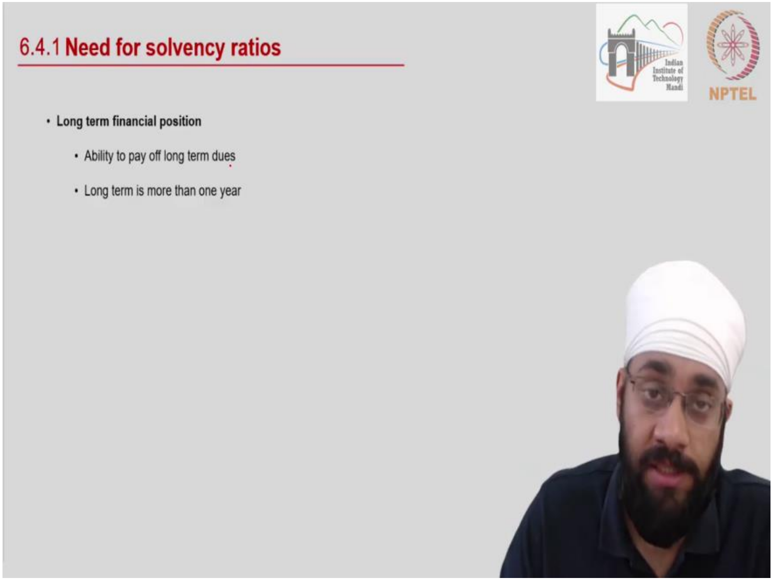
Financial Accounting
Dr. Puran Singh
School of Humanities and Social Sciences
Indian Institute of Technology, Mandi

Lecture – 73
6.4 Solvency Ratios

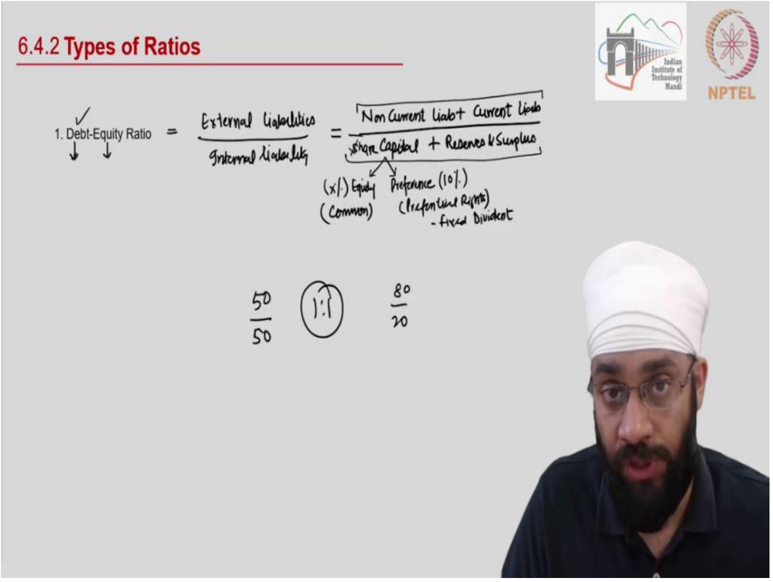
In this video, we are going to discuss the indicators that are used to judge the solvency position of the business.

(Refer Slide Time: 00:24)



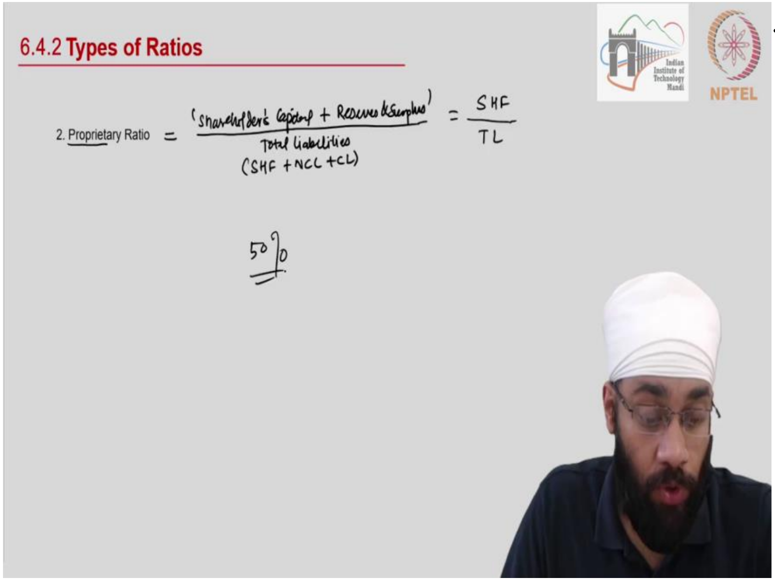
The solvency position refers to the long-term financial position of the business and we want to judge the ability of the business to pay its long-term dues. What are the long-term dues? Long-term dues refer to the non-current liabilities. These are bank loans or debentures or bonds that you have in the balance sheet. Again, there are three indicators which help us understand the solvency position of the business. Let us look at these indicators one by one.

(Refer Slide Time: 00:58)



The first indicator is called *Debt to Equity Ratio* and this indicator can be calculated by dividing the external liabilities of the business by internal liabilities. Debt is the external and equity is the internal liability. The only catch here is that external liabilities will include both non-current liabilities and current liabilities because both are external liabilities. We divide this by internal liabilities which are essentially the capital of the shareholders plus any reserves and surpluses. As discussed earlier, the reserves and surpluses also belong to the shareholders. So, the internal liabilities are the liabilities of the business towards the owners of the business, towards the shareholders of the business and those liabilities include the share capital, the reserves and surpluses. Share capital can be of two types: equity shares and preference shares. I will explain these two terms as well. The equity shares are also called the common shares. The preference shares on the other hand enjoy some preferential rights in the sense that there is a fixed dividend that they get. The dividend is the return, the part of profit, which is distributed to the shareholders. The preference shareholders have a fixed dividend, say 10 percent. On the other hand, equity shareholders, the common shareholders, have no fixed dividend. Hence, it is called the preferential right of the preference shareholders. Also, the preference shareholders have a right to first payment in case of liquidation of the business. If the business is coming to an end or there is an investment, which is coming in, preference shares have the first right to be paid, before the equity shareholders. Therefore, the name is preference shares. Essentially both the categories represent the share capital. The only thing is there are some preferential rights given to some shareholders and hence those are called preference shareholders. You are now aware of one more new term; the other terms are fairly familiar to you. Using these terms, you can calculate a debt-to-equity ratio. This ratio tells you how much money has been brought in by the owners of the business and how much money has been borrowed from other parties. In the long run whatever has been borrowed from the other parties will need to be repaid. So, you have to ensure that there is a balance between what you bring in as an owner and what the outside parties have brought in. More importantly when you go to outside parties; for example, you go to a bank to raise a loan, they will also look at this ratio. If you are into a business and have ever approached a bank for a loan, you would know that the bank asks you to prepare a project report: tell us how much money will you make, how will you be able to pay off the loan, how much money are you investing on your own, and how much money do you want us to invest. Imagine you go to a bank and say, I am going to put in 50 and you also put in 50 from your side; which means a ratio of 1 is to 1, assuming no other current liabilities exist. Bank might say alright, you want me to put in equal money, but the risk is too much. So, I will not do 50-50; what I would rather want is that you invest 80 and I will invest the 20. Likewise, this negotiation could take place. All I am trying to indicate is debt to equity ratio is a very important ratio not only to be utilized by management internally, but also by the external parties when you are trying to increase your external funding, trying to raise more debt funding. Debt essentially refers to the loans taken by the company. In this case we are looking at the external liabilities divided by the internal liabilities to see what is the balance between the two. What is the ideal ratio? what is the thumb rule? Go to the industry average, whichever sector you are working in, there are numbers available on various platforms, where you could look and say these are the average numbers in the industry or top 5 competitors in the industry and they have this external to internal liabilities ratio. So, this is the first indicator which helps us understand the long term solvency position of the business.

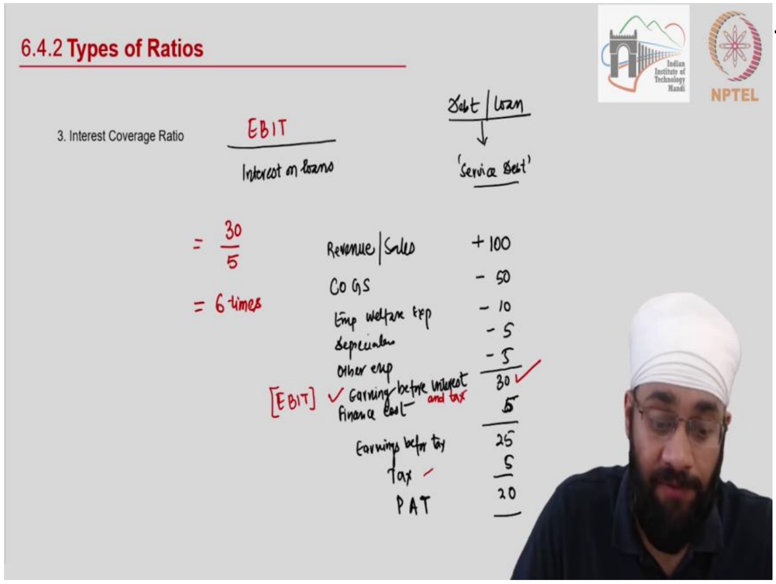
(Refer Slide Time: 06:35)



Let us go to the second indicator which is called proprietary ratio. What is proprietary ratio? The word proprietor is typically used to refer to the owner of a business proprietor. The proprietary ratio therefore, would help us understand, what is the percentage contribution of the owners of the business, in the business. What is the total investment in the business and what is the contribution of the owners in that: this is what this ratio is going to tell us.

The contribution of owners is equal to the capital that they have: shareholders capital. Add to it any other reserves and surpluses, all the extra money which has been put into short-term and long-term reserves. This is the contribution of the shareholders. You divide this by the total liabilities, which essentially means all the funds, internal and external funds, in the business and you have a proprietary ratio. Total liabilities include non-current, current liabilities, and the shareholders capital. So, this will include shareholders' funds. By the way this term is called shareholders' funds. So, shareholders fund plus non-current liabilities plus current liabilities: practically the total on the balance sheet on any side, because total liabilities are equal to total assets. Thus, you divide the contribution of shareholders by total liabilities (or total assets).This tells you the percentage,: x percent, 50 percent of the money is contributed by the shareholders of the business.

(Refer Slide Time: 08:25)

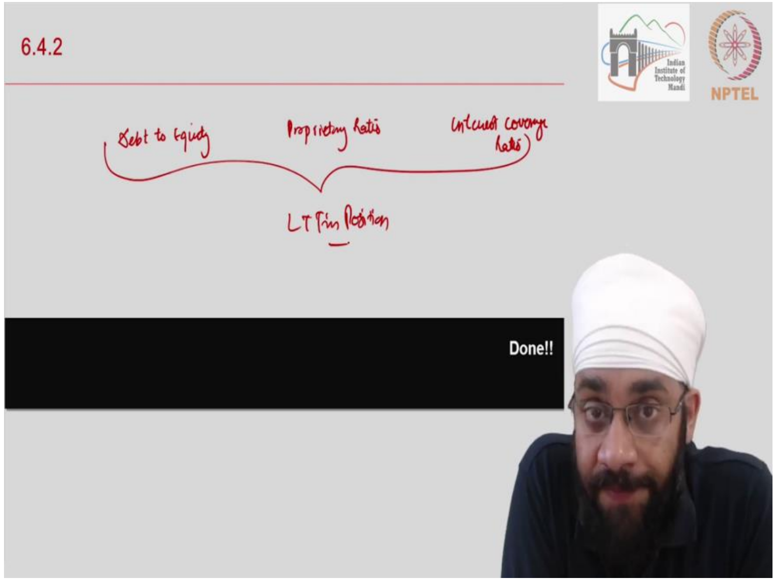


Let us look at one more ratio, which is called *Interest Coverage Ratio*. Again, this is very useful ratio in gauging the ability of the business to service the debt. Let me explain this. When you take a debt, debt refers to a loan, you will have to service the debt. An analogy of this is you purchase a car and now you have to get the car serviced every few months, every few kilometres. So, servicing the debt here means that you have taken the loan and you have to pay the interest amount on it. You have to pay interest regularly. The service here refers to the ability of the business to pay the interest regularly. We are clearly interested in the interest amount on the loan. So, interest on all the loans that are there in the business. And when we talk about the ability of business to pay off these loans; what are we talking about? We are talking about the money which is available, the cash which is available in the business to pay the interest. The question is how much cash is available in the business? What we need to do is to look at the income statement; because this is an expense, the finance cost is an expense. If you remember the format of the income statement you have your revenue or sales and let us say this is 100. You take out from this the cost of the goods sold, let us make it 50 and then you have employee welfare expenses. Let us say 10 and you have depreciation, let us say 5 and there can be all the other expenses as well. Let us say this is also 5. After you take all of these out; you have to pay the finance cost. Finance cost, let us say, in this case is 5. What is the money which is available to pay this finance cost, the interest amount of 5: that is the question. And the answer is, this is the inflow; you get this much money and then you have to first pay off the cost of the goods sold, you have to pay the employee welfare expenses, depreciation and other expenses. When all the expenses have been paid, you reach a number which in this case is 30. This is the earning of the business, earning of the business before paying the interest, before paying the interest. This is the money which is available to pay off the interest; you have to pay 5 as the interest, but you have 30 rupees to pay it. After you pay this money, you are left with 25, this is called earnings before tax; because on this amount you pay a tax, let us say 5, and then you reach a number called Profit After Tax or PAT. It is a popular acronym which is used to refer to the profit earned, during the year, profit after tax, also called the *bottom line* of the business. What we wanted to take out from this is earnings before interest. And actually, not only interest, this is the earning before interest and a tax; because tax also needs also to be paid. So, I am adding these two words to it, before interest and tax. And this is a standard term which is called EBIT, *Earnings Before Interest and Tax.* There you go.

You are already familiar with the statement, the format of the income statement. I have taken an example to show you the calculation for EBIT; how do we get this number called EBIT. How are we going to use this number now? Well, we put this in the numerator, EBIT. So, we had 30 rupees to pay 5 rupees of interest; which means you had 6 times, your earnings were 6 times that of the interest, the finance cost. It means that even if your earnings fall down by five-sixth; if your earnings fall by 5/6 times, you will still be able to pay off the finance cost. This means the bank can rest assured that you have capacity to pay the interest, you are doing good business.

That is where this ratio comes in and that is how it helps in decision making of the business and of the parties that are trying to lend to the business. So, we have discussed three ratios to judge the long term financial position of the company.

(Refer Slide Time: 14:10)



We first spoke about the external liabilities divided by internal liabilities, which was debt to equity ratio. And then we looked at the proprietary ratio and finally, we discussed the interest coverage ratio. So, these three ratios help us judge the long-term financial position of the business, the solvency position of the business.

I will see you in the next video, where we will do a tutorial to understand these three indicators in more detail.