Financial Accounting
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Lecture - 29
Interpretation and Analysis of Financial Statements

Namaste. In last many sessions we have been discussing about preparation of financial statements, P and L, balance sheet, cash flow and so on. In this and the next few sessions we will discuss about interpretation and analysis of the statements.

Now, there are large number of users of the financial statement, they mainly include the owners, the prospective owners that is investors who want to invest in the company, they also include employees, managers who are insiders may want to use the statements for decision making, it will also include government, regulators, suppliers customers. So, there are large number of users, and different users use the statements for different purposes. So, they may not be interested in all information in the statements, statements will give you assets, liabilities, income expenses, cash flows and so on.

But a particular user is interested in a particular thing in the statement, and to understand that particular aspect you will have to analyse the information given in the statement. The information will be just taken as a raw data, it will be analysed not only for this year for earlier years, it can be compared with the statements of other companies or other entities or of industry average, then the information in the statement becomes much more useful and enriched. For that it is necessary to understand various techniques used for analysis and interpretation of the statements.

I have been telling you right from first session that for your company download the annual report, read the whole report, read the financial statements. So, now though it is mainly analysis of statements, we are also going to use other information. So, if you have still not read the whole report please read your report once again your annual report once again so, that you know other information and we will try to understand how that information can be analysed.

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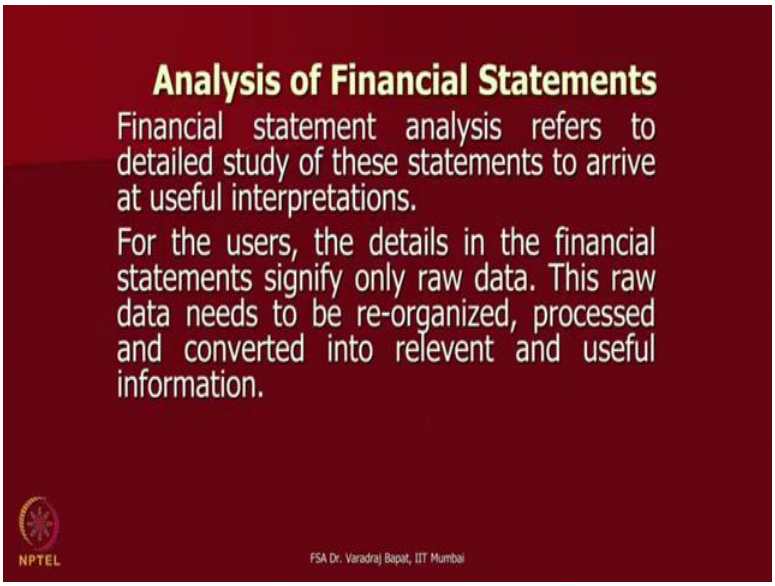

So, we will be discussing about financial statement analysis, we have already just seen that the information is raw data.

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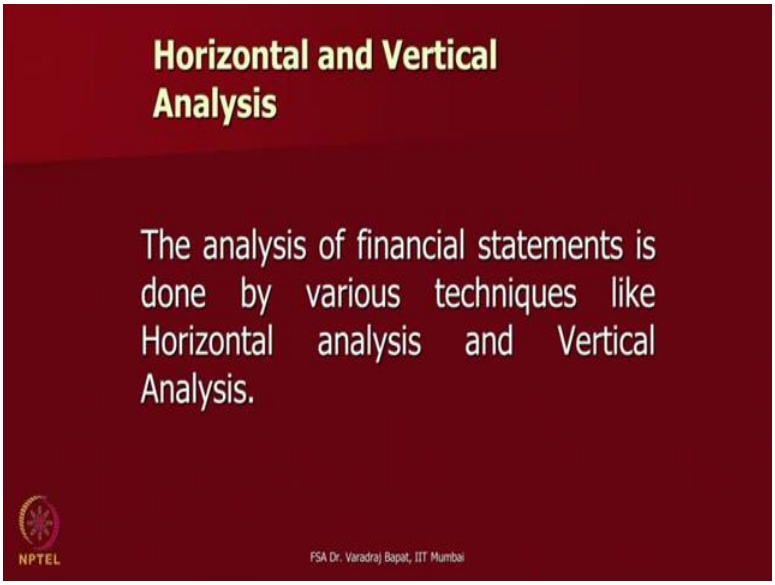

It needs to be reorganised and converted into relevant information as per the needs of the user.

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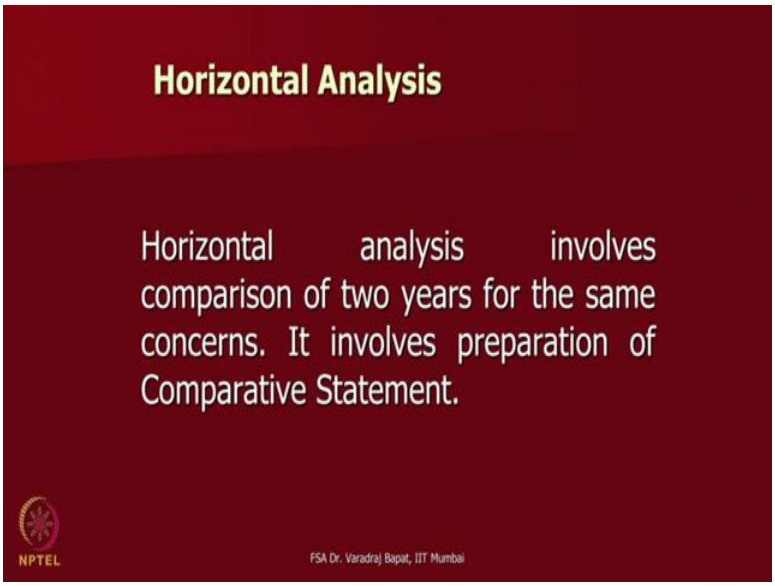

There are two major types of analysis, one is known as horizontal analysis and other is vertical analysis. Now as the name suggests in horizontal analysis we compare. So, we take 2, 3, 4, 5 years of financial statements and convert it into a comparative statement. So, instead of just taking the raw figure, we want to convert it into a comparative statement and then compare it over a period of time.

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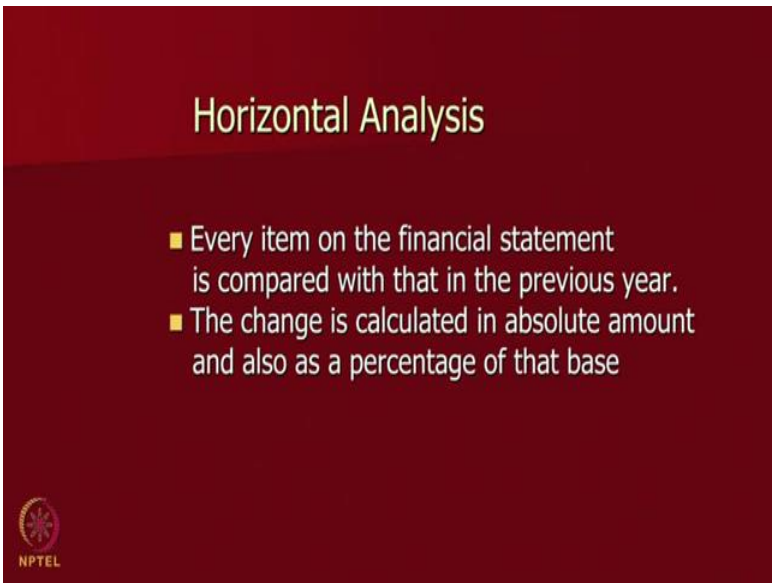

So, every item is to be compared with the previous year and the change is calculated as a absolute amount as a percentage to that base. So, what could be the base in P and L

account, what is the base? The total revenue which be normally a base and every amount is considered as a percentage of that total and we will compare it with last year or last to last year over a period of time, that is called as a horizontal analysis.

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In vertical analysis, this involves finding out the relationship between two items in respect of the same year.

So, here we prepare a common size statement.

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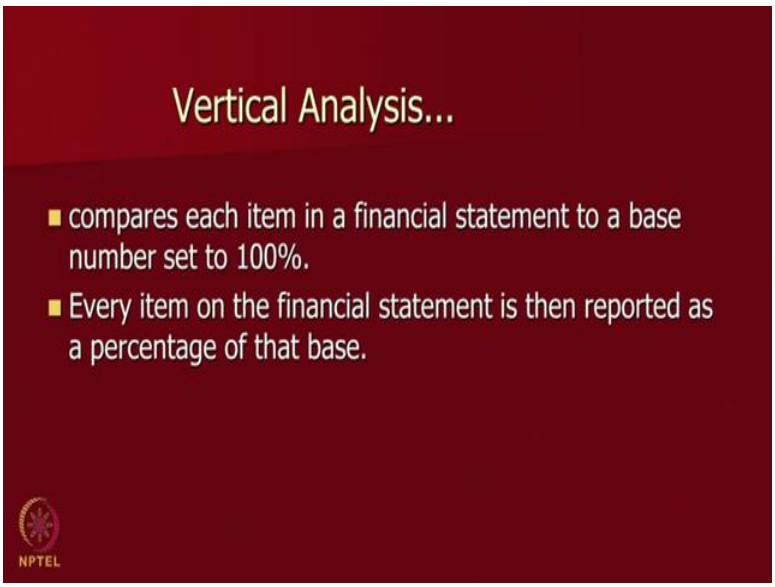

Now, it compares each item, the base of the total is considered as 100 and then we find each item as a percentage to the base.

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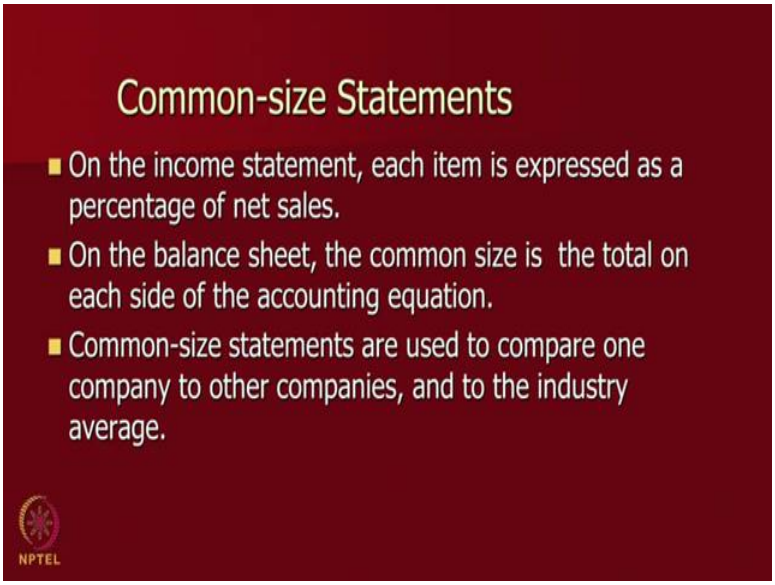

In common size statement on income statement, each item is expressed as a percentage of net sales or the total revenue. For balance sheet we take the total of balance sheet and common size statements become very much useful not only for comparison of items within the same company that is just the last year of the same company, but it is also useful across the industry.

So, for example, suppose there is a small cement company and there is a large cement company their absolute figures will be different. So, you cannot compare them in absolute figures, but you convert them as a percentage of sales if you are comparing P and L and then it will be compared across different companies. We are going to see a few cases like that, so this is called as a vertical analysis. In both the cases there is a comparison, but in horizontal analysis it is comparing for the same company with earlier periods earlier years or quarters, and in vertical analysis we first convert it into a comparative statement and we can compare with other companies or also with the industry ok.

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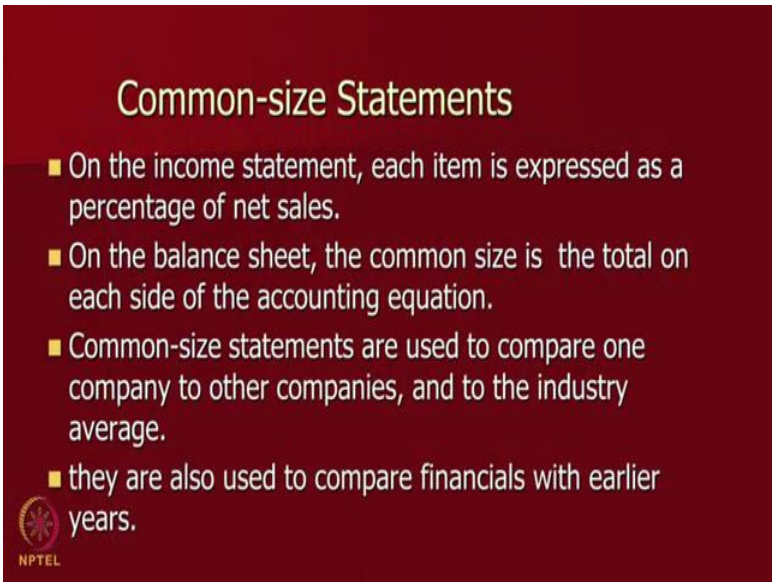

Here also we can compare with earlier years of the same company as well.

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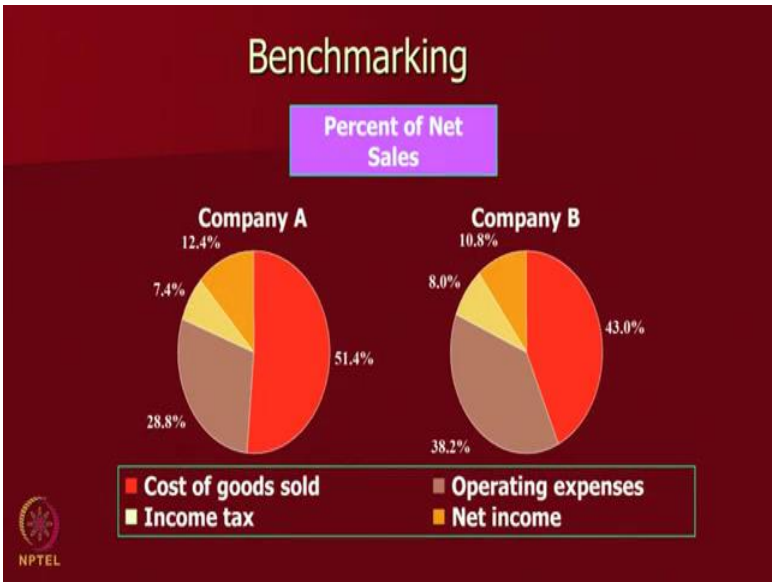

Other method could be benchmarking. We can also convert the whole statement into a pie chart as you can see here for company A and B, total sales as a percentage is calculated. So, you can understand see here this part is cost of goods sold for company A is 51 percent, for company B its 43 percent. So, A is spending much more on cost of goods sold like that we will be able to make comparisons. Operating expenses if you compare for A it is 28 percent, but for B it is higher.

So, A is using more of cost of goods sold so, that is more raw material, but has relatively lesser operating expenses while B has lesser percentage on the raw material on the cost of goods sold, but has more percentage of operating expenses like that the structure of the two companies is different. Keep in mind that this comparison should normally make be made with the same industry and in reasonably similar sizes.

If you are comparing with very small company with very large company sometimes the comparison may not be meaningful. I think you would have read segmental statements because for large companies they are having businesses of different types. So, the whole P and L and balance sheet is converted and is reported for each business segment and if you want to study a particular industry instead of taking the total P and L, just take the segmental revenue statement for the relevant segment; are you getting me? So, these are some of the techniques used for comparison; now, we will go to the most important technique that is called as ratio analysis.

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There are large number of ratios which can be calculated. In fact, any figure can be compared with any other figure and we can get more and more ratios, but we are going to discuss some important ratios and how these ratios can be interpreted.

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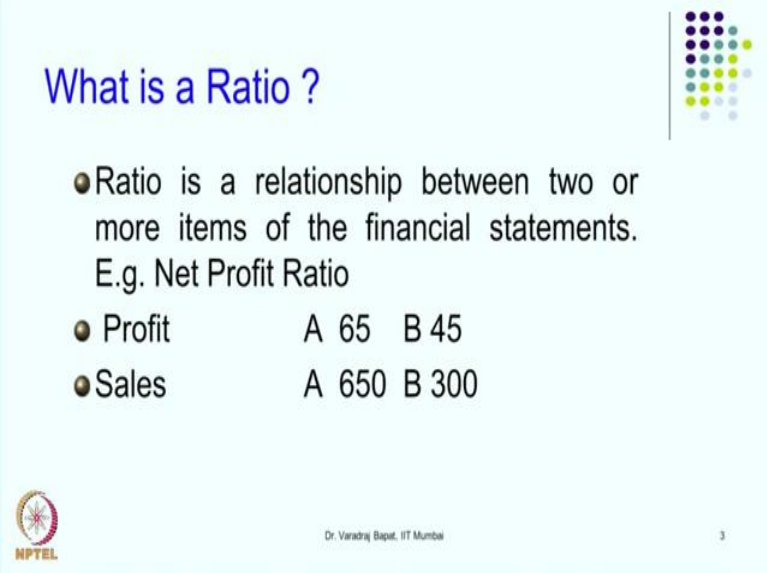

First of all what is a ratio? This is relationship between two or more items in financial statements example is net profit ratio. So, everybody is interested in profitability so, we can calculate the profit in P and L account. In fact, P and L account is meant for that, but to understand the profitability only calculating the profit is not enough.

For example if we get this information that profit of company A is 65, company B is 45; so, which company is more profitable? Only on the basis of these perhaps most will say that A looks profitable because their profit is much more than that of B. If we get the information of sales also, now what do you get? You realise that A is able to make a profit of 65 on sales of 650, B is able to make profit of 45 on sale of only 300; that means, if you just take a percentage here you will realise that, profitability of A is 10 percent while profitability of B is 15 percent. So, B's business is actually more profitable than that of A. This is the insight which ratios give; absolute figure like these often can give you a kind of information which may be misleading.

So, any figure in the financial statement needs to be seen in relation to others, that is why ratio analysis is a very very important technique we have seen variety of stakeholders, all the stakeholders find ratios very much useful and variety of ratios can be calculated ok. So, we have just discussed this.

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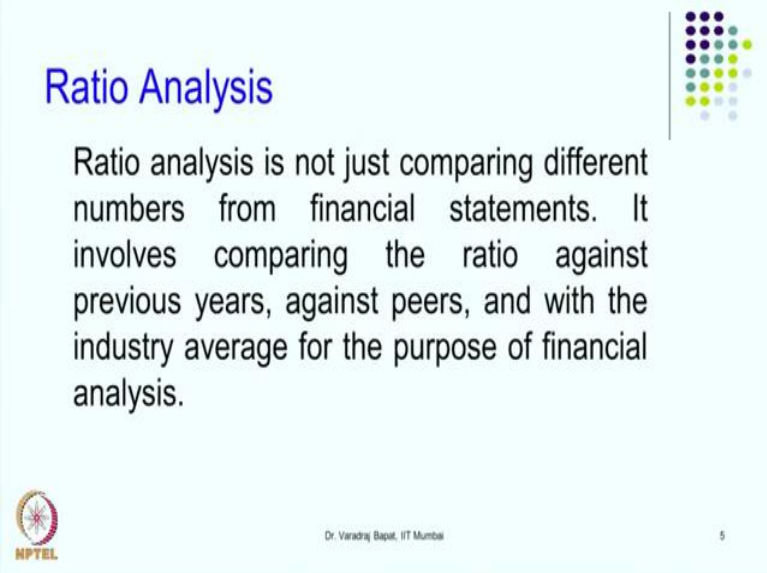

Now, this is not just comparing the financial statements, the different numbers in statement we can also do variety of comparisons. Because see absolute figure cannot be compared, but a relative figure can be compared that is why once you calculate ratio you can compare it with previous years, you can compared with peers with industry averages and so on, that is why much more insights can be drawn from ratios then what can be drawn from raw statements.

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We have just discussed these that number of stakeholders have interest in variety of

information; particularly for example, performance. So, people want to know not only present performance, past performance and likely future performance for that ratios are very much useful. Because financial statements only give you the information about the current state; you calculate the ratio compare it with the past. So, that we know the past and present performance, beyond that we can use the ratios for doing projections because using ratios, we can calculate the probable position in future; of course, based on some assumptions that is why for performance evaluation of future also this is useful.

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We also to come to know about strengths and weaknesses of the company because we can compare with peers and with industry average. So, we know that compared to other company our profitability is good or compared to other company our operating costs are less or compared to other company we can see that our advertising costs are less.

So, we can take a decision there that is there a necessity to advertise more spend more on advertising increase our sales? We can see that in a particular segment our market share is less. So, is there a possibility to push more in that market segment? So, like that variety of decisions also can be taken. Sometimes if we collect information about operations, let us say that our transportation costs are less that is a strength, but our packing costs are more. So, is there a scope for going for a alternate packing like that number of decisions can be taken if we have information for if we calculate the ratios carefully.

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Now, ratios can be classified in variety of ways as I told you hundreds of ratios can be calculated for different purposes, but here we are going to discuss mainly the ratios which are calculated from financial statements. But when we come to solving the case we will consider other ratios as well, let us in the beginning understand the ratios which are calculated from financial statements. So, first one is liquidity ratios.

Now, what do you understand by liquidity? As the name suggests, this is about availability of cash or liquid money with the company. So, we will calculate certain ratios wherein we can comment on liquidity. Then we have got capital structure, leverage activity, profitability, return and so on let us look at each type of ratio.

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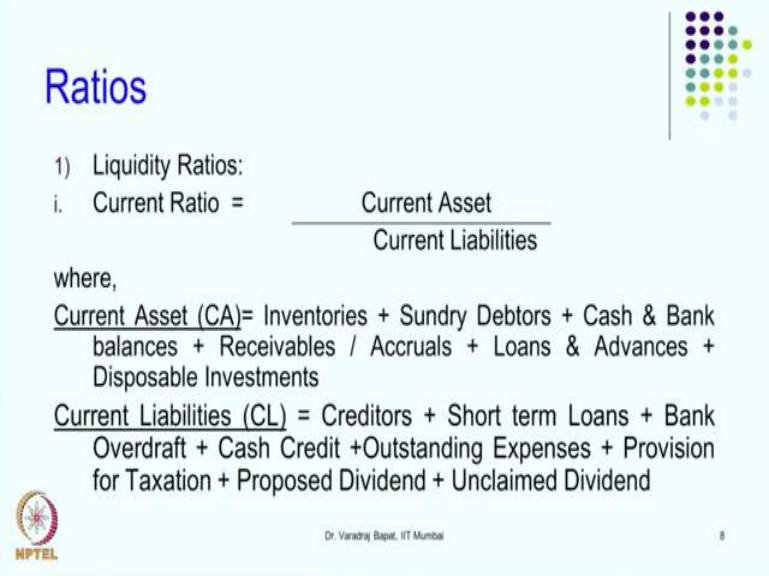

Now, one of the most important ratio of liquidity is current ratio. This is extensively used not only by shareholders, but by managers, also by bankers by suppliers and so on. This is a simple ratio current assets divided by current liabilities. So, all the current assets are total, all the current liabilities are total and you get a relationship which is known as current ratio.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

where,

Current Asset (CA) = Inventories + Sundry Debtors + Cash & Bank balances + Receivables / Accruals + Loans & Advances + Disposable Investments

Current Liabilities (CL) = Creditors + Short term Loans + Bank Overdraft + Cash Credit +Outstanding Expenses + Provision for Taxation + Proposed Dividend + Unclaimed Dividend

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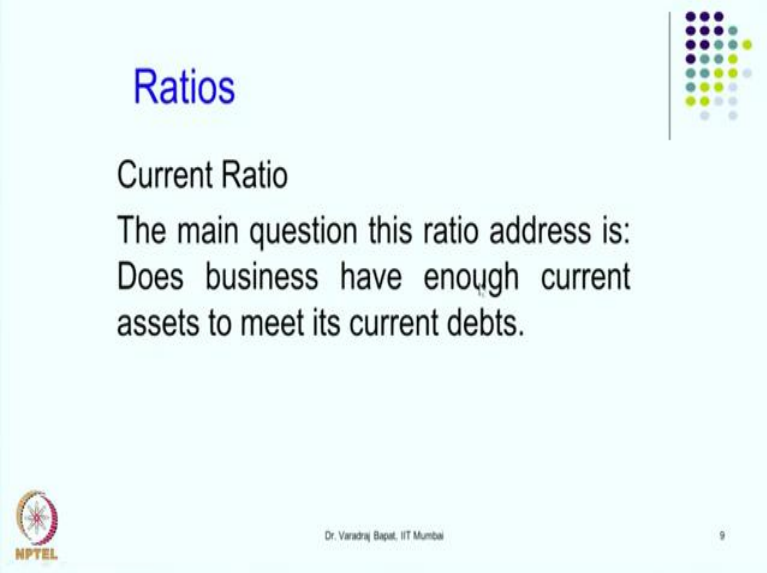

This tries to answer this question that whether business has enough current assets to meet its current debts. So, what should be the ratio? What is what how much ratio is required? It becomes obvious that your current assets should be at least equal to current liabilities. But normally based on conservatism, the acceptable ratio is considered as 2 is to 1.

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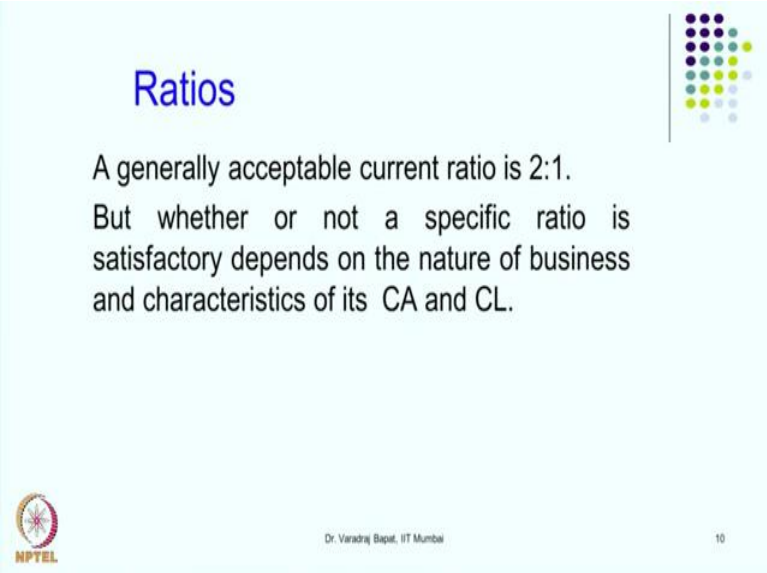

But it may change significantly from the nature of business and also from the characteristics of CA and CL.

So, for example, if company A has current ratio of 2.5 and company B has current ratio

of 1.5, can we say A is better? Normally yes, because they are able to have current assets of more than 2 is to 1, but sometimes it changes by the nature of business which businesses would need more current asset and which need less current assets; can you just give a thought.

Suppose one company is a manufacturing company, the other company is a service company which will have more current ratio? Normally manufacturing company will need much more current ratio, because they have raw material stock, work in progress, finish good stock, many times they also have more of finish good, they have raw material, working progress, finish goods and even large quantity of debtors. Because when they sale they do not realise the cash immediately whereas, a service company may have less current ratio.

For example if you think of railways, what will be the current ratio of railways? The current ratio will be very less because they do not have to give any they do not have to have any daters they are not giving any credit. In fact, passengers book the money put the money book the tickets in advance. So, perhaps there current assets can be negative so, their current ratio will be very less. So, it changes from the nature of business, it also depends on characteristics of CA, CL like we were talking that company A may have 2.5 company, B may have 1.5.

But if company A has very large quantum of inventories, which have become old inventories they have out dated inventories and they cannot be traded easily or sold easily then the quality of their CA is in question. Or if they have large quantum of receivables which are not being it is not possible to collect them easily. Suppose they have given some they have sold goods to let us say to Malya, and Malya is absconding can you collect that money? It is very difficult the company would have become bankrupt, but still if the amounts were shown in their current assets, then the quality of current assets become questionable that is why it is said that it depends also on the characteristics of current assets.

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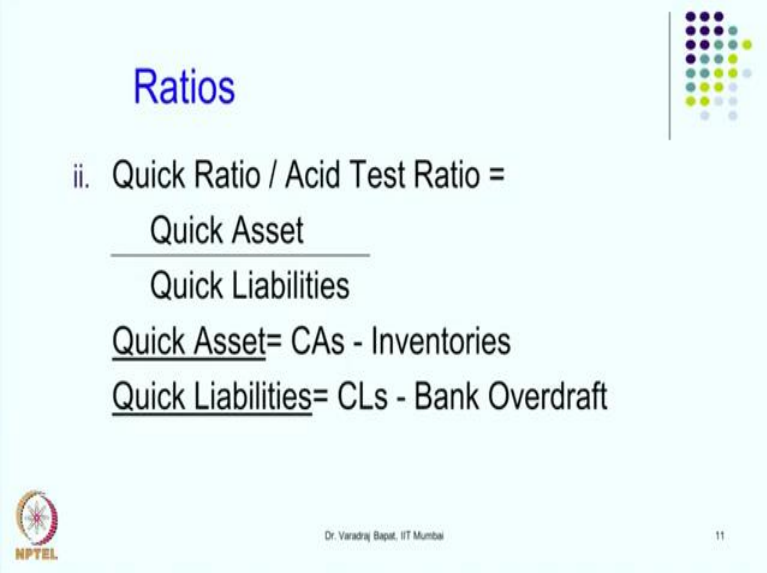

So, to go more in deep another ratio is calculated that ratio is known as quick ratio or sometimes it is called as acid test ratio; now the formula is quick asset upon quick liabilities. So, in current ratio it was current assets upon current liabilities, in quick ratio we have adjusted the current assets by reducing inventories and we have adjusted current liabilities by reducing bank overdraft.

$$\text{Quick Ratio / Acid Test Ratio} = \frac{\text{Quick Asset}}{\text{Quick Liabilities}}$$

Where,

Quick_Asset= CAs - Inventories
Quick Liabilities= CLs - Bank Overdraft

Now, what is the logic why is inventory is reduced? Because normally inventories are not quick in nature, it takes a long time to convert them into cash. Because first of all we will have to make sales, then if it is a credit sale it will get converted into debtors and after the cash debtors are collected we will get cash. That is why, any in liquid asset in the current assets; all current assets are supposed to be liquid within 1 year period, but of that those which cannot be easily converted there should be reduced. That is why something like inventories reduced, part of your debtors are slow moving debtors, they should also be reduced then we get quick assets. And for quick liabilities we consider almost all current liabilities except those which do not have to be repaid immediately.

In case of bank overdraft it is a facility which is sanction for 1 year and normally company may not have to repay it in a shorter period of time that is why quick liabilities generally are considered as CL minus bank ODE. I am saying generally again and again because this depends on the users. Keep in mind all ratios these are not calculated as per any accounting standard this is not prepared by our own company other people are judging our company. So, as per the needs of the user they calculate ratio so, we have got hundreds of different ratios and people can use different formulas. But the formulas which are normally used are being discussed in the class.

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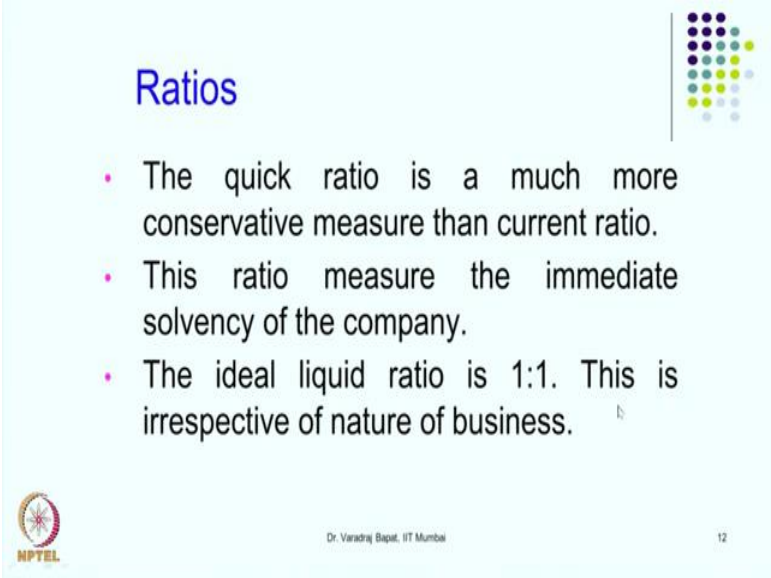

Now, quick ratio is a quiet conservative measure than current ratio so, what we are calculating here is a immediate solvency of the company. In current assets we were calculating overall solvency or ability to meet current debt, in quick ratio we are looking and trying to check their ability to repay the immediate debt. So, the ideal current ratio is 1 is to 1, normally this is irrespective of nature of business because for any business you would need enough quick assets to meet at least quick liabilities ok.

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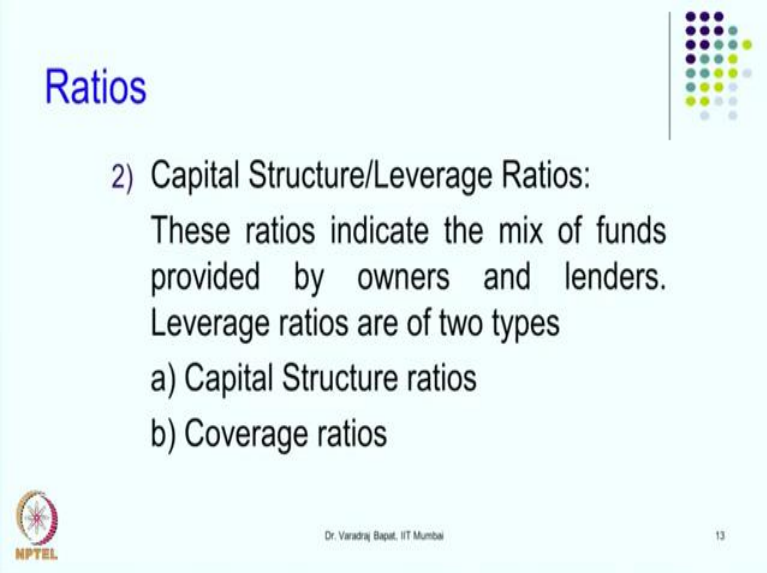

So, first two ratios where mainly for short term stability of the business, now let us look at the long term stability, which is also known as capital structure or leverage. If you all know that if we analyse the sources of funds, there are two major sources of funds one it comes from owners, other it comes from lenders. It can be in the form of equity or it second one is normally in the form of loans or debentures.

So, if company has to raise 100 rupees, they can either raise 100 of equity no debt maybe 80 of equity 20 debt, 50 of equity 50 debt. So, these three companies have a different capital structure. Now we calculate variety of ratios to know the capital structure of the company now is it good to have more equity or more debt? Which one will be lasting with the company for a longer time, you will realise that equity need not be repaid immediately whereas, debt has to be repaid as on a due date that is why having more debt is relatively more risky. So, from a stability view point higher equity is better.

Now, we will calculate different ratios we seek to measure the percentage of equity at the same time if we have too much of equity and no debt it negatively impacts profitability. So, company has to seek a balance between fair amount of equity and debt, let us look at the ratios.

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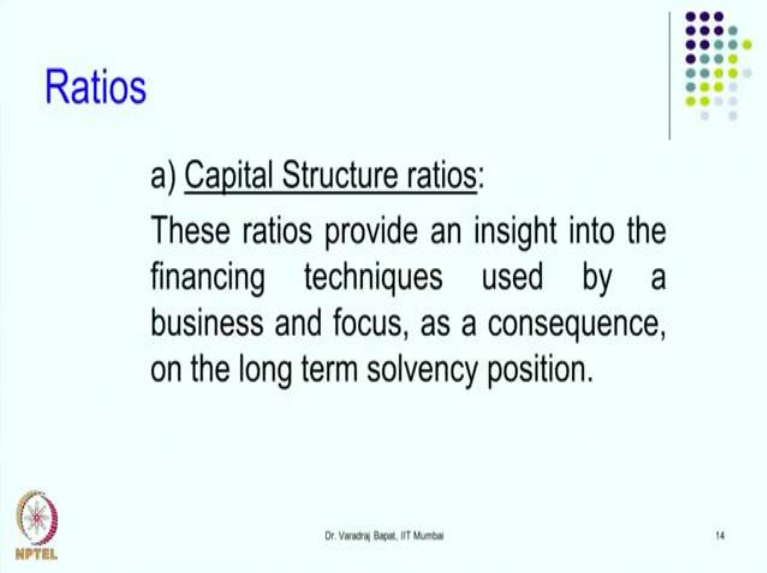

So, from the capital structure angle these are the ratios which gives insight into long term solvency position of the company.

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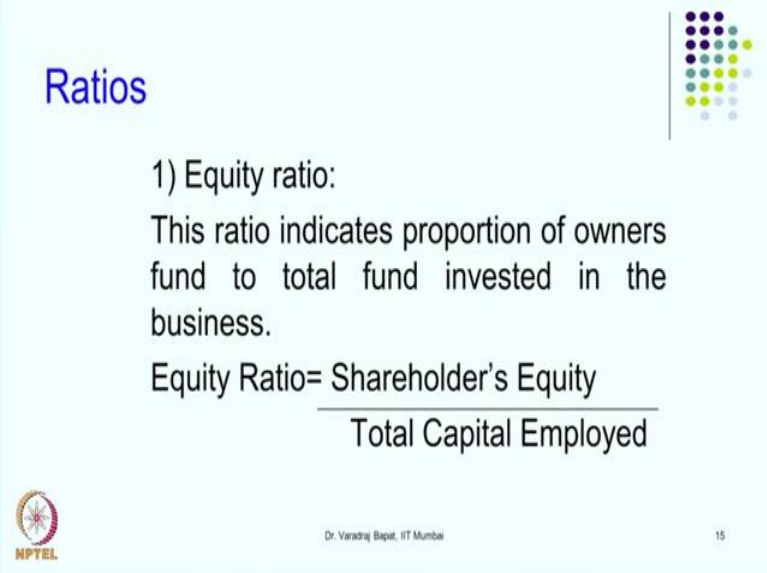

The first one is equity ratio. As the name suggests the total capital employed is the denominator and we see what percentage of capital employed is being funded by the equity or by the owners fund. So, it is popularly known as equity ratio.

$$\text{Equity Ratio} = \frac{\text{Shareholder's Equity}}{\text{Total Capital Employed}}$$

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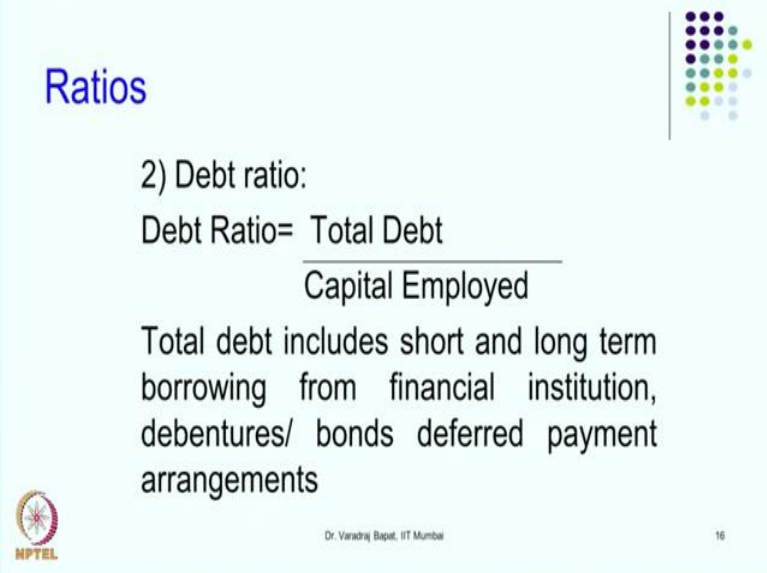

Now, complementary to this is a debt ratio. So, debt ratio seeks to find total debt as a percentage of capital employed. So, see denominator is same for both, the money which is either equity or debt is taken in the as a capital employed, in the first ratio it was a ratio of equity, the second ratio is the equity of the ratio of debt. So, we are consider the various types of borrowings or deferred payment arrangements.

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Capital Employed}}$$

Where,

Total debt includes short and long term borrowing from financial institution, debentures/ bonds deferred payment arrangements

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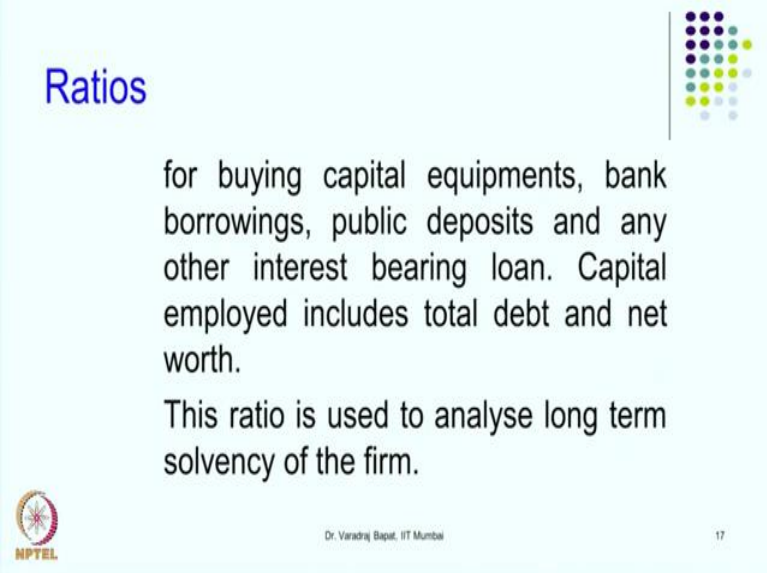

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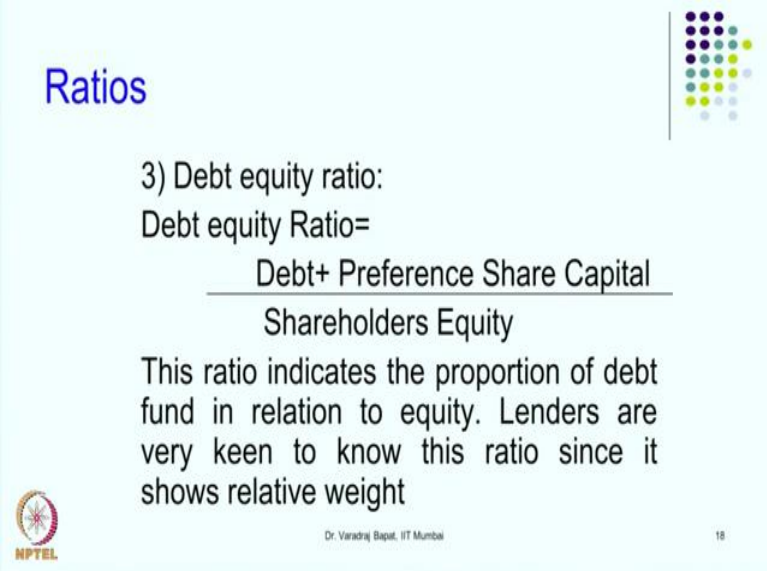

The third ratio is known as debt equity ratio perhaps it is much more popular than the first two, because here we are finding debt as a percentage of equity. So, numerator we have got the moneys which we have to repay and denominator has got money which we do not have to repay, moneys which we have taken from debt lenders upon moneys which we have taken from owners.

$$\text{Debt equity Ratio} = \frac{\text{Debt} + \text{Preference Share Capital}}{\text{Shareholders Equity}}$$

Now, here preference capital though is a part of equity or the owners fund is taken in the numerator, because it is required to be repaid at a certain debt. So, higher ratio will mean more risk and a lower ratio indicates more stability. This is a very important ratio which is seen by bankers and many other stakeholders, including suppliers and also the owners of the company ok. So, we will stop here, in the next session we will continue our discussion on ratios and then we will go for solving certain cases on ratio analysis. Namaste.