

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

Lecture – 83
6.13 Practice Problem – Solvency Position

In this video, we are going to look at a practice problem where we will comment on the solvency position of a company, which is the long term financial position of the company.


(Refer Slide Time: 00:26)

Comment on Solvency position of the business

✓ 10% Preference Share Capital	200000
• Equity Share Capital	400000
• Capital Reserve	50000
• Reserve & Surplus	50000
✓ 9% Debentures	200000
✓ Sundry Creditors	50000
✓ Bills payables	50000
• Land and Building	200000
• Plant and Machinery	200000
• Goodwill	100000
• Investments	300000
✓ Total Assets	1500000
• Finance Cost	5000
• EBIT	50000

Handwritten notes on the slide:

- SHF (Shareholders' Funds) is indicated for the top four items.
- Current Liabilities is indicated for Sundry Creditors and Bills payables.
- Non-current Liabilities is indicated for 9% Debentures.
- Assets are categorized into Long-term Assets (Land and Building, Plant and Machinery, Goodwill, Investments) and Short-term Assets (Total Assets).
- EBIT is noted as 50000.
- Finance Cost is noted as 5000.
- Handwritten diagrams show a flow from 'Company' to 'Bank' and 'Debtors', and from 'Debtors' to 'Company', with '10Cr' and '10L' labels.



On the slide, we have a list of items like share capital, current liabilities, noncurrent liabilities, fixed assets, possibly short-term assets, EBIT, finance cost etc. So, some details are given and we have to comment on the solvency position.

(Refer Slide Time: 00:45)

Practice Problem

$$\text{Debt to Equity} = \frac{\text{External Liab}}{\text{Internal Liab}} = \frac{NCL + CL}{SHE}$$
$$= \frac{300,000}{700,000}$$
$$= 0.42857$$

The slide contains a handwritten calculation for the Debt to Equity ratio. It starts with the formula: Debt to Equity = External Liab / Internal Liab = (NCL + CL) / SHE. The values 300,000 and 700,000 are substituted, resulting in 0.42857. Below the calculation is a handwritten diagram of a balance sheet. It shows a T-account with '50' on both the debit and credit sides. To the right, there is a circle containing '100'. Below the T-account, there are several arrows and numbers: '20', '8', '12', and '100'. A small circle with '50' is also present to the right of the diagram. In the bottom right corner, there is a small portrait of a man wearing a white cap and glasses, and the NPTEL logo is visible in the top right corner of the slide.

Solvency position is a long-term financial position. The first indicator that we are going to use is debt-to-equity ratio. Debt-to-equity ratio is equal to external liabilities divided by internal liabilities.

Debt-to-Equity= External Liabilities/ Internal Liabilities

The external liabilities include both non-current liabilities and current liabilities. The internal liabilities refer to shareholders' funds. Shareholders' funds, as we know, is the total sum of the capital: preference capital, equity capital, reserves & surpluses, profits during the year, all the different kinds of reserves. Let us just figure that out. So, we are going to need the external liabilities first. Where are external liabilities? You have debentures and you have creditors, bills payables and that is it. So, these are the external liabilities. Debentures is something that we have not discussed and I think now we should discuss it. Debentures necessarily are a kind of loan. Let us say this is a company that can go to a bank, this is a bank, and take a loan. So, the bank says alright here is a 10-crore loan, you pay me a 10 percent interest per annum or there are EMIs that you pay. Instead of going to the bank, the company can go to the public. Company can go to the general public and say we want 10 crore rupees and these 10 crores are going to be raised through the public. And you do not have to give us 10 crores, you can only give us 10,000 rupees, let us say. So, 10,000 rupees per unit of loan. Everybody can give us 10,000 rupees as a loan and as soon as it sums up to 10 crore, nobody else will be able to give us that loan. So, all we are doing is instead of going to the bank, we are going to the public.

You go to the public and raise this debt from the public, each unit of debt is 10,000 rupees. You promise that we will pay 10 percent to you instead of going to the bank or you will pay them 9 percent may be slightly less compared to what the bank would charge. But you have the opportunity to raise much higher loans compared to what you get from the bank. So, each of these instruments is called a debenture. In the international parlance it is also called a bond, but bond you know is more used for the government issuing these debentures. So, when the government issues debentures these are called bonds, when the company issues debentures these are called debentures and that is it. To sum up, debentures are the loans that are taken from the public. The company can raise money from the public through shares and also through debentures. The debentures have a fixed interest rate to be paid on them. The shares do not have a fixed interest. So, that is what debenture is, it is essentially a loan taken by the company. There you go. Noncurrent liabilities are 250,000 and current liabilities are 50,000, sum total 300,000 is the external liabilities. The internal liabilities are going to include the capital and reserve and surpluses. I think I have discussed the preference share capital before. It is the same as the share capital, but they enjoy certain rights over and above the equity shareholders. They have some preferential treatment in distribution of profit; one example is that they have a fixed return, fixed dividend just like debentures. So, preference share capital, plus equity share capital, plus all the reserves, this is what is going to make shareholders' funds and this is what was external liabilities. There you go. So, total shareholders' funds comes out to be 700,000. So, you have 700,000 here there you go; the debt-to-equity ratio is 3:7, you could further simplify it as well.

What it means is out of the total capital of the company, total money invested in the company, 30 percent is being contributed by the external people and 70 percent is being contributed by the internal people in the organization. The question is how do you comment on this? What is an ideal ratio? Again, look at the top 5 peers or the industry average, but as I have discussed earlier, raising debt can be advantageous for the company. Say for example, a company requires 100 rupees to be started; you can put in all of your 100 that is one option. The other option is that you put in 50 and you raise a loan from the bank worth 50, in which case you have 50 remaining. This is you and this is from the bank and this is your company which needs 100. So, you can put in all 100 or you could put in only this 50, if you put in the 50 only, then you are saving 50 which could be used elsewhere, but the business will go on. On the business you make, let us say, 20 percent profit and here you will have to pay to the bank, let us say 12 percent rate of interest. So, this additional 8 percent also comes back to you as a return. That is

the advantage you have of taking debt. How much debt should you have is a question which is an advanced topic in financial management discussed in another course. However, for now if you want to say whether this is a good position to be in or bad position to be in; you compare it to previous years you see the trend or you compare it to the competitors.

(Refer Slide Time: 07:42)

Practice Problem

$$\text{Proprietary Ratio} = \frac{\text{SHF}}{\text{TA}} = \frac{700,000}{15,00,000} = 7:15$$
$$\frac{7}{15} = 42.1\%$$

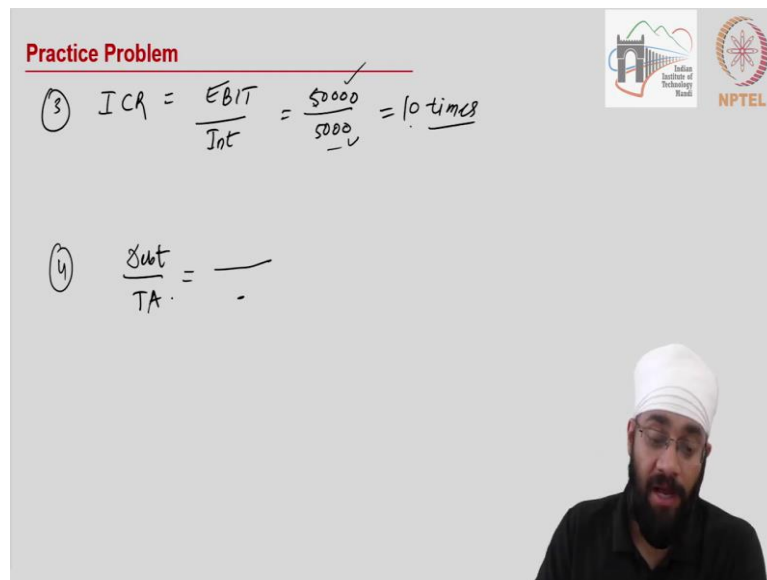
Let us next look at another ratio, which is called proprietary ratio. Proprietary ratio simply tells us the shareholders' funds, contribution to the total assets of the business.

Proprietary ratio = Shareholders' Funds / Total Assets

We have both these numbers; shareholders' funds are 700,000 and total assets are given here. Total assets are 1500000. So, 7:15; that means, if we do the calculations, 7 by 15 will come out to be how much? About 42 percent is the contribution of the shareholders, in the total assets of the business. That is how you comment on this. It means the remaining portion is contributed by somebody else.

(Refer Slide Time: 08:47)

Practice Problem

$$(3) \text{ ICR} = \frac{\text{EBIT}}{\text{Int}} = \frac{50,000}{5,000} = 10 \text{ times}$$
$$(4) \frac{\text{Subt}}{\text{TA}} = \frac{\quad}{\quad}$$


And finally, we have the interest coverage ratio, which is earning before interest and tax divided by the interest amount which has to be paid.

Interest Coverage Ratio = EBIT / Interest

The numbers are here. You have 50,000 divided by 5,000 gives you 10 and the units are times. It means you have earnings, using which you could pay this interest 10 times over if required, which is a very good position to be in. It means that you can afford to lose earnings, a lot of earnings and you know one-ninth of the earning for example, and the 10th part of the earning will still be able to pay off your interest. So, these are three ratios which we have discussed that we used in commenting on the long-term financial position of the business.

There can be other ratios. For example, you may want to know what is the contribution of debt to the total capital which is essentially the opposite of the proprietary ratio. So, you could do that: you could figure out this number, taking all the long-term debt and the total assets. You could be interested in saying what is the ratio of fixed assets to the debt or to the equity again.

So, the ratios could be manufactured, you could come up with a new ratio if it is relevant to the business, of course. You cannot just make up stuff which gives you no information. Whatever information is required, accordingly you could create a new ratio. But these are some standard indicators which are used by various business websites as we have seen in the annual reports of the companies.

Let me stop here. I will see you in the next video.