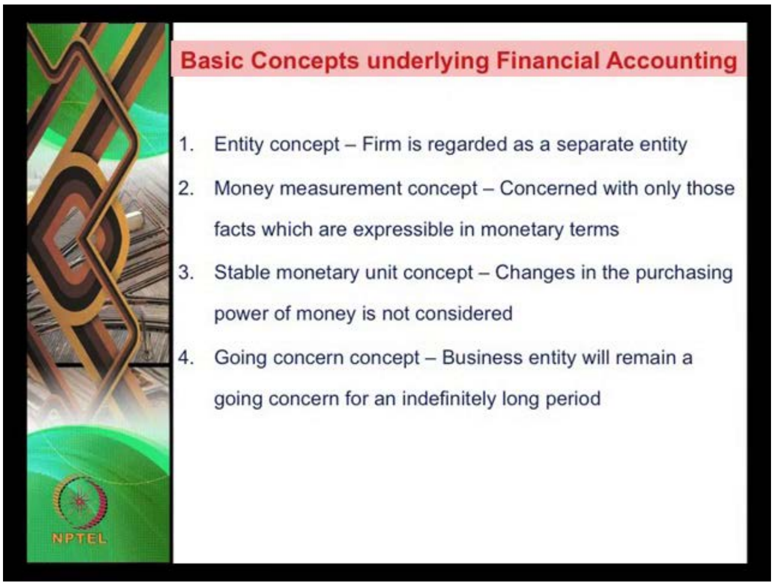

But, before even look at discussing the balance sheet further, we should look at some of the common concepts that I used in financial accounting and it is important that we be aware of this basic concepts. So, that we are able to appreciate the balance sheets, the profit and loss account or the cash flow statement in lot more detail, let me look at some of the main concepts 1 by 1. Number 1 is the entity concept, what do we mean by an entity concept in an entity concept the form or the corporation is regarded as the separate entity that is distinct from the owners of the form.

So, the balance sheet indicates, the balance sheet of the form, it does not in anyway captured the balance sheet of the owners of the form. So, in the case of N T P C, what we look at is the owners of the form as government of India along with other members of the public. But, the balance sheet does no way captured the financial status of a government are the other public shareholders, who owned shares in the form.

So, it is essentially capturing the financial status of the N T P C, so therefore, entity the form is regarded as a separate entity and it is a very important concept that we should be aware of in the balance sheet. The second concept is called as your money measurement concept, so what you actually see in the balance sheet, if you go back, there are several items that you actually see in the balance sheet. So, the balance sheets are for that matter any financial statement is concerned only with those facts, which are expressible in monetary terms.

So, if you are really looking at the assets, the assets can be expressed in monetary term, if you are looking at the contribution by the owners that can be expressed in monetary terms. If you are looking at the amount of debt that the company has taken from various sources, it can be precisely expressed in monetary terms. So, that is one can clearly state, the amount of borrowing that the company has done from the different sources, we can clearly state the amount of investment that the shareholders met made in the company.

So, all of this can be expressed in monetary terms, but there are, so many other factors that are associated with the form, which are not monetary best for example, we have the number of employees is not a monetary concept. So, therefore, we do not find any information about number of employees that is working for NTPC in the balance sheet, the simple reason is it is cannot be expressed in a non monetary term. The second could be the number of offices NTPC has several offices that, they do not actually find a mention of these in the balance sheet, because again it is not a monitoring concept.

So, to understand a corporation has several elements and the financial accounts reflects only those aspects that can be expressed in monetary terms or whenever, there are non monetary terms, the financial statements translate them to monitor terms, before mentioning at in the financial statement. Concept number 3 is a stable monetary unit concept shall, as we have see in the balance sheet captures, the assets and the liabilities and it captures, there been monetary concept, but we also know that the power of the monitor units will change over a period of time.

So, for example, the value of rupee is 100, yesterday are a near before is not the same as what we have today. So, a near before one probably might have been able to purchase a larger basket of goods and services, for a 100 rupee as compared to what we can do 1 year later. So, the purchasing power of the monetary unit keeps changing with time, but the financial statements do not reflect, the change in the purchasing capacity with time. So, financial statement simply records the monitory units and it assumes, at the monetary unit is stable that is rupee 100 5 years back is recorded as same as 500 5 years later.

So, the stable monetary unit concept is use uniformly across all financial accounts, concept number 4, a going concern concept, this again is a very powerful concept that you actually see a balance sheet or any of the financial accounts. A form is expected to when forever, there is no in life, as for as the form is concerned, the business entity is expected to be existing for an indefinitely long period. And the financial statements are prepared, in such a way that the business is treated as a going concern.

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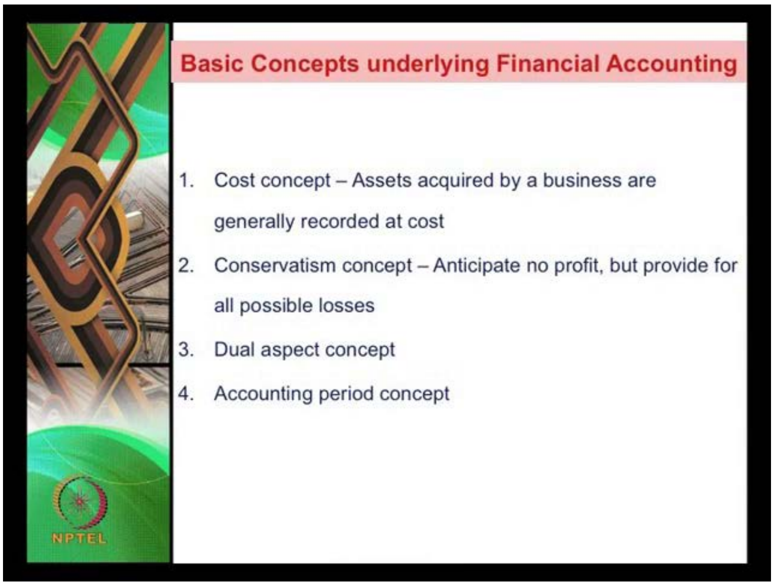

Concept number 5 is a cost concept, the assets that are acquired by the business are generally recorded at cost, what do we mean by that, remember a form, let us say in this case N T P C acquires an asset. It could be something as simple as a computer or it could be let us say a purchasing of land, let us say the second category, let us assume the company has purchased a piece of land either to construct its office or to construct, let us say any power generating stations.

Now, when the form has purchased an asset at a particular price, it gets reflected in the balance sheet under the category of an asset. Because, these are all investments that are needed, for the operations of the business or computer might be needed to support the day to day operations land might be needed to construct power generation plans.

So, therefore, all of them are captured under the assets in the balance sheet, these assets have a fairly long life, for example, if you actually own ownership of land, the benefits from this ownership is expected to accrue over a long period of time. But, when you actually record the fact that the company is actually purchased, certain amount of assets in the balance sheet, it is recorded at the price, at which the asset was purchased. But, over a period of time the value of the asset that is the market value of the asset can change.

So, the price of land can increase as the years go by, but in the balance sheet and a normal circumstances, the asset value is reflected at the same price, at what it was purchased. So, this is your cost concept, every year in the value of the assets do not change or it is not changed to reflect the current market value of the asset, many company is periodically, do such revaluations of the assets. But, it is not a common occurrents, only when there is been a substantial time that as elapse from the time, the asset was acquired.

And there is a substantial difference between the value that was recorded in the balance sheet and the market value would companies going for revaluation exercises. So, the assets that you have actually see in the balance sheet, reflect the price, at which the assets was purchased by the company and not the current value of the assets. So, the current value of the asset could be higher or lower, as compared to what we actually capture in the books of the accounts.

The sixth concept is the conservatism concept, so conservatism concept simply states that, when a company is preparing its financial statements, it should be prepared in a very conservative manner. One example of conservatism is anticipate no profit, but at the same time provide for all possible losses. So, this simply indicates that, if a company is expecting a loss is a company is expecting some kind of a right of then it should be accounted for in the financial statements though the event might not have actually occurred.

So, the possibility of that event happening is going to be reflected in the financial accounting and that is considered to be approved and management practice, concept number 7, we will also look at an example of the conservatism concept, as we go along. Concept number 7 is that dual aspect concept, this is what I had actually indicated in thought question number 2, that is the sources of funds, should be equal to the uses of funds, assets should be equal to liabilities, which consist of both equity and dead.

So, under all circumstances this should match, the asset should match should be liabilities of the form, concept number 8 is your accounting period concept. So, forms prepare the statement of accounts for a particular period. So, the period can actually change, but the period is mentioned for an accounting statement, so without a period being mentioned, the financial accounting statements are meaningless, for example if you look at the balance sheet of NTPC, what we have been discussing is the balance sheet is been prepared as of 31 march 2012.

So, that indicates the time, for which the balance sheet has been prepared, now when we look at the profit and loss account in a subsequent lectures, we will find that, profit and loss is actually prepared for a particular duration. So, it could be profit for a particular year, it could be profit for a particular quarter, it could be profit for a particular month, it could be profit for 18 months and soon. But, whatever, it may be unless until, there is a period attached to the statement of accounts, we may not be in a position to interpret or attach any meaning. So, the period concept is a very powerful and very important concept in financial accounting.

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Let us now continue our discussion on the balance sheet, let us try and see, how we can interpret some of the numbers that, we see in the balance sheet. So, I would urge you to actually look at, a download in the balance sheet from the internet. So, that will be able to follow the discussions that, we are going to have for the rest of this lecture, my first question is what is the value of equity or net worth of N T P C as of 31 March 2012.

So, equity is also known by net worth, so we can use, it interchangeably, so what is the value equity and what does the balance sheet indicate as the value of the equity of the company, let us see, how do we find out. So, if you look at the balance sheet, on the left hand side is what we have the equity a liabilities or the source of funds. So, the expression for calculating the net worth or the equity is net worth equals share capital plus reserve and surplus.

So, an addition of these 2 items gives you, the value of the net worth of the company, now what is the share capital and what is the reserves and surplus. Share capital is nothing but a face value of the share multiplied by the number of shares that the corporation as issued. Remember, the corporation actually sells ownership by way of shares and the total contribution in terms of share capital is found out by the total number of shares of the company has issued and multiply that by the face value of the share.

Now, what is this face value of the share, let us also look at that discussion separately, next comes your reserve and surplus. So, reserve and surplus are nothing but the amount collected by the form, from the shareholders are accumulated over the years, let us see both this aspects in some detail.

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A price of a share is nothing but a face value of the share plus the share premium that is when a company comes out with an initial public offering and the company sells, it is share to the public, it sells the share at a particular price. And this price is an addition of both the face value of the share and there is a premium, if the price of the share is above the face value, then we call it, selling a share at a premium.

That is owners are willing to purchase a share at a price that is higher, than the face value, if the price of a share is lesser than the face value of the share, so we are calling it as a discount. In that case the company is giving a discount to the shareholders to purchase the share, at a price that is less than the face value of a share. So, the price, at which the shares are being offered in an initial public offering, is both face value and share premium put together.

NTPC made an initial public offering in October 2004 and it sold the shares at a price of rupees 62. Now, if you look at it the face value of the share is rupees 10, but the price, at which the shares sold in the initial public offering was 62. So, therefore, if you look at it the premium that, the company has received by selling the share is rupees 52. So, the share capital reflects nothing but the face value multiplied by the number of shares the company has issued, the premium collected during this public offerings is separately accumulated and it is shown under a reserve account.

So, there are many categories of reserve accounts one of this is the premium reserve account. So, the premium reserve account indicates, the amount of premium that the company has collected, when the shares were being sold, at the public offering is this clear. There are several other accounts within reserves and surplus, another most common account is the surplus carried over from the profit and loss account, remembers the company, actually makes profits.

And these profits are actually, due to be paid to the shareholders the owners of the company have technically eligible to get the profits that the company makes, but in many cases the company does not return all the profits of the company has made during a financial period, but retain some of it. So, the amount of money the amount of profit, that the company has retained, over a period of years is accumulated under a surplus from a profit and loss account.

So, this surpluses that have actually been retained over a period of many years is also part of the reserve and surplus, why are this reserves and surplus, shown as a part of net worth. They are shown as a part of the net worth, because technically these are amounts that are paid by the shareholders are these are amounts that, the form is due to paid the shareholders, but as not actually paid, but technically this belong to the shareholders.

So, therefore, the value of the net worth should captured the amounts under reserves and surplus, because that is what the shareholders or the owners have contributed to the company. Now, let us look at the calculations to find out the net worth, so if you look at the net worth, it is a summation of share capital and reserves and surplus, the total net worth that we see in the balance sheet is 73, 291.17 crore. Now, what of it is coming by way of share capital and the remaining is coming from the reserves and surplus. The amount that come from share capital is 8245.46 crore and the amount that is in reserves and surplus is 65, 45.71 crore. So, the total net worth is 73, 291.17 crore.

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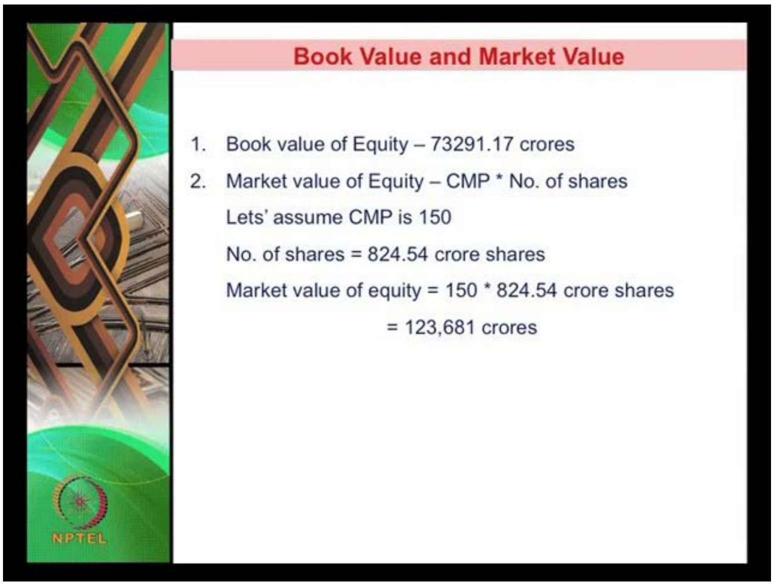

Now, let us try and distinguish between the book value and the market value of net worth, now the figure that we just saw 73, 291.17 crore is an amount that is indicated in the balance sheet of the form. In a sense, this is a value that, the companies books of accounts indicate, the value of the net worth to be. So, the value of net worth that we see in the balance sheet is called as the book value of net worth, now what is the market value of net worth, market value of the net worth is not given in the balance sheet.

But, this is something that we should be in a position to find out from the current market price of the share, remember we are be able to calculate the market value, only if the company is publicly listed. If a company is not publicly listed and if it is privately held then we have no way of knowing, what is the current market price of the share of the corporation. Now let us look at market value of N T P C, how do we calculate the market value of equity of N T P C, so the market value is nothing but current market price multiplied by the number of shares.

So, we would be in a position to get information on the number of shares of the company has issued from the balance sheet and we can get the information on the current market price from the stock exchanges, in which N T P C has listed is stocks. And I looked that what should be the current market price of N T P C, the current market price of the N T P C was little above 140 rupees. So, for the sake of simplicity, let us assume that the current market price of N T P C is 1500 rupees per share.

Now, the market value of equity, therefore becomes current market price multiplied by the number of shares the number of shares issued by N T P C is 824.54 crore shares. So, the market value therefore, becomes current market price multiplied by the number of shares, which totals 123, 681 crores. Now, compare this with the book value of equity, the book value of equity indicates a value of 73, 291.17 crores, where as the market value of equity is higher as compared to the book value of equity.

So, in many cases are commonly, you will find there is a difference between a book value and the market value, in most cases, you will find the market value of equity to be higher, then the book value. If the company is doing well the company is financially strong, then you will normally find the market value to be higher than the book value. So, whenever we are talking about, the value of equity, it is very important that we recognize, what value are we talking about, is it the book value or is it the market value, if there is nothing mentioned, it is assumed that the value is the market value.

And for a publicly listed company, we can get the market value from the stock price in the stock exchanges, but for an unlisted company, we cannot get that value. So, for an unlisted company, we assume, the book value to be equal to that of the market value. Let us look at an example of conservatism, we talked about conservatism is a very important concept way in preparing financial statements, how can we actually look at, conservatism being played at in the balance sheet.

Balance sheet indicates numbers that are actually available, because we know the exact amount of investments that is been invested shareholders, we know the amount of investment that the company has made in fixed assets and so on. So, where does conservatism actually come in, where as several places where, we can look at, implementing conservatism in a balance sheet, but I will give you one example.

Remember, we have something called as trade receivables in the balance sheet in the balance sheet, under the assets column, under the current assets, we have something called as trade receivables. So, that trade receivables indicate, the amounts that the company is expected to get from, it is customers for the various products or services that it as given. So, the company is already supplied, the goods or services to the customers and in all likelihood. the customers would have consumed or utilized those products or services.

Now, if for some reason, if the customer, has fallen on bad times and if the customers unable to pay, the company that as actually supplied, this goods and services, than the amount shown under trade receivables have to be written off. They have to be written of as amounts that are unlikely to be recovered, because the customers actually fallen on bad times. But, if you are not able to recognize, this non-recoverability and if you continue to show that, these are amounts that are due under trade receivables.

And these are amounts that are expected to be received by the receive from the customer, then we are violating the principle of conservatism, because we are not providing for the possible losses that we would like to incurred the event of the company or the customer not paying. Remember in most cases the customers will paid, but there are many cases where the customers are unlikely to pay, so this should be clearly indicated. There are several ways, in which it could be indicated.

The most common form of indicating is known as an ageing schedule, so an ageing schedule indicates, how much of the amount has not been paid for various periods of time. So, the ageing schedule indicates, how much of the receivables are due for 3 months, how much of the receivables are due for 6 months, how much of the receivables are due for a 9 months and how much of the receivables are due for more than a year and so on.

So, the ageing schedule also indicates the likelihood of the customer not paying remember, if the customer is in a position to pay, you would have likely paid the receivables on time. If a company is having temporary financial difficulties, then there could be a delay in paying this receivables, but if the receivables has been due for a very long period of time, this indicates that the customer is having difficulties in paying for several reasons, now a customer due for a long time is unlikely to be recovered.

So, by indicating that the dues are pending for a long time, we are capturing information in the balance sheet of potential right of that could occurred in the near term. So, avoiding of dues that are unlikely to be recovered and indicating the ageing schedule of receivables in the balance sheets are examples of conservatism that is being implemented in a balance sheet. Now think, if there are any other ways, in which conservatism can be implied in a balance sheet statement.

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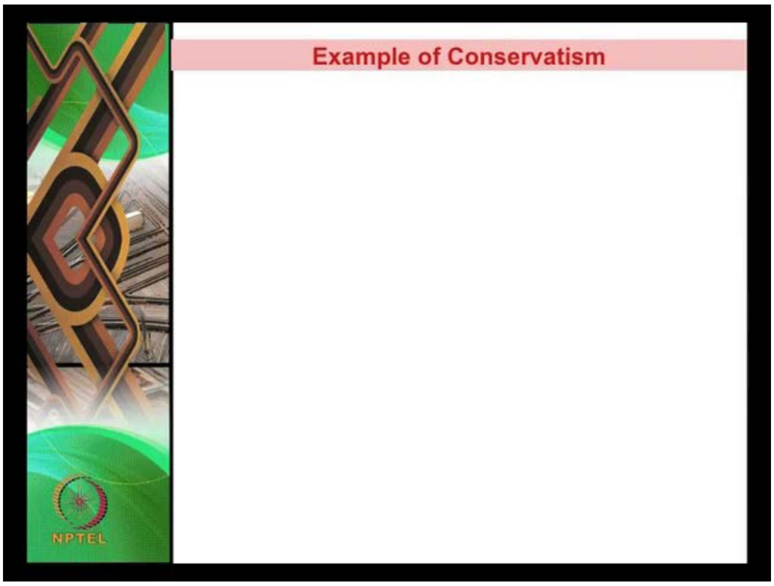

Another discussion point is how do we ensure that dual aspect concept is maintained throughout, that is how do, we ensure that the sources of funds matches with that of the uses of funds, how do we ensure that the liabilities matches to that of assets. Let us assume the company has actually made a profit for a particular year and the profits are not given back to the shareholders in terms of dividends. The company retains a profits and when the company retains a profit, the profit that is retained goes into the surplus account.

So, when the surplus account increases naturally the liability side of the balance sheet will also increase, so how do we ensure that, there is a corresponding increase in the asset side, how is that taken care of it is taken care of. It is when the following way for example, if the company is actually made a profit and if the profit is retained as cash, then the amount of cash that is indicated in the balance sheet will correspondingly increase, to the extent of profit that the company has made.

So, what we find is there is an increase, on the liability side, because of the increase in the profits surplus account, but that is matched with an increase in the cash position in the asset side. So, this would ensure that, the dual aspect concept is consistent, any increase in liabilities is matched with a corresponding increase in your assets. Now, the company could have retained the profits as cash or the company could actually retain or company could have actually made, some investments on this profits the company could have actually, bought new equipment setup new offices and so on.

So, in those cases, what could have happened, in those cases instead of an increase in the amount of cash, what could have happened is the assets show in the balance sheet would have increased, the assets could have increase either in terms of intangible assets or tangible assets. So, again what we are seeing is there is a match between an increase in liabilities to that of increase in assets, only that the nature of assets that has increase thus changed, when the level of cash increases the increases in the current assets that, when the company has created some assets, in the profit, there is a generated, the increases under non-current assets or fixed assets. Whichever way the changes that dual aspect concept is consistent, because it simply talks about an increase, it simply talks about liabilities should match, way that of uses of funds. It does not really talk about, how it is actually been used, whether it has been use for increasing the current assets or whether it has been use for increase in the fixed assets.

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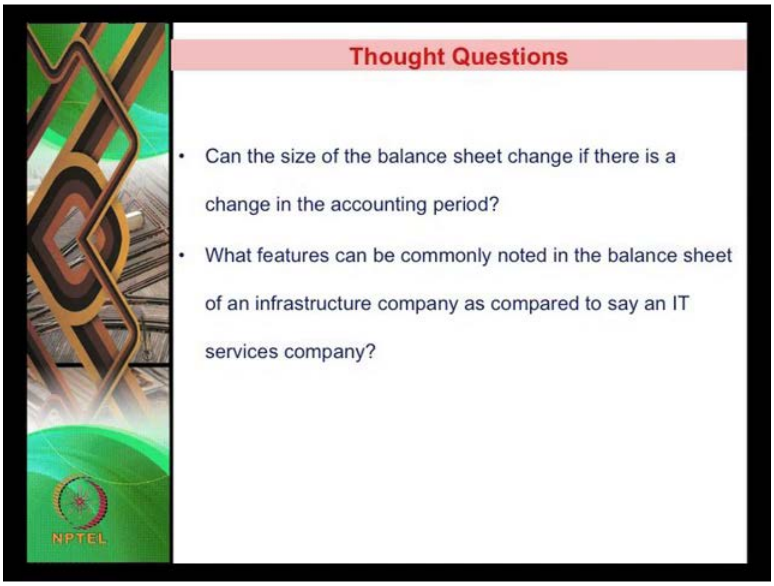

We have come to the end of this lecture on balance sheet, before we end let me pose a couple of thought questions, questions number 1 can the size of a balance sheet change, if there is a change in the accounting period that is, if you look at the NTPC’s balance sheet. The current years balance sheet has been prepared, from a balance sheet that has been prepared 1 year ago.

So, the difference between the 2 balance sheets is 1 year, now my question is will the balance sheet size change, if the balance sheet has been prepared, let us say 3 months after the previous balance sheet has been prepared, would the size changes considerably. My second thought question is in a balance sheet, lets say a balance sheet of an infrastructure company, what are the significant features that we see, as compared to balance sheets of let us say on IT services company.

Are we able see some distinguishing features of companies in the infrastructure sector, as compared to companies, let us say in sectors other than infrastructure, I have given an example of an IT services company here. But, you can look at companies in any other industry sector for that matter, if you are able to identify some distinguishing features that are commonly seen, in infrastructure companies, it will help us to understand the other downstream aspects of financial management, when we talk about it, in case you want to know more about financial statements and the line items that are there each of the financial statements.

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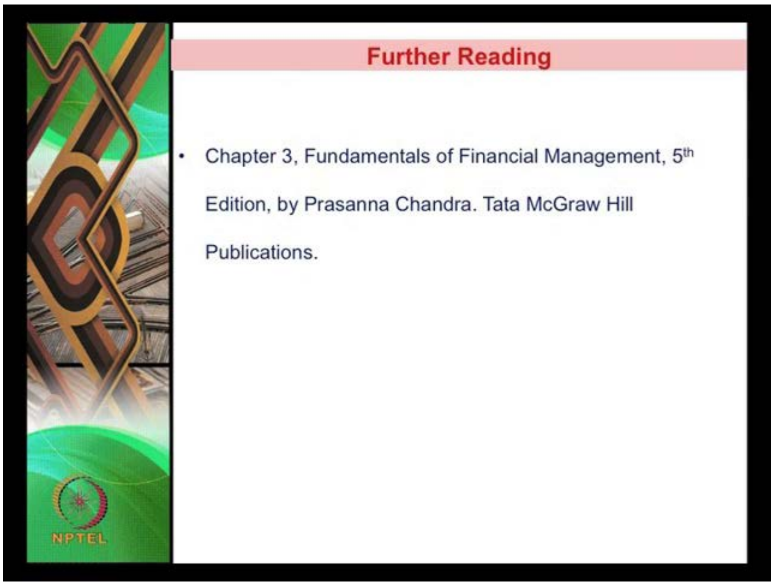

I have a simple reading for you, which is chapter three of the textbook on fundamentals of financial management, this is the text that is authored by Prasanna Chandra and published by Tata McGraw-hill. So, even those, who do not have any background in finance will find it, will find this textbook easily readable. So, if you not been able to grass up, some of the concept that we have discuss in this lecture, I would encourage you to look at chapter 3 of the text Prasanna Chandra.

Thank you and we look forward to seeing in the next lecture.