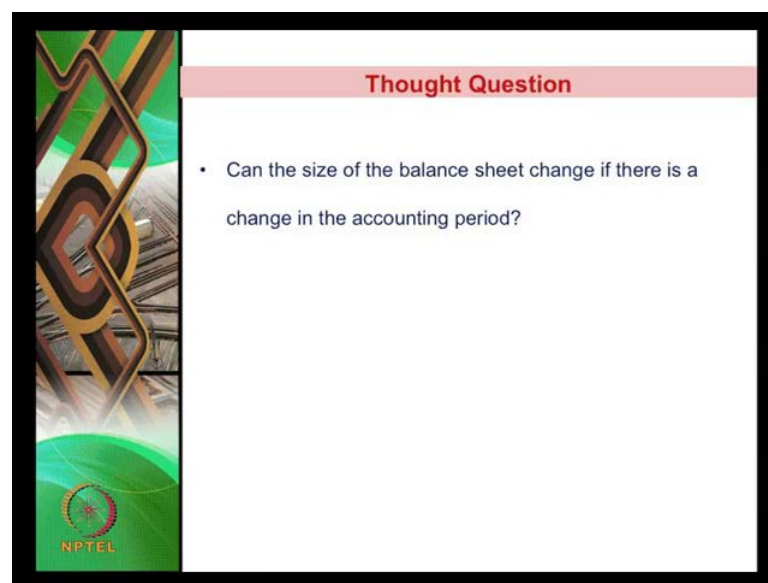


**Infrastructure Finance**  
**Prof. A. Thillai Rajan**  
**Department of Management Studies**  
**Indian Institute of Technology, Madras**

**Lecture - 5**  
**Basics of Financial Management-Part 3**

Hi, welcome to lecture 5 on Infrastructure Finance. We will continue with what we have been doing in the last two lectures, which is to continue our understanding of the Basics of Financial Management. Today we will do part 3 of understanding the basics of financial management, but before we actually do that let us try and discuss the thought questions that we put forward at the end of lecture 4.

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The slide features a decorative vertical banner on the left with a green and gold geometric pattern and the NPTEL logo at the bottom. The main content area has a pink header with the text 'Thought Question' and a single bullet point.

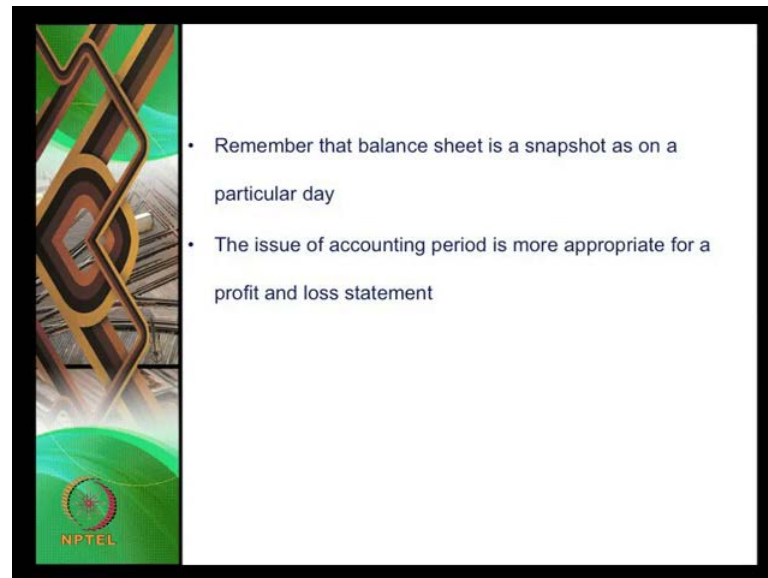
**Thought Question**

- Can the size of the balance sheet change if there is a change in the accounting period?

So, the thought question number 1 was can the size of the balance sheet change if there is a change in the accounting period. Remember, we looked at accounting period as one of the fundamental concepts that is there in financial accounting, that is financial accounting is with respect to a particular accounting period if that is, so be the case then will the size of the balance sheet change if there is a change in the accounting period. If you remember we also said the size of the balance sheet is essentially the value of either the total of sources of funds or the uses of funds.

In essence, the size of the balance sheet is the sum of net worth and the debt or the sum of total assets that is there in the balance sheet. So, do you think the size of the balance sheet would change, if there is a change in the accounting period.

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Remember we have to really look at a balance sheet is a snapshot as on that a particular day. So, the concept of an accounting period does not really hold good for a balance sheet because a balance sheet is prepared as on a particular day, in the case of national thermal power corporation, we have been seen that the balance sheet is of 31 st of March 2012. Now, if the balance sheet had been prepared as of first April 2012 would it have changed the level of assets that, was there in the company's books is unlikely to change significantly over a period of one day.

So, therefore, the size of the balance sheet is unlikely to have any major changes if we change the accounting period, but if you look at the profit and loss statement, what we are going to discuss today accounting period is a significant issue, if the accounting period changes, then the size of the profit and loss account is also likely to change.

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### Thought Question

- What features can be commonly noted in the balance sheet of an infrastructure company as compared to say an IT services company?

Let us go to thought question two, what features can be commonly noted in the balance sheet of an infrastructure company, as compared to an IT services company. I have given an IT services company as an example it can be any other sector, it could be manufacturing, it could be capital goods and so on and so forth. So, if you look at particularly the infrastructure sector, there are some commonalities that we see we saw the other sectors like manufacturing. But, there are substantial difference when we compare it with let us say a services sector, what are the major differences.

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| BALANCE SHEET AS AT                                                                       |  | ASSETS                              |
|-------------------------------------------------------------------------------------------|--|-------------------------------------|
| Particulars                                                                               |  | Non-current assets                  |
| <b>EQUITY AND LIABILITIES</b>                                                             |  | Fixed assets                        |
| <b>Shareholders' funds</b>                                                                |  | Tangible assets                     |
| Share capital                                                                             |  | Intangible assets                   |
| Reserves and surplus                                                                      |  | Capital work-in-progress            |
| <b>Deferred revenue</b>                                                                   |  | Intangible assets under development |
| <b>Non-current liabilities</b>                                                            |  | Non-current investments             |
| Long-term borrowings                                                                      |  | Long-term loans and advances        |
| Deferred tax liabilities (net)                                                            |  | Other non-current assets            |
| Other long-term liabilities                                                               |  |                                     |
| Long-term provisions                                                                      |  |                                     |
| <b>Current liabilities</b>                                                                |  | <b>Current assets</b>               |
| Trade payables                                                                            |  | Current investments                 |
| Other current liabilities                                                                 |  | Inventories                         |
| Short-term provisions                                                                     |  | Trade receivables                   |
|                                                                                           |  | Cash and bank balances              |
|                                                                                           |  | Short-term loans and advances       |
|                                                                                           |  | Other current assets                |
|  TOTAL |  | TOTAL                               |

Let us look at the balance sheet once again, the balance sheet indicates the key line items that we see in both the assets and the liabilities side. Now, we have to pay a particular attention, not just the total size of the balance sheet, but how much each of the line items compose of in the total balance sheet. So, if you little look at the equities and liabilities side we have broadly two categories that is share holders funds and debts. On the asset side we have, fixed assets and current assets. Now, let us try and see how this line items differ in a infrastructure sector.

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- Proportion of debt funding is generally higher in infrastructure firms
- Long term borrowings / Total equity (BV) =
$$\frac{45908.27}{73291.17}$$
$$= 63\%$$
- Long term borrowings / Total equity (MV) =
$$\frac{45908.27}{123,681}$$

One major indicator that we find in an infrastructure company is the proportion of debt finding is generally higher in an infrastructure company, how do we actually find a proportion of debt funding. We define debt funding as a ratio of long term borrowings, as a percentage of total equity, remember both of this are available in the balance sheet. First let us calculate the ratio of long term borrowings to total equity, I am actually going to consider the book value of total equity.

In the balance sheet we find a long term borrowings as 45908.27 crores, and the total equity in book value terms is 73291.17 crores. So, the ratio of long term borrowings to total equity works out to about 63 percent, now this is a fairly high ratio value. If you look at calculating the same ratio for let us say Infosys, which is in the IT services sector we find the ratio is close to 0 because the company has not obtained any borrowings and it has been entirely funded by equity.

Now, why did the company not borrow and fund entirely by equity that is something that we will look at in the subsequent lectures, but at this point in time I would like you to remember that, in an infrastructure company. The company is substantially funded by debt, now let us also look at calculating the value of debt as a percentage of market value of equity, the market value of equity be calculated in lecture 4 was 123,681 crores. Now, if you calculate the proportion of long term borrowings, as a percentage of the market value of equity it works out to about 37 percent.

So, you have to first remember that borrowings can be calculated as a percentage of either the book value or the market value of equity. If it is a private company and does not have it is equity trader in a public stock exchange, then we will be calculating only the long term borrowings as a percentage of the book value of equity. So, this is the first major characteristics that we would find in an infrastructure company.

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- Proportion of fixed assets as a proportion of total assets
- Fixed assets / Total assets =  
$$= \frac{87086.22}{140837.80}$$
$$= 62\%$$

The second characteristic that we would find in the balance sheet of an infrastructure company is the proportion of fixed assets as a proportion of total assets. Now, the proportion of fixed assets is also very high in an infrastructure company, when you compare it as a percentage of total assets. In the case of NTPC, the total asset is 140837.8 crores, out of that the total amount of fixed assets is 87086.22 crores. So, the level of fixed assets is 62 percent of the total asset value.

So, this again is a very important characteristic that we find in a normal infrastructure company. So, to summaries we distinguish infrastructure firms, in terms of the amount of debt funding that is being used and the level of fixed assets as a proportion of total assets. Now, let us go back to the main topic of today's lecture, which is to really look at build on what we have actually looked in the past two lectures. Today we will look at the second aspect of the financial statement, which is to look at the profit and loss account.

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So, far we have been looking at the balance sheet of the company, now let us look at the second statement we seen in a financial account. We will look at the NTPC's financial accounts again to discuss the profit and loss statement, I am going to show you quick shop snapshot of the latest profit and loss account, which is the year 2012 profit and loss account. But, before that let us understand what is the simple meaning of profit and loss account, remember we have a business the business produces something and it sells what it has produced to a customer, and when it sells it sells it at a price.

So, in return for purchasing a good or a service the customer makes a payment to the company, and whatever the payment has been made by the customer to the company is called as revenues. So, the company makes some revenues by virtue of selling a product or a service, now the company has to produce the products to be sold, and by way of producing this product, the company incurs some expense. Remember, the company

cannot produce anything out of thin air it needs various components to produce something, what are the various components.

For example, the company would need to procure some raw materials, so that is actually an expense, the company would need to employ some personnel and pay salaries and that is an expense. So, the company would actually incur a variety of expense to produce a given product or a service, and the net of all the expenses is a profit or loss, so the simple equation is revenues minus all the expenses would give you the profit or loss. If the revenues exceed the expense, then the company makes a profit, if the expenses exceed revenues and if there is a shortfall then the company is set to have incurred a loss.

Now, it goes without saying that it is better for the company to be making profits, and rather than making a loss, but many companies do incur a loss and it is if the losses are of temporary nature, in the long term a company is supposed to be making profits. The next equation is, what happens to the profits that the company has made, so the profits that the company has made essentially belongs to the owners of the business. So, the shareholders are supposed to be enjoying the benefits of the profit that the company has made.

In most cases all the profits are not given back to the shareholders, the company distributes a part of the profit to the shareholders, and this is called as the dividend. The proportion of the profit that the company distributes to the shareholders or the owners is called as dividends, and the proportion of the profit that the company has retained for subsequent use. For example, the company can retain a part of profit to fund its future expansion to buy additional equipment and so on and so forth. So, the amount that is retained is known as retained earnings.

Now, this retained earnings has been retained by the company, but essentially this is an amount that actually belongs to the shareholders. So, therefore, the retained earnings is captured in the balance sheet as a part of reserves and surplus, and reserves and surplus is included under the equity. So, therefore, retained earnings though it is retained by the company, it is shown as a part of the equity because it is an amount that is belonging to the shareholders, but is not paid by the company for various reasons.

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| STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED   |      |                  |
|---------------------------------------------------|------|------------------|
| Particulars                                       | Note | 31.03.2012       |
| Revenue from operations (gross)                   | 22   | 62,480.88        |
| Less: Electricity duty                            |      | 498.65           |
| Revenue from operations (net)                     |      | 62,052.23        |
| Other income                                      | 23   | 2,778.42         |
| <b>Total revenue</b>                              |      | <b>64,830.65</b> |
| <b>Expenses</b>                                   |      |                  |
| Fuel                                              |      | 41,635.46        |
| Employee benefits expense                         | 24   | 3,090.48         |
| Finance costs                                     | 25   | 1,711.64         |
| Depreciation and amortisation expense             | 19   | 2,791.70         |
| Generation, administration & other expenses       | 26   | 3,588.79         |
| Prior period items (net)                          | 27   | (313.58)         |
| <b>Total expenses</b>                             |      | <b>52,504.49</b> |
| <b>Profit before tax</b>                          |      | <b>12,326.16</b> |
| <b>Tax expense:</b>                               |      |                  |
| Current tax                                       |      |                  |
| Current year                                      |      | 9913.64          |
| Earlier years                                     |      | 154.84           |
| Deferred tax                                      |      |                  |
| Current year                                      |      | 327.85           |
| Earlier years                                     |      | (203.90)         |
| <b>Total tax expense</b>                          |      | <b>3,102.43</b>  |
| <b>Profit for the year</b>                        |      | <b>9,223.73</b>  |
| Significant accounting policies                   | 1    |                  |
| Expenditure during construction period (net)      | 28   |                  |
| Earnings per equity share (Par value ₹ 10/- each) | 42   |                  |
| Basic                                             |      | 11.19            |
| Diluted                                           |      | 11.19            |

Now, let us look at a snapshot of the profit and loss account of NTPC, now the top line states that statement of profit and loss for the year ended. So, if you look at the first line in the balance sheet and compare it with the first line in the profit and loss account, there is a big difference. Now, what is a difference the balance sheets stated that the balance sheet was as at a particular period, but if you look at the profit and loss account, it clearly states it is for the year ended.

So, in essence profit and loss account is prepared for a particular duration, is prepared for a particular period and it is not as at a point in time. So, therefore, you can actually have a profit and loss account for an year, you can have profit and loss account for a quarter, you can have a profit and loss account for a month and so on and so forth. So, this statement of profit and loss account is for a particular year that is ended on 31'st March 2012.

So, therefore, the beginning of the profit and loss account was of 1'st April 2011, and the profit and loss account records the revenues and the profits made by the company for the year that has ended as 31'st March 2012. Now, if you look at the profit and loss account there are various line items that constitute the profit and loss account, the first line item that you would find is called as revenues. Now, revenues is the amount that the company has received, from various customers or this represents the value of the products, and goods that has been sold by the company to it is various customers.



Again if you look at it, the first line item talks about gross revenue from operations, now what is gross revenue from operations. Gross revenue from operations represent, the total amount or the total value of goods and services that the company has provided to its customers. Now, a part of the revenues would also include a tax component that would have to be paid to the government, remember let us say let us go and having a meal in a restaurant. And when we get a bill, normally the bill includes several components such as a service tax or it could also include components such as luxury tax and so on.

So, the total bill amount inclusive of this various taxes represents the gross revenue that the hotel air will get. So, out of this gross bill amount a part of it luxury tax or a service tax, has to be paid to the government, so when we look at the profit and loss account, we also find a similar item that has to be paid to the government, which is the electricity duty. So, out of the total bills that has been raised on the customer, the electricity duty is something that has to be paid to the government.

This is an amount that the company receives from the customer, but this is an amount that does not belong to the company because; this is a tax amount that is to be owed to the government. So, net of these duties would actually constitute the net revenue from operations, so net revenue from operations would indicate revenues that are due for the company, net of all taxes and duties that are to be paid to the government. So, this is the revenue that belongs to the company, after paying off all the duties and taxes to the government. So, it is net of all duties and taxes to be paid to the government.

So, in the case of NTPC the net revenue from operations are 62,052 crores I beg your pardon 62,052.23 crores. Now, you also have another line item after the net revenue from operations, which is called as other income remember the corporation can actually get income, which is also called as revenues from various sources. Let us say in the case of NTPC, the main revenues that it is going to be get are from sale of electricity.

So, NTPC is a power generating company it generates power, and it sells the power it generates to various distribution companies such as state electricity boards. It also sells electricity to also some very large direct consumers, such as Indian railways and the total amount that it gets by way of such sell of electricity is called as revenue. So, remember the source of revenues would differ from one Infosys company to other, in the case of

electricity generation company, the revenues are by way of selling the electricity that has been generated.

Now, let us say there is toll Road Company, the revenues for a toll road company would be the tolls that it collects from the various users of the road, remember when you actually use a toll road, you actually pay a toll before we enter the road. So, those are the revenues for a toll road company, similarly for a telecommunication company they revenues would be, the telecom services that it provides to various customers. So, the sources of revenue would actually differ from one company to the other.

Now, what is this other income that we are talking about, the other income represents the income that the company has received, but these income are not from the operations of the company. In the case of NTPC, the main operation of the company is to generate electricity and sell this electricity, but the company could also receive income or revenues from various other sources that are not part of the business operations. Now, what could be the other sources of revenue for a company like NTPC.

If you actually look at the balance sheet of the company, you will find that the company has actually made several investments, part of the investment is in fixed asset. And then part of the investment is also under an item called as non current investments, remember the company can invest some of the surplus funds that it has, in several area such as it could be bank deposits, it could be other bonds that are investment raid. And whenever the company makes such investments in other financial instruments, it gets a return on it is investment.

The return could be by way of dividends, the return could be the way of interest and so on, so this income that the company gets on it is investments is classified under other income. So, in the case of NTPC what you find is for the year ending 31'st March 2012 2778.42 crores has been obtained, by way of this financial investments, these are not income that can be attributed to the business operations. But, this is an income that can be attributed to the financial investments that the company has made, over a period of time.

So, the total revenues that the company has for the year, includes both the revenue from operations, as well as the other income. So, the total income for the year ending 31'st March 2012 is 64,830.65 crores, revenues represent an inflow to the company and

expenses represent an outflow to the company. So, there are various types of expenses that a company incur, now this profit and loss account indicates some of the broad heads. In another company the expense heads might be different, it could also be classified or represented differently.

But, ultimately we have to understand as a concept expenses are items that the company incurs to generate the revenues, without any expenses the company would not be in a position to run the operations, and without it cannot actually get any revenues from operations. So, expenses are a necessary ingredients for business operations, let us look at the various expense heads that we see in this profit and loss account. First is the fuel, the fuel represents the raw material that the company needs to generate power, NTPC is a thermal power generating company.

So, it needs a primary fuel which it can burn to generate the power, so in this case a primary fuel in most cases is coal. So, the company would need to procure coal from another company, and using this coal it has to generate the power, so the fuel expense of 41,635.46 crores indicate the amount that the company has spent, in purchasing coal and other fuel that are needed to generate the power. The next line item talks about employee benefits expense.

So, employee benefits expense code actually include the various cost that the company has incurred, such as paying salaries and other benefits to the employees of the company. Remember, just raw material will not be able to generate power, we need somebody who will be operating the machinery, we will need somebody who is actually going to run the entire power generating entity. So, the expenses that are incurred to pay salaries, and other benefits to this employees are captured in the next line item.

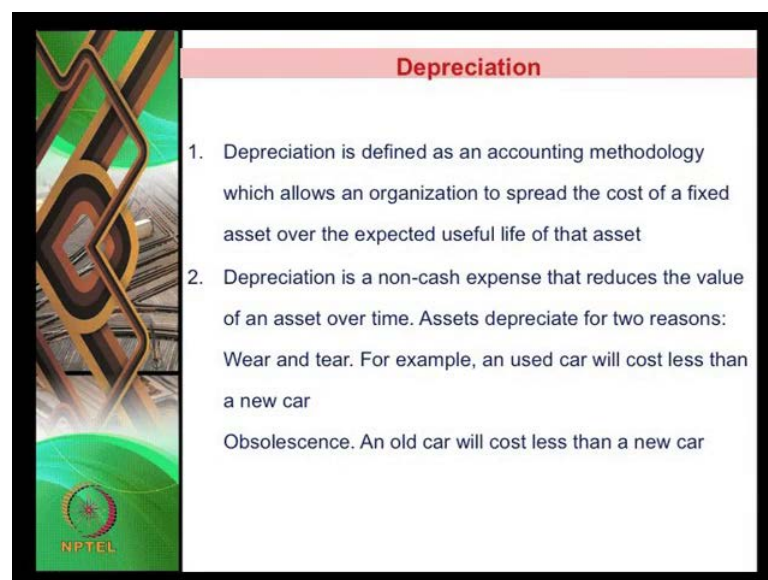
So, a total of about 3030.48 crores is the expense incurred towards this employee benefits, next come the finance cost. So, finance cost represent the interests that the company pays for the various borrowing that it is made, so if we look at the balance sheet we have said that the company acquires, it is capital from two sources from the shareholders or sponsors, and it can also borrow it is requirements. So, when the company actually borrows it is funds, it has to pay an interest.

So, this interest is an expense, the interest is a capital out flow, and the amount of interest and other charges the company bears on the amount that is borrowed is captured under

finance cost. So, for the year ending 31<sup>st</sup> March 2012 the company has actually incurred interest cost of 1711.64 crores, this is an expense, this is an outflow and therefore, it needs to be accounted for before estimating the profits. And next we have, what is called as your depreciation and amortization expense.

Remember the company will have to purchase, various assets such as turbines and other power generating equipment to generate the power. Now, these assets are going to give benefits for a long period of time, so the cost incurred in purchasing this assets needs to be accounted for as well. So, we do this through an item called the depreciation, let us look at a little bit detail as to what is this depreciation.

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The slide is titled "Depreciation" in a red header. On the left side, there is a vertical decorative strip with a green and gold geometric pattern and the NPTEL logo at the bottom. The main content area contains two numbered points:

1. Depreciation is defined as an accounting methodology which allows an organization to spread the cost of a fixed asset over the expected useful life of that asset
2. Depreciation is a non-cash expense that reduces the value of an asset over time. Assets depreciate for two reasons:  
Wear and tear. For example, an used car will cost less than a new car  
Obsolescence. An old car will cost less than a new car

A simple definition is depreciation is an accounting methodology which allows an organization to spread the cost of a fixed asset over the expected useful life of that asset. A fixed asset is something that is actually going to provide benefit, over a long period of time, so therefore, it would not be appropriate if we account, the entire cost that is involved in acquiring the asset at one go at the beginning. One of the fundamental concepts in accounting is expenses should match with that of revenues.

Now, the revenues from using that fixed asset is going to accrue over a period of many years. So, therefore, the expense should also be matched in according to the revenues, if the asset is going to be put in use for let us say 5 years or 10 years, and the revenues from putting that asset to use, is going to accrue over a period of 5 years or 10

years. Then the cost of acquiring that asset should also be accounted over a period of many years, so that is a fundamental concept behind depreciation.

Now, this is not a finance course, so therefore, we will not spend a lot of time in trying to calculate the amount of depreciation that we need to account for, but we should try and understand depreciation as a concept, more than a way of how to calculate depreciation. Now, why do we also have to look at depreciation another way is, the value of the asset reduces over time. Now, the balance sheet reflects the value of the asset at any particular point in time.

So, when doing so the balance sheet should reflect the fact that the value of the asset will change over time, and particularly the value of the asset if the asset is going to be used is going to depreciate over a period of time. Why will the asset depreciate over a period of time, broadly two reasons, reason number one because of wear and tear. A simple example an used car in the market today will cost, less than that of a new car or a similar make and type.

Why because we all assume that an asset has a fixed useful life, let us say a car has an useful economic life of 1,00,000 kilometers. So, an used car if it has already run about 40,000 kilometers, the economic value of the entire asset has already been utilized to some extent. So, the value of the asset will capture only that portion which is still remaining and can be utilized, so because of using the asset there is a certain amount of wear and tear.

And because of this wear and tear there is a depreciation on the total value of the asset, the second reason why we account for depreciation is obsolescence. The principle of obsolescence is an old car is going to cost less than a new car, a new car is probably having a lot more advantages, is probably more efficient than an old cost. And therefore, a market value of the old car is going to be lower than that of market value of a new car.

Remember a car an old car, even if it has not been utilized at all is going to fetch a lesser value simply because of the fact that a new car offer a lot more advantages as compared to an old car. So, this is a concept of obsolescence even if there is no wear and tear, just because of the fact that asset is obsolescence, obsolete it can lose a part of its value. So, the depreciation actually comes from these two broad reasons because of wear and tear and also because of obsolescence how do we actually calculate depreciation.

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### Calculating Depreciation

1. Depreciation in a year

$$= \frac{(\text{Cost of acquiring a asset} - \text{Salvage value})}{\text{No. of years of useful life of the asset}}$$

If asset = 1,00,000 and has a salvage value of 20,000, and the number of years of useful life is 5, then

$$\begin{aligned} \text{depreciation in a year} &= (100,000 - 20,000)/5 \\ &= 16,000 \end{aligned}$$

Let us do a simple calculation, depreciation in a year is calculated by the following expression, cost of acquiring an asset, net of salvage value divided by the number of years of useful life of the asset. Now, what is a salvage value, salvage value is a value that a seller can realize by disposing of the asset, at the end of its useful life, sometimes it is also called as the scrap value. Remember, the asset as been put into use and we have completely used or benefited from it is economic value.

Whatever remains of the asset, if it is disposed of in the marketplace, the value that we get is called as your salvage value. Let us take the example of a car, if the car is no more usable because it has run the entire distance that it is supposed to run, then the car can be disposed of in the market as scrap that is as simple iron and steel. So, the value that we would get by this kind of a disposal is called as your salvage value, to give a numerical prospective let us assume that the cost of acquiring asset is 1,00,000.

And, when it is disposed of at the end of its economic life it features a salvage value of 20,000 and if the asset has a useful life of 5 years. Then the depreciation that we will account for in a year is 1,00,000 minus 20,000 divided by 5 which equals 16000, so the depreciation in the year would equal 16,000 for this assets. Now, how is this going to be reflected in the balance sheet, so at the beginning the value of the asset will be denoted as 1,00,000 because this is the cost of acquiring the assets.

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At the end of year one we have used the asset for 1 year, so therefore, the asset depreciates by 16,000. So, at the end of 1 year the value of the asset that is going to be reflected in the balance sheet would be 1,00,000 minus 16,000 that would be 84,000, at the end of year 2 the value of the assets would be 68,000 because we have used the asset for the second year. And because of that usage the asset depreciates again by a value of 16,000. And therefore, the net value of the fixed asset after depreciation near to would be 68,000.

So, similarly for year 3 we have to account for a depreciation of 16,000 and therefore, the balance sheet at the end of year 3, would reflect a fixed asset value of 52,000. In year 4 the value of the fixed asset would be 36,000 and year 5, the value of the fixed asset would be 20,000. So, this 20,000 is the salvage value of the asset and at the end of year 5 or any time after that, the real value of the asset is what the company could get by disposing this off at the marketplace, and that would be 20,000.

So, this is the way in which depreciation is accounted for all the fixed assets, now there are several ways in which depreciation is calculated, depreciation is calculated as a straight line method or it is calculated as written down value and so on. So, the example that I have indicated is a straight line method of calculating depreciation, where equal amounts are depreciated throughout the entire period in which asset is being used. So,

there are other ways such as written down value which uses a different way of calculating depreciation in each of the years.

So, but as I was mentioning let us not really bother about finding out how to calculate depreciation, but focus more on understanding depreciation as a concept.

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| STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED  |      |                  |
|--------------------------------------------------|------|------------------|
| Particulars                                      | Note | 31.03.2012       |
| Revenue from operations (gross)                  | 02   | 62,480.88        |
| Less: Electricity duty                           |      | 498.65           |
| Revenue from operations (net)                    |      | 62,052.23        |
| Other income                                     | 23   | 9,778.42         |
| <b>Total revenue</b>                             |      | <b>64,830.65</b> |
| <b>Expenses</b>                                  |      |                  |
| Fuel                                             |      | 41,635.46        |
| Employee benefits expense                        | 04   | 3,090.48         |
| Finance costs                                    | 05   | 1,711.64         |
| Depreciation and amortisation expense            | 10   | 2,791.70         |
| Generation, administration & other expenses      | 06   | 3,588.79         |
| Prior period items (net)                         | 07   | (313.58)         |
| <b>Total expenses</b>                            |      | <b>50,504.49</b> |
| <b>Profit before tax</b>                         |      | <b>12,326.16</b> |
| <b>Tax expense:</b>                              |      |                  |
| Current tax                                      |      |                  |
| Current year                                     |      | 9913.64          |
| Earlier years                                    |      | 154.84           |
| Deferred tax                                     |      |                  |
| Current year                                     |      | 397.85           |
| Earlier years                                    |      | (893.90)         |
| <b>Total tax expense</b>                         |      | <b>3,102.43</b>  |
| <b>Profit for the year</b>                       |      | <b>9,223.73</b>  |
| Significant accounting policies                  | 1    |                  |
| Expenditure during construction period (net)     | 08   |                  |
| Earnings per equity share (Rs value ₹ 10/- each) | 42   |                  |
| Basic                                            |      | 11.19            |
| Diluted                                          |      | 11.19            |

Now, let us get back to our profit and loss account, so the depreciation and amortization of 2791.7 crores, indicates the total amount of depreciation that NTPC has made for the year ending 2012. If you want to know in more detail about, how much has been depreciated for each of the different asset categories, then we could go to the note number 12 that is given in the profit and loss account. Remember, the various notes indicate more details of each of the line items that are given in the profit and loss account or the balance sheet.

Now, after that there are other expenses such as generation, administration and other expenses. So, these are all expenses that are pertaining to other categories, and for this year this amounted to about 3588.79 crores. So, we have broadly the following four expense items, fuel, employee benefits, finance cost, depreciation and amortization and admin and other expenses. These line items might differ from company to company, the level of this will also differ from company to company.



But, ultimately we just have to remind remember that expenses are out flows that the company incurs in order to generate revenues. So, revenues minus all the expenses leads to profit before tax, so this is the amount of surplus that the company has generated during the year, and like we all pay taxes on our incomes, the company will also have to pay a tax on the profits that it generates. So, profit that a company generates represents the income for the company, like the salary that represents income for individuals, the profits represent an income.

And like individuals the corporation will also have to pay taxes on it is income, now that can be differences between the tax rates from a individual and a corporation or there could be several ways in which tax rates can affect, for different sources of corporate income. But, basically we will have to understand that corporations also pay a tax on their profits, so the tax that NTPC would have to account for the profits during the year is also given in the profit and loss account. So, the total tax expense for the year is 3102.43 crores.

So, the total profit before tax is about 12,326.16 crores and after paying the tax of 3102.43 crores, the profit for the year is 9,223.73 crores. So, profit for the year is also denoted as net profit, it is also called as net income, it is also called as PAT which is a profit after tax and so on. So, we may be using many of these terms interchangeably, similarly profit before tax is also called as PBT, it is also called as earnings before tax, profit is also synonymously used with earnings.

So, out of that total profits that the company has generated, part of the profit is distributed as dividends, the surplus profit that has not distributed is carried over to the balance sheet, and is shown as a profit is shown as a part of reserves and surplus. We will also have to remember, an important item that we would be keep coming across which is the earnings per share. So, at the bottom of the profit and loss account you will find that, there is a line called earnings per equity share, how do we actually calculate the earnings per equity share.

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### Earning per Share

•  $EPS = \text{Profit after tax} / \text{No. of shares}$

$$= \frac{9223.73}{824.54}$$

$$= 11.19$$

So, earnings per equity share also denoted by EPS is nothing but the profit after tax divided by the total number of shares, so in this case if you calculate the earnings per share, the profit after tax was 9223.73 crores, and if we divide this profit after tax by the total number of shares, which is 824.54 crore shares. Then the earnings per share works out to be 11.19.

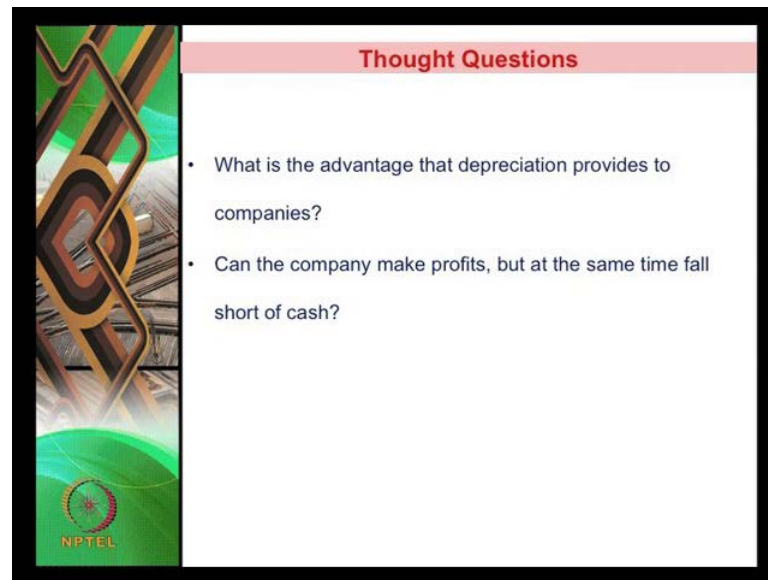
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| STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED   |      |                  |
|---------------------------------------------------|------|------------------|
| Particulars                                       | Note | 31.03.2012       |
| Revenue from operations (gross)                   | 22   | 62,480.88        |
| Less: Electricity duty                            |      | 428.65           |
| Revenue from operations (net)                     |      | 62,052.23        |
| Other income                                      | 23   | 2,778.42         |
| <b>Total revenue</b>                              |      | <b>64,830.65</b> |
| <b>Expenses</b>                                   |      |                  |
| Fuel                                              |      | 41,635.46        |
| Employee benefits expense                         | 24   | 3,090.48         |
| Finance costs                                     | 25   | 1,711.64         |
| Depreciation and amortisation expense             | 10   | 2,791.70         |
| Generation, administration & other expenses       | 26   | 3,588.79         |
| Prior period items (net)                          | 27   | (313.58)         |
| <b>Total expenses</b>                             |      | <b>52,504.40</b> |
| <b>Profit before tax</b>                          |      | <b>12,326.16</b> |
| <b>Tax expense:</b>                               |      |                  |
| Current tax                                       |      |                  |
| Current year                                      |      | 2913.64          |
| Earlier years                                     |      | 154.84           |
| Deferred tax                                      |      |                  |
| Current year                                      |      | 397.85           |
| Earlier years                                     |      | (293.90)         |
| <b>Total tax expense</b>                          |      | <b>3,102.43</b>  |
| <b>Profit for the year</b>                        |      | <b>9,223.73</b>  |
| Significant accounting policies                   | 1    |                  |
| Expenditure during construction period (net)      | 28   |                  |
| Earnings per equity share (Par value ₹ 10/- each) | 42   |                  |
| Basic                                             |      | 11.19            |
| Diluted                                           |      | 11.19            |

So, this is what has been stated in the profit and loss account, so for the year ended the 31'st March 2012, the earnings per share that the company has generated is 11.19 per

equity share. As we will see in the subsequent lectures, this earnings per share is an very important metric in determining the company's value. Now, let us go back to the thought questions for this lecture, we have spent a little bit of time in discussing the concept of depreciation today.

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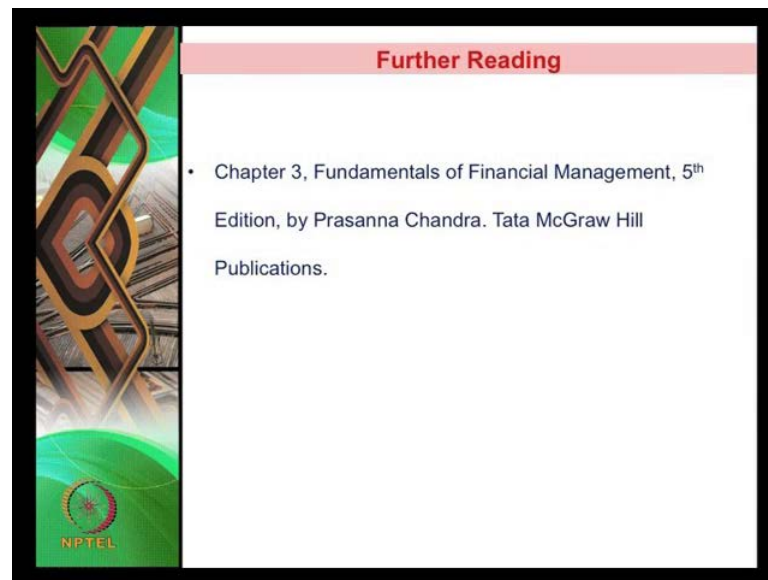


**Thought Questions**

- What is the advantage that depreciation provides to companies?
- Can the company make profits, but at the same time fall short of cash?

My question therefore, is why should we actually have depreciation at all, is there any advantage that depreciation provides to companies. Question number 2, can the company make profits, but at the same time falls short of cash, in the case of NTPC the company is making healthy profits. Similarly, there are several companies that are making healthy profits, would making profits indicate that the company has adequate amount of cash or could there be circumstances, when even though the company is making profits, the company could experience problems of cash shortfall. So, think about these questions and we will try and discuss them in the next lecture.

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If you want to do more additional reading I would still suggest, the reading that we have been looking at for the last two lectures, which is chapter 3 of text book fundamentals of Financial Management.

Thank you.