Security Analysis and Portfolio Management

Prof. C. S. Mishra

Department of VGSOM

Indian Institute of Science, Kharagpur

Lecture No. # 10

Financial Statement Analysis (Contd.)

Hello, in the previous session of financial statement analysis, we discussed about the different types of financial statements, like balance sheet income statement, cash flow statement and their content.

We also discussed about where do get this financial statement information, like annual report, websites etcetera, analysts reports, and we also talked about how to analyze the financial figures provided by this financial statements, we started discussing about it, in that we discussed about comparative statement, train analysis and common size statement. In this session of financial statement analysis, we are going to discuss about analyzing the financial statements with the help of financial ratios.

When you say financial ratios, we mean that there are as usual the ratio means, the relation between numerator and denominator. So, you have certain figures in numerator and certain figures in denominator, and fine comparing those two figures, we find a ratio, and this ratios can be found out for different companies the s c s can be found out for one company for different years, and this ratios also on them, on their own, do not mean anything, but when you compare this ratio with another company, relatively we can say which company is better than the other one. Or if you are comparing this ratio of one company with, you know, about one year with another year, then we compare, we find out whether this particular company has done better than the previous year or the last year or it has done worst then that. So, ratio on its own may not convey much, but ratio when it is compared with a previous figure or a, another company's comparable, company figure, then it makes a lot of sense.

(Refer Slide Time: 02:03)

So, coming to the next, what are different types of Financial Ratios, we have one the first category ratio is the Profitability; Profitability ratio means the profit relation to certain things of the company another, at basically two types of profitable ratio is, one is profit relation to the activity of the business like revenue or income of the business how much profit has happened compare to the income that has been generated by the company during a particular period.

Similarly, another profitable ratio that we have is their profit in relation to the investors money, if the investors have given x Rupees throughout a in a particular period or on a particular period, how much profit this company has earn on this particular investments. So, those investors can find out, whether they have earned enough, what they have expected or not. So, there are two types of ratios, profitable ratios, one is the relation to the income of the company, another relation to the investors money of the company.

Then we have the next one is efficiency ratio; efficiency ratio indicates how efficiently the assets or the resources of the company have been used. So, better efficiency refer to the better ratio will say better efficiency. So, we can say that, yes, this company has used assets in a better way or not, so that is called an efficiency ratio.

Then we have the Liquidity ratio; Liquidity ratio talks about how liquid is the company in a short run, and how solvent is the company, whether this company will be able to

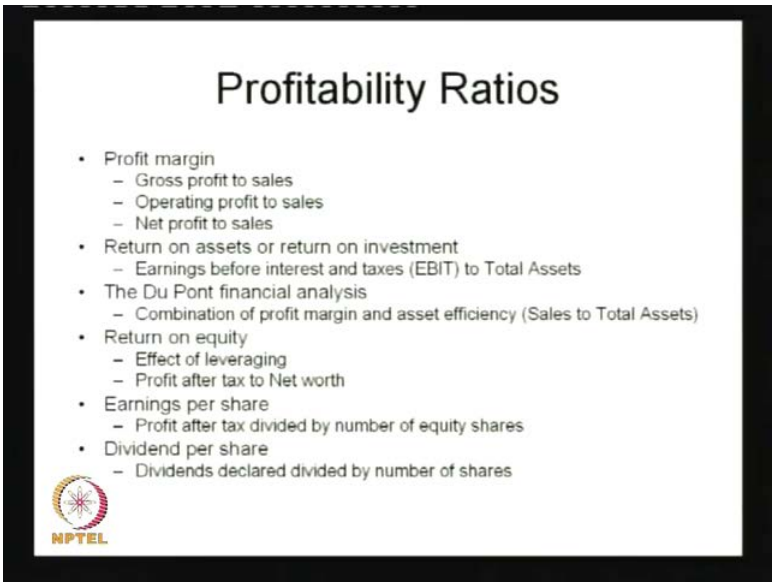
meet the obligations, during a particular period of time or not, how comfortable the company is in meeting the current obligations. So, this Liquidity is also known as short term solvency ratio.

Then we have the solvency ratio, since you have already covered the short term solvency in terms of Liquidity, this solvency ratio talks about the Long Term Solvency over a long term, how comfortable with the company in repaying the loan, and how much dare the company has taken relation to the equity of the company, because high dare could be high risk for the company also; so, those things are measured in terms of solvency ratio.

Then we have some other ratio, where we talk about the capital Market standing of the company. So, in this case, unlike the previous four types of ratio, where we get the figures from the financial statement, like balance sheet or income statement or something else, that is published by the company; in this ratio, this type of measurement, that is capital Market standing, we talk about certain figures from the financial statement of the company, also certain figures from the Market, like capital Market for that matter.

For instance, there is a popular ratio called price to Earnings per share p ratio, as such; in that case, Earnings per share figure is found out with the help of information from the annual report or financial statement, where as the Market price per share is found out from the Market asses; so, that is capital Market standing.

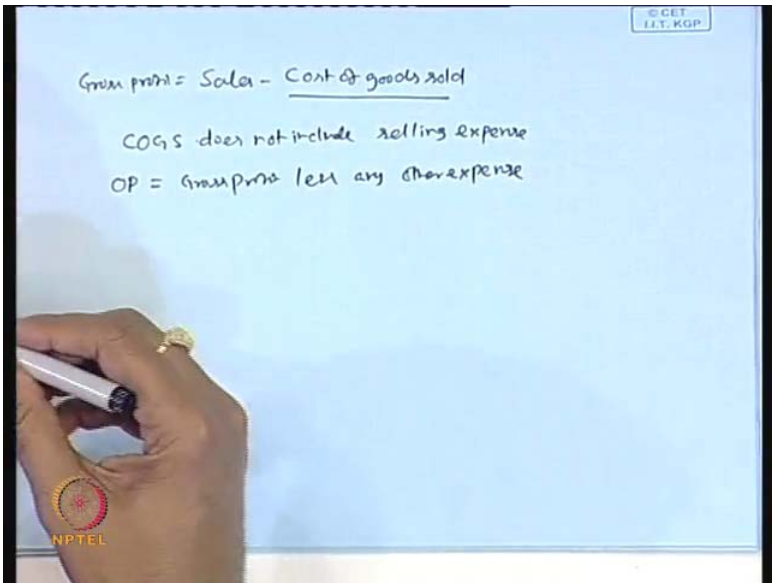
(Refer Slide Time: 04:50)



Then we go one by one different types of ratio here, and discuss what are the implication in the profitable ratio that we have is the first one is the profit margin. So, profit margin means, how much profit this company has made in relation to sales of the company, where the income of the company as such, and the profit are of different types as such, different type in the different stages of profit, the first level of profit of the company could be gross profit to gross profit of the company as such.

So, gross profit means, actually whatever the sales have taken place, and how much cost of goods sold is the relation to sales, that difference actually gives us the gross profit. So, gross profit can measured in different ways, and the gross profit to sales ratio, it is always given in terms of percentage, and that shows, yes, this much profit has been generated out of the sales, which will take care of rest of the expenses, and the thing, that is not covered in cost of goods, now will be covered out of gross profit. Then we have something called operating profit to sales, gross profit might not have include certain expenses, but they are essential to the business.

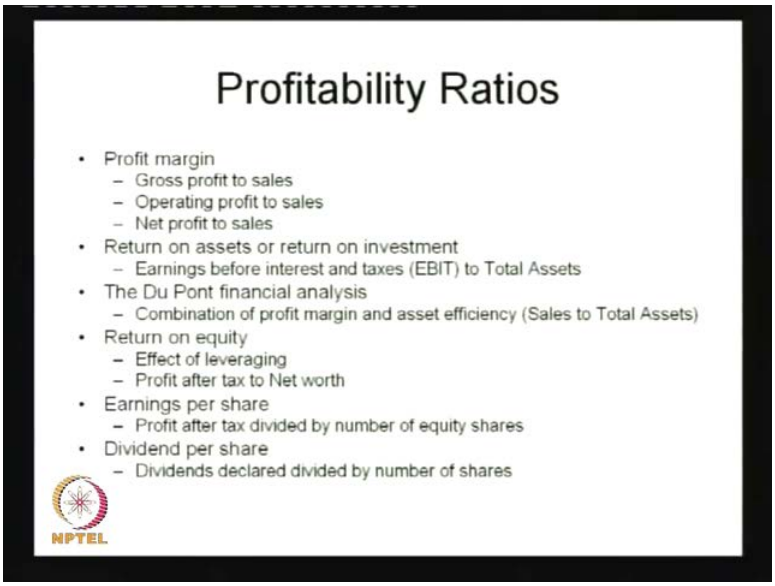
(Refer Slide Time: 05:57)



So, typically what happens in the gross profit, when you say, it is sales minus cost of, cost of goods sold; this cost of goods sold COGS does not include something called selling expenses. So, in that case, the operating profit will take care of this gross profit less any other expense excluding interest.

So, that is operating profit; that means, having got the gross profit how much this company has earn, So, that it can meet other expenses including selling and distribution expenses then we deduct that we got the operating profit, and how much operating profit is there relation to sales that is giving as a operating profit margin, and this operating profit margin once you have higher, that means, the company has been able to do the business at a lower cost of operation, if the operating margin has increased, that implies, that the operating cost of the company has actually declined in relation to sales over a period of time.

(Refer Slide Time: 07:10)

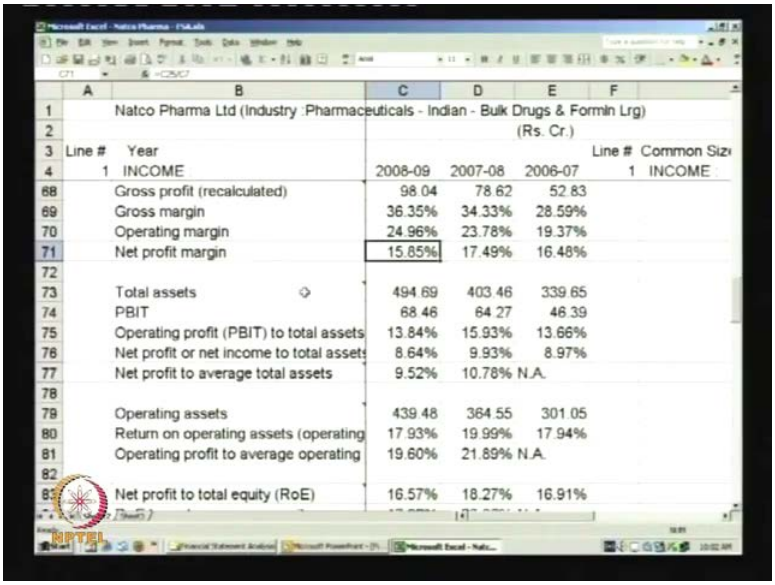


Then we have the next figure that is called net next ratio, that is called net profit to sales or net profit that is also known as net profit margin. So, in net profit margin nothing but the profit after tax, after taking care of all the expenses, operating expenses, any other non operating expenses and interest expense, financial expense, and tax, whatever profit is leftover that is known as net profit, and the net profit, we say is popularly known as net profit margin. At the end of the day, all these ratios, that is profit margin should always be higher, higher is always better, and that shows the company is able to comfortable comfortably meet the expenses, and still creates some surplus for the investors

Then we have the return on assets, return on investment, which related to investment, in this we talk about what is the profit that has been earned on the total investment of the

company, see total investment is always reflected as total assets of the company, and the numerator for this ratio is profit before interest and tax or Earnings before interest and tax. So, Earnings before interest and tax, after total assets gives us the profit return on investment, and this particular ratio should always be in any case higher. So, that the company can satisfy the investors, yes, the investor can feel happy about it, that is the company has earned a lot of return on the investment or adequate return on the investment, that they have made in the company.

(Refer Slide Time: 08:42)



	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Size
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
68		Gross profit (recalculated)	98.04	78.62	52.83	
69		Gross margin	36.35%	34.33%	28.59%	
70		Operating margin	24.96%	23.78%	19.37%	
71		Net profit margin	15.85%	17.49%	16.48%	
72						
73		Total assets	494.69	403.46	339.65	
74		PBIT	68.46	64.27	46.39	
75		Operating profit (PBIT) to total assets	13.84%	15.93%	13.66%	
76		Net profit or net income to total assets	8.64%	9.93%	8.97%	
77		Net profit to average total assets	9.52%	10.78%	N.A.	
78						
79		Operating assets	439.48	364.55	301.05	
80		Return on operating assets (operating	17.93%	19.99%	17.94%	
81		Operating profit to average operating	19.60%	21.89%	N.A.	
82						
83		Net profit to total equity (RoE)	16.57%	18.27%	16.91%	

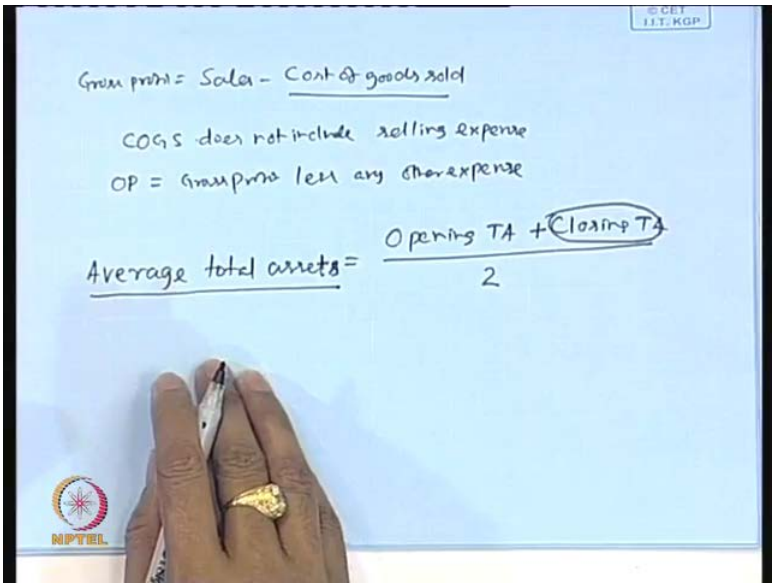
So, if we go back to our example, we have got the profit before interest and tax for this particular company 68.48, which was actually 64 .27, it was earlier 46. 39 and this profit by interest and tax, which also can be known as something, some other way then other also it said operating profit.

So, this total assets of the company of the of this company is 494.9, which is in 2008-09 and PBIT 68.46 as the ratio between these two is 13.84 percent, which was actually 13.6 6 percent in 2006-07 and 2007-08 it has gone up to 15.3, whereas, it has declined to 13.84 percent in the latest year. So, one has to now find out, why this particular decline has taken place from 15.93 percent to 13.84, because it could be, because of different reason; that means, the profit might not have increased substantially compare to or this sales of the see total assets of the company has gone up from 403 to 494.69 is a lot of increase, where as the profit before interest and tax has gone of marginally. So, because

of that, we can, one can see there is a fall in the ratio, that is profit before return on investment from 15.93 percent to 13.84 percent.

Another way of measuring this particular ratio is to find out the net profit to total assets, in that case, we talk about the net profit of the company and the divide by total asset of the company total assets and net profit is always there, then that ratio in this company has gone down from 8. 97 percent 2006-07, 64 percent in 2008-09, this also could be because of the company has made less profit or company has made more profit, by the profit growth is not adequate to compensate for the growth in the total assets that has happened during these two year period of time; so, this is one.

(Refer Slide Time: 10:53)

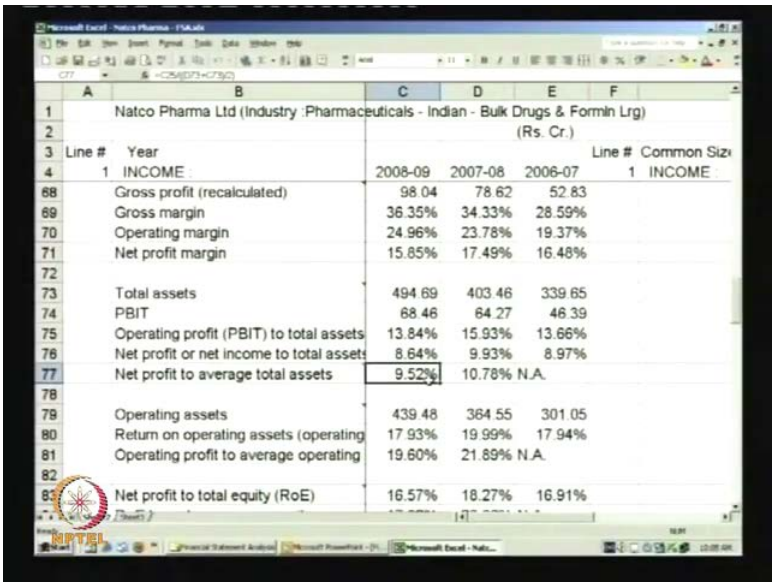


Another way that is discussed as per the net profit total assets, instead of taking the total assets of the latest year, that is closing total assets, one can also look at the total average total assets on, when you say, average total assets, average total assets nothing but total assets, what is there in the opening and the beginning of the year, opening total assets which is nothing but the closing of previous year. So, closing total assets whatever is there divided by 2, that gives us the average total assets, and instead of measuring the profit to ratio on closing total assets, we do measure an average of these two, that is average total assets, what is the superiority of this particular measure, instead of taking closing asset, why should we take average total assets, that the company might have acquired the assets, in the, at the, it was the end of the particular period; in that case, it is

not, it is not right that we expect the profit should be earn on those total assets, which has those assets which have been acquired in the latest time of the period as such.

So, to take care of that particular program, instead of taking closing total assets, there is a better, that if we take the average total assets of, that is average opening and closing and this way.

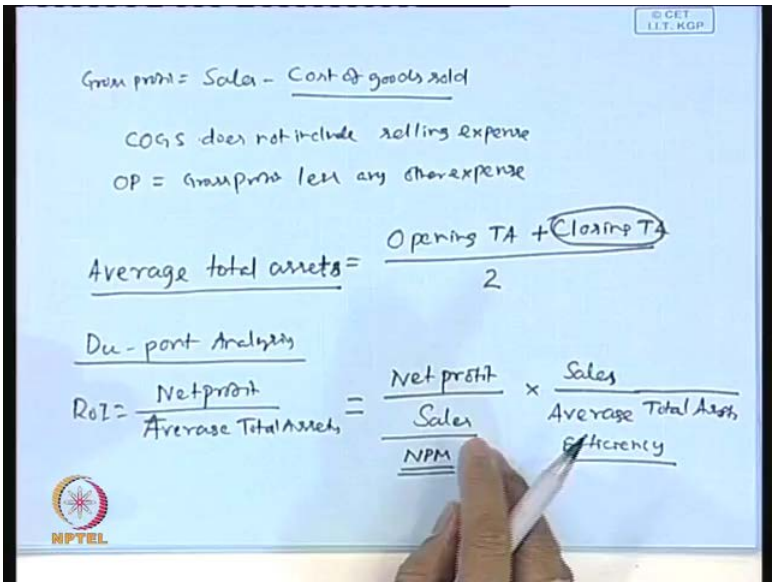
(Refer Slide Time: 12:02)



	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Siz
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
68		Gross profit (recalculated)	98.04	78.62	52.83	
69		Gross margin	36.35%	34.33%	28.59%	
70		Operating margin	24.96%	23.78%	19.37%	
71		Net profit margin	15.85%	17.49%	16.48%	
72						
73		Total assets	494.69	403.46	339.65	
74		PBIT	68.46	64.27	46.39	
75		Operating profit (PBIT) to total assets	13.84%	15.93%	13.66%	
76		Net profit or net income to total asset	8.64%	9.93%	8.97%	
77		Net profit to average total assets	9.52%	10.78%	N.A.	
78						
79		Operating assets	439.48	364.55	301.05	
80		Return on operating assets (operating	17.93%	19.99%	17.94%	
81		Operating profit to average operating	19.60%	21.89%	N.A.	
82						
83		Net profit to total equity (RoE)	16.57%	18.27%	16.91%	

This company has return on total assets or return on investment of, in the, when return is defined as per net profit, which has 10.78 percent, it has gone down to9.52 percent, one can see here, when he net profit as a total assets is measured in terms of closing asset is 8.64 percent, whereas if it is measured in terms of average total assets, this has come, gone up to 9.52 percent, possibly because that is profit to total assets was profit, was more in the previous relation total assets as such. So, this is one of the important ratios, that all the investors look at, and next we go to the next type of ratio, that is your du point financial analysis.

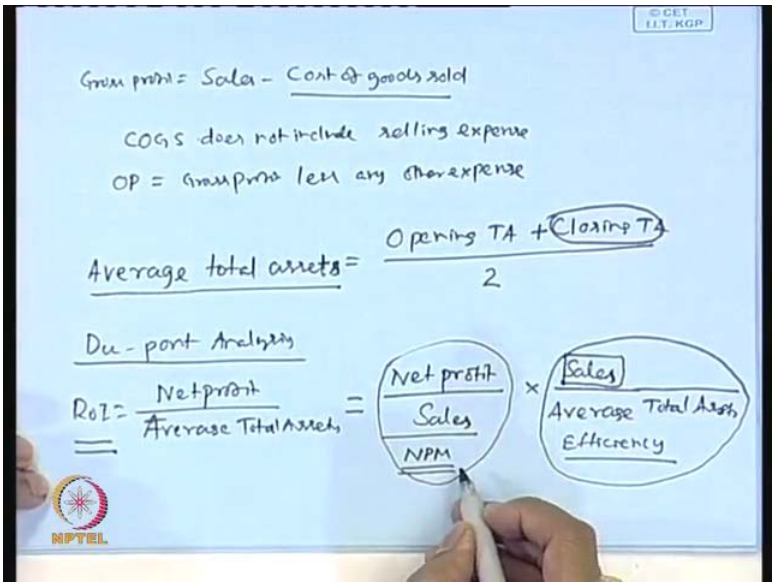
(Refer Slide Time: 12:58)



What happens, in this case we have got a combination of profit margin and asset efficiency and in this what happens, we have the du point chart is a very simple formula, what is very useful formula, useful analysis method, where we talk about the profit to total assets, that is net profit to average total assets is the return on investment, and which is nothing but if you expand further, it is nothing but net profit to sales into sales by average total assets.

So, what is the beauty of this particular analysis is that, one is talking about here net profit margin, and they talking about here the sales by average total of assets, which is essential talk about the efficiency of utilization of assets, and this talks about how profitable the operations are there; that means, the profitability multiplied the efficiency talks about how much return has been earned as far as the investment is concerned.

(Refer Slide Time: 12:58)



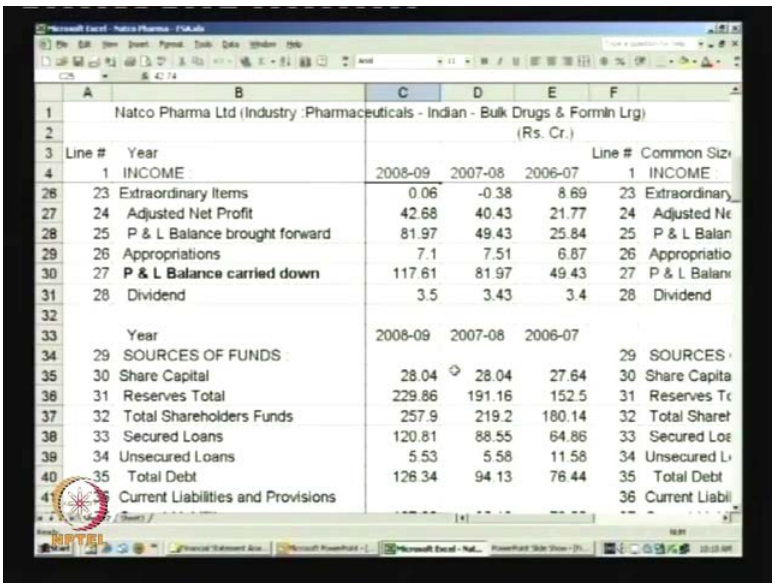
So, the investment return cannot be on its own, rather it will be based on the how profitably the operations have taken place at the same time, how efficiently these particular assets have been utilized to generate something called the revenue of the company. So, more this particular ratio, even if this particular ratio remains constant, if this ratio is higher, then also this particular ROI can be higher; similarly, if this ratio may remain constant, whereas the profitability of this activity could be higher, that also can lead to higher return on investment, and if the, both the things are taken care, it is higher over a period of time, then there is a double benefit of on the return on investment.

So, instead of saying return on investment as a function of profit to total assets is actually the function of how profitably the company has made the revenue, and also how efficiently the assets have been utilized, that is with by du point analysis. In fact, this particular analysis was used for the first time by the du point that is the chemical company, and in that, after that this particular analysis has been named by the du point itself is a very popular analysis; one can start the financial analysis, in fact, with this particular ratio as such.

Then, we move on to the next type of ratio, that is your return on equity, when we talk return on equity here, instead of talking about the investors as total, we talk about only the, all the equity holders of the company. So, investors can comprise of all the people, that are equity holders as well as debt holders, but here you talk about the equity holders

only, and that is we find out the return on equity as a percentage of profit after tax to net worth of the company. So, that talks about how much return that has been earned by the on the equity holders money.

(Refer Slide Time: 16:13)

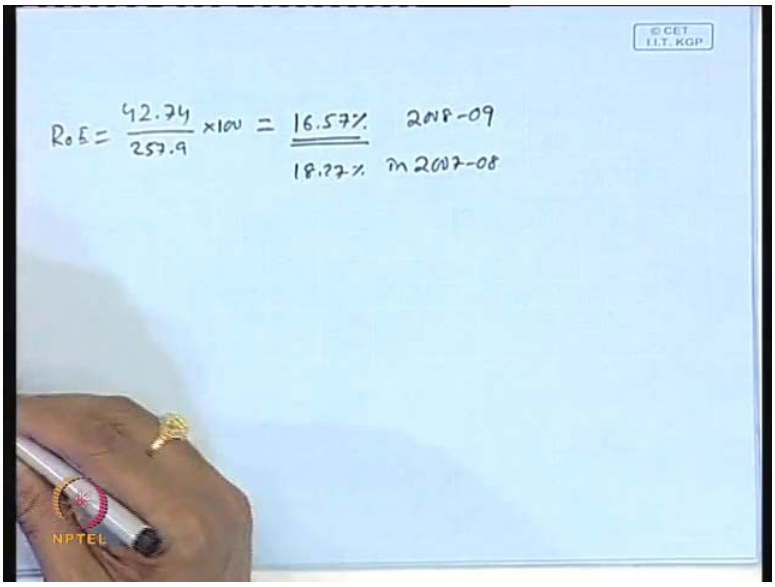


	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Siz
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
26	23	Extraordinary Items	0.06	-0.38	8.69	23 Extraordinary
27	24	Adjusted Net Profit	42.68	40.43	21.77	24 Adjusted Ne
28	25	P & L Balance brought forward	81.97	49.43	25.84	25 P & L Balan
29	26	Appropriations	7.1	7.51	6.87	26 Appropriatio
30	27	**P & L Balance carried down**	117.61	81.97	49.43	27 P & L Balan
31	28	Dividend	3.5	3.43	3.4	28 Dividend
32						
33		Year	2008-09	2007-08	2006-07	
34	29	SOURCES OF FUNDS				29 SOURCES
35	30	Share Capital	28.04	28.04	27.64	30 Share Capita
36	31	Reserves Total	229.86	191.16	152.5	31 Reserves Tc
37	32	Total Shareholders Funds	257.9	219.2	180.14	32 Total Share
38	33	Secured Loans	120.81	88.55	64.86	33 Secured Loa
39	34	Unsecured Loans	5.53	5.58	11.58	34 Unsecured L
40	35	Total Debt	126.34	94.13	76.44	35 Total Debt
41		Current Liabilities and Provisions				36 Current Liabi

So, if you, if we go back to our excel sheet, we will find out that return on equity of this particular company, which was 16.91 percent, which is based on profit after tax, that is the reported profit is 13.46 on equity of the company, that is nothing but total share holders' money, which total share holders' funds is giving as one 80.14 in the 2006-07, and similarly is 2.257.9 2, two core is in 2008-09.

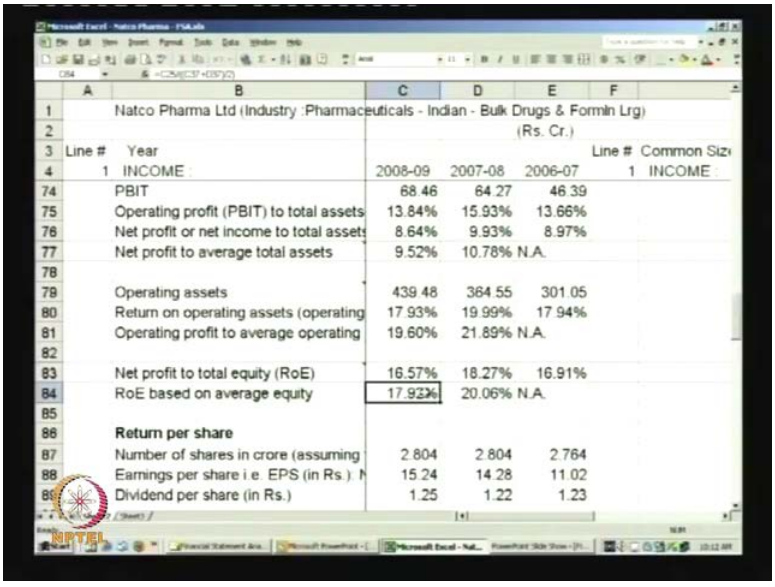
And this is the denominator, whereas it reported profit of the company is 42.74, that is 42.74 divided by 257.9 2. So, 42.74 divided by 257.9 into 100 has got return on equity of this particular company for this particular year, that is, 2008-09 which is nothing but 716.57 percent.

(Refer Slide time: 17:14)



So, 16.57 percent return on equity which has actually 18.27 percent in 2007-08 which has gone down to 2000 in 2008-09, it has gone down to 16.57 percent, which is obviously not a good sign that return on equity of this particular company has actually declined, but it could be, because of, that is company might have gone more equity or it could be because of the profit itself has not gone up substantially lesson to what the equity has actually moved up.

(Refer Slide Time: 17:45)



	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Size
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
74		PBIT	68.46	64.27	46.39	
75		Operating profit (PBIT) to total assets	13.84%	15.93%	13.66%	
76		Net profit or net income to total assets	8.64%	9.93%	8.97%	
77		Net profit to average total assets	9.52%	10.78%	N.A.	
78						
79		Operating assets	439.48	364.55	301.05	
80		Return on operating assets (operating	17.93%	19.99%	17.94%	
81		Operating profit to average operating	19.60%	21.89%	N.A.	
82						
83		Net profit to total equity (RoE)	16.57%	18.27%	16.91%	
84		RoE based on average equity	17.93%	20.06%	N.A.	
85						
86		**Return per share**				
87		Number of shares in crore (assuming	2.804	2.804	2.764	
88		Earnings per share i.e. EPS (in Rs.)	15.24	14.28	11.02	
89		Dividend per share (in Rs.)	1.25	1.22	1.23	

This ratio also can be found out with the help of average equity, when you say average equity, we talk about the opening equity plus closing equity divide by 2, as we discuss in the average total assets, this average of the equity of beginning and ending or average of ending, ending equity of last year and ending equity of this year.

In that way, this ratio is actually 17.92 percent which was actually 20.06 percent in the previous year there. In this ratio also there is a decline, which is not a good sign for any company as such the company return equity has declined. It is return on equity declines over a period of time continuously, there is a warning signal as such, and the possibly the investors will withdraw investing from this particular company, they may sell the shares in the Market, and the share price of the company can slowly come down. So, the company has to be very careful, that under what any circumstance the return on investment returns on equity all those things should not actually come down.

Then we have the next ratio, that is your Earnings per share, Earnings per share is the how many, how much profit has been earned on a per share basis, if the company has got let us say 10 core shares, and the company has made a profit of 30 core; so, 30 by 200 that 30 core Rupees by 10 core number of share that gives you Rupees3 per share.

So, per shares Rupees 3 has been earned in a particular company. So, higher this particular Earnings per share is always better, and any company which is increasing return on equity is quite likely, that Earnings per share of this particular company might have gone up. So, if we look at our example of nacho Parma, we have got a number of shares, in this case as 2.804 core, and the Earnings per share which is nothing but the profit after tax, that is 42.74, in case of the latest year, that is 42.74, and divide by number of share is 2.804, so Earnings per share this particular company is 15.24 in the latest year, which has actually gone up from 11.02 in the 2006-07, it has gone up to 14.28, now it has moved up to 15.24, in the Earnings per share performance the company is actually done well.

And then we have the next ratio, that is the dividend per share, that is nothing but the dividends declared by a particular company, during a particular year divide by again number of shares in for some investors, like senior citizens, who earn their bread and butter from this investment in the Market, because they put money in the Market or they put money when the company is comes with the first initial public offering.

So, they buy these shares with the expectation that they are going to get some regular return in terms of dividend for the company. So, for such type of people, the dividend per share makes a lot of sense. So, they will always go for those companies which pays a high dividend per share, there will be certain companies; we will find they pay very high dividend per share, there will be some company, which may pay very less dividend per share, but the company may believe, that instead of declaring dividend, the dividend can be plowed, this profit can be plowed back into the business, and that they can earn a high rate of return on equity, and that should reflect with that, that is reflect in a higher Market price of the particular share of the company.

So, in any case, so, dividend per share is found out with the help of this ratio, that dividend declared by divide by number of shares, and in the our case, we have got this dividend per share of almost same which is 1.23 Rupees per share which has gone down to 1.2 has become now 1.25 or 1 Rupees 25 paisa per share has been declared as dividend to the share holders of this particular company.

So, this is one more ratio which is actually relevant for those people, who will like to earn a bread and butter from this investment, as such and they look at the dividend as a regular source of income to meet their a regular expenses as such.

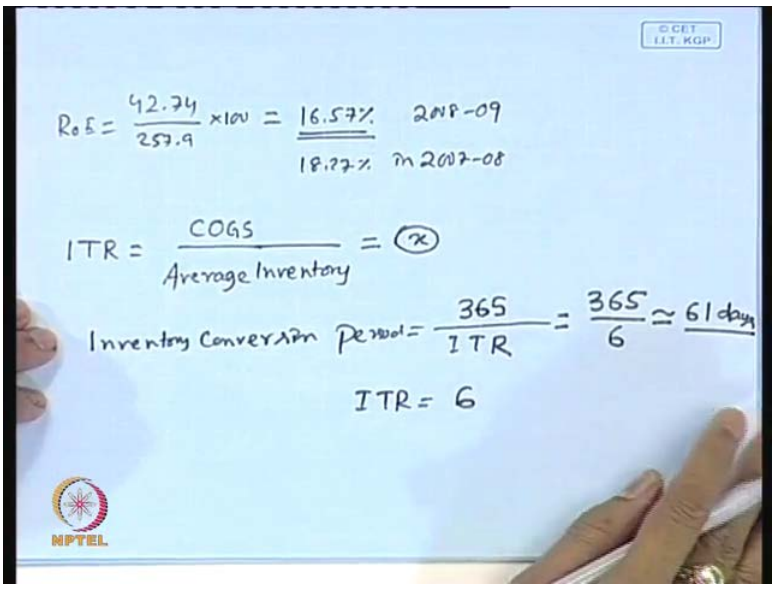
(Refer Slide Time: 21:59)

Then we move on to the next category of ratio, that is the Efficiency Ratio of the company. So, when you say Efficiency Ratio of the company, we talk about the efficiency in asset utilization, we talk about efficiency in terms of the relationship between the sales and the assets, and in this we have different classification, that is we have this efficiency, that is total assets turnover Fixed asset turnover, current asset turnover, and this ratios are actually known as turnover ratios, otherwise known as turnover ratios, efficiency ratios are otherwise known as turnover ratio. The turnover means, how many cycles have actually been made with the utilizing this particular assets.

So, if the turnover ratio is 2, that means, the two cycles has been made utilized these particular assets. So, if the total asset is 10 crore, and the revenue of the company is let us saying 20 crores. So, total assets turnover ratio becomes 20 by 10, that is 2 times the turnover has also higher, this particular ratio is always better.

So, any Efficiency Ratio should always be higher. So, total asset turnover ratio, if it is going up; that means, the overall the total assets have been utilized very high. So, we have total assets, we have fixed assets total turnover ratio, then we have current assets turnover ratio in inventory turnover ratio. So, as far as these ratios are concerned, we talk about the asset utilization efficiency.

(Refer Slide Time: 23:57)



Then we have the next ratio is called the current inventory turnover ratio; in inventory turnover ratio what happens, we find out the inventory turnover ratio which is known as ITR by having this cost of goods sold divided by average inventory, and when we say average inventory, we mean that average of opening stock and closing stock.

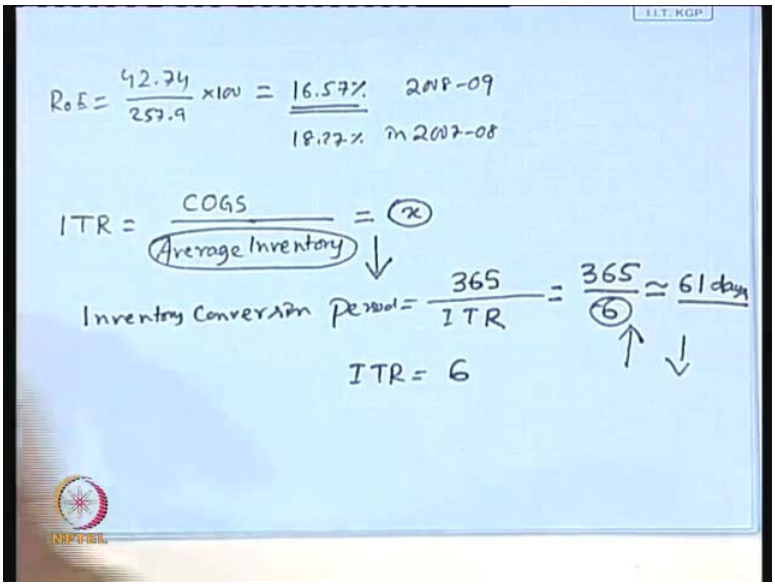
If for any reason, closing stock opening stock figures are not there, then closing stock can be taken as the average inventory. So, this talks about how efficiently this inventory has been utilized to generate sales, in terms of cost of goods sold; so, whatever that value comes x or y, whatever that may be, we will always expect this particular value to be going up over a period of time.

So, higher the ratio is actually better, and from this inventory turnover ratio, one can also find out something called inventory conversion period, which is nothing but the 365, that is the average, that is the number of working days, in a number of days in a year divided by inventory turnover ratio; so, if ITR of any company is let us say 6, and then, in that case, the inventory turnover ratio if is 6, then the inventory conversion period will be 365 by 6, which is around 61 days.

That means, what is the implication this is that, if this say, if the inventories acquired, and certain day, it takes 61days for the company to convert into sales. So, in this case, you can interpret, if this particular value is the 61 days is less, then it is always better; instead of 61, this 61 days has become less, and subsequently this is 50; that means, on an average, the inventories held only for 50 days to convert which was actually 61.

So, the company will should always like to reduce this inventory conversion period from for as many days to as less as possible, and this particular thing 61 days, which were talking about, if this particular 61 days can come down, it can come down over a period of time, if this inventory turnover ratio actually goes up.

(Refer Slide Time: 24:57)



So, in that case, if the inventory turnover ratio has to go up, then this average inventory has to actually come down. So, inventory held during a particular period has to come down, then this ITR goes over; the moment ITR goes up, then the inventory conversion period actually falls, which should be a good sign of for any company.

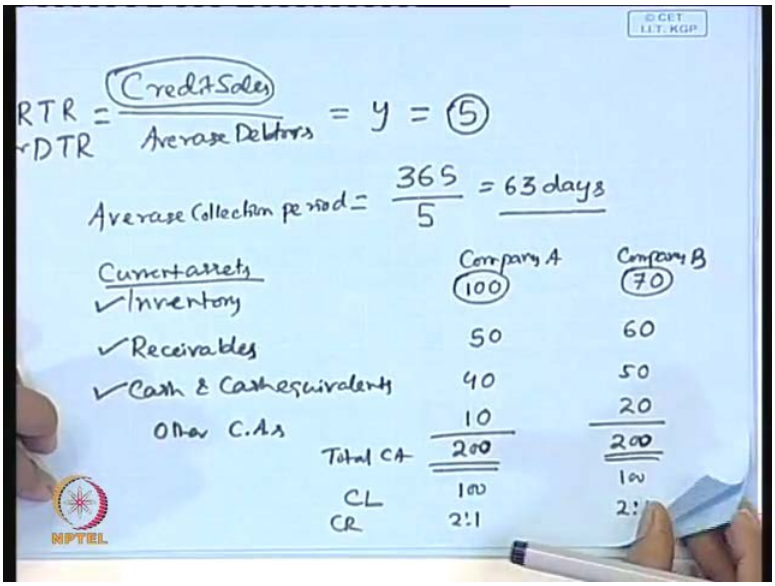
And companies which go for something like just in time approach inventory; in that case, the inventory is likely to be 0 or almost 0, and the inventory becomes almost 0, then ITR becomes very high, and this ITR becomes very high, then inventory conversion period also become as less as possible; in those cases, actually the Austin time concept, the inventory turnover ratio may not main mean anything, because in any case the company has no intension of holding an inventory to convert it into sales.

Then we have the next ratio called Receivables turnover ratio, Receivables arise as per the companies are concerned, receivers arise because of credit sales of the company. So, it is quite natural, that the companies make sales on credit basis, and it is also possible that the company may give a period of let 30 days credit period, and companies may end up getting the back money, after 30 days or within 30 days or less than 30days or may be possibly after 30 days for that matter.

So, for to know how much money is due, and what the liquid condition of the particular company is, when are you going to get back the money as such, we got something like

Receivables turnover ratio; in Receivables turnover ratio, we define by credit sales divided by average debtors.

(Refer Slide Time: 27:16)



So, this is our receivable turnover ratio or otherwise known as debtors, and DTR that is known as debtor's turnover ratio. So, when has to look at here, it is taken as credit sales, and if for any reason, if the credit sales figures are not available, we presume that all the sales are happening one credit. So, all the sales can be taken as a credit sales as such.

So, credit sales divide average debtors, average debtors as we have discussed earlier, any average figure is nothing but average of opening and closing figure. So, this ratio should always be again, if this is a y, in that case, this ratio should be always as high as possible.

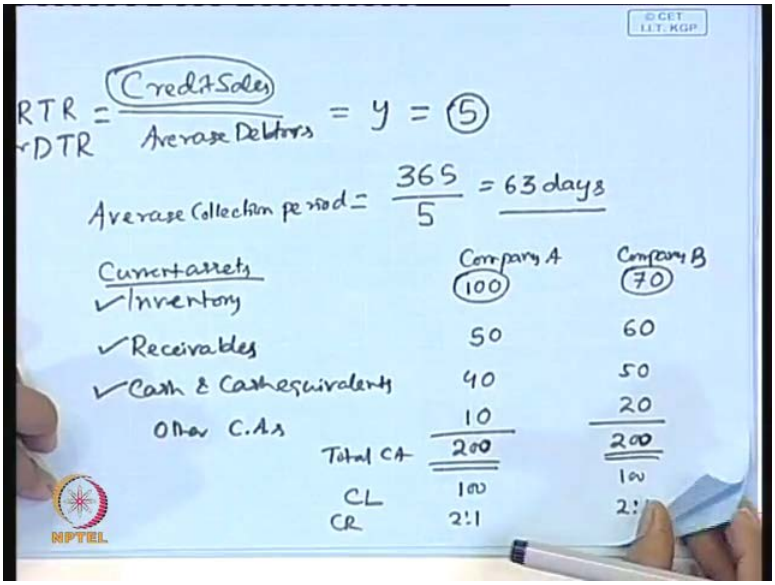
So, higher the ratio means, that means, you are having less money due from the customers, who are have taken the goods or who have purchase the goods and credit from this debtors turnover ratio, one can also go to find out something called average collection period; average collection period is nothing but how many days on an average it takes for the company to get back the money from the debtors or from Receivables, how many days, it takes to realize the Receivables into cash.

So, if the average debtor turnover ratio, for example, is let says 5, and the land in that case, average collection period will be number of days, in a particular year divided by 5.

So, that comes to 63 days, that means, if 5 is the receivable turnover ratio for this company, it has taken 63 days to collect the money from their Receivables.

Now, these 63 days can be compared with such figures of different companies of in this particular sector. So, you can see here, whether this company is taking more days to collect the Receivables or this company is taking less days to collect the Receivables compare to the companies, in other company in particular sector.

(Refer Slide Time: 29:16)



So, lower this particular value is always good and this can be lower, only if the debtor turnover ratio is higher or the debtor turnover ratio can be higher, only the average debtor is actually lower.

So, this can be achieved with the help of giving some incentive to the debtors, that you please pay within time or if you pay within this many days, we will give certain discounts to you. So, in that case, it can be achieved, so, that the money kept with the debtors is as far as many days is less as far as, that is concerned, and then obviously, with the number of days is reduced 63 days has gone down to let us say 61, like 60, that it is also, obviously the good sign for the company, because the money left with them is for a shorter period of time, but then what happens, whatever money is due, if that money comes to the company; that means, they are actually converting the Receivables which is also obviously known as liquid assets, but is converted into Cash is more liquid assets.

So, higher the data turnover ratio, that means, lower the invent, lower the average collection period talks about a better Liquidity management of this particular company.

And we will always like that the company are managed as per Liquidity frontier is concerned and Liquidity front they should manage very well. So, that money should not be kept idle or money should not be with the debtors, rather it should be with the company. So, a company has to get back the money as quickly as possible.

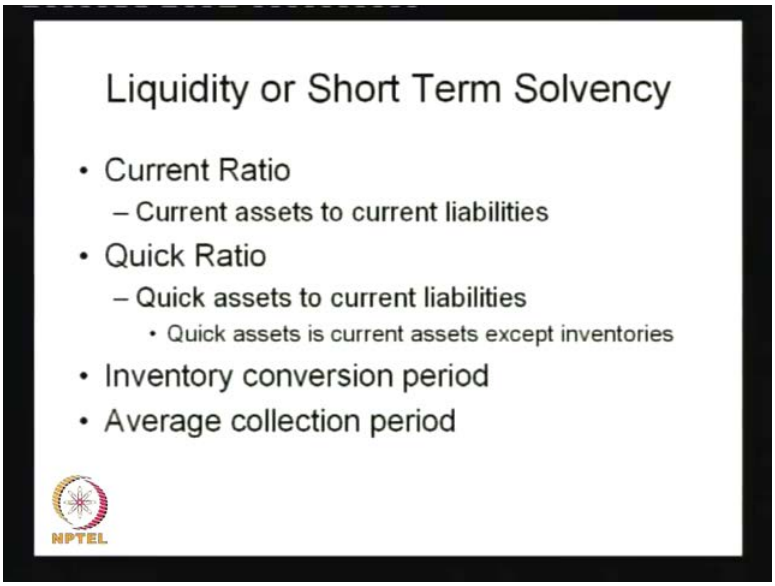
Next we category ratio, that we will move on is the Liquidity in terms of different other method Liquidity or short term solvency. In this we have very popular ratio known as Current Ratio; the Current Ratio is nothing but the ratio of current assets to current liabilities. As we have discussed in the previous session of finance statement analysis, current assets are those assets, which can be converted into cash, within a short period of time, and current liabilities are those liabilities, which has to be honored within a very short period of time or typically one year.

So, in the Current Ratio, one has to find the ratio between current assets and current liability. So, in this case, the current asset in the numerator, and the current liabilities in the denominator, if the current asset of the particular company is let us said 30, a current liability of the company is let say a 15 crore. So, Current Ratio becomes 2 is to 1, this ratio is always measured in terms of a something is to 1.

That means, for in this, if the Current Ratio is 2, in that case we say for every 1 Rupees, the current liability the company has got 2 Rupees of current assets. So, in that case, the company can meet all the current liabilities out of the current asset still 1 Rupees of it 2 is to 1 Current Ratio have been met 1 rupee as the current liability, the company can now have 1 Rupees to take care of the expenses, that is going to happen over a period of time. So, higher this particular Current Ratio is obviously better for the company that the company is liquid, but very high Current Ratio indicates that the piling of the current assets; actually, current assets on their own does not yield anything, the current asset have to be cycled over a period of time, the current assets like inventories should be converted into sales, that is Receivables; in a Receivables has to be collect back in terms of cash, and cash has to be there; so, that we can again process the inventory.

So, that has to be there, if any part of this particular current asset, in the current asset cycle, it is piling up that shows that the money is idle, and money is always finance base certain financers, where we are paying some interests or they are expecting some rate of return, in that case, actually we will be losing money, because the investment is piling up which is also not; that means, excess Current Ratio is obviously not good. So, what is excess or low or something like that one can compare, this Current Ratio of this particular company with the average Current Ratio of the companies in this particular sector.

(Refer Slide Time: 32:17)



So, next ratio that we have is the Quick Ratio, and as far the Quick Ratio is concerned, see in the Current Ratio, there could be some current assets which cannot be converted into cash as quickly as possible. Current assets typically consist of inventory that consist of inventory, that is if goods meant for sale or goods meant for conversion, then we have another Current Ratio asset called Receivables, then we have got cash and cash equivalents.

So, if this, and there could be other current assets. So, if you look at this inventory Receivables, and cash and cash equivalent, obviously, this particular current asset called cash and cash equivalent is already liquid, and whenever if somebody needs the money it can be paid out of this they Receivables are little more liquid compare to inventory, and inventory the least liquid among the current assets.

So, the company having one company, if the company, let us say we have company a as well as company b, which has got total current assets of 200, whereas this company has 100 Rupees in terms of inventory, 50 in terms of Receivables, 40 in terms of cash, and 10 in terms of other current assets, whereas this company has got 70 in terms of inventory, 60 in terms of Receivables, then 50 in terms of cash, and 20 in terms of other current assets.

See if we look at this, though both the companies has got 200 and 200 as current assets and presuming, that this current liabilities of the company, both the companies are 100 as well as 100.

So, the Current Ratio is obviously 2 is to 2 for company a, as well as 2 is to 1 for company b, but if you look at compare these two companies, we have here in this company 100 Rupees in terms of inventory, which is not going to be easily convert in to cash, like any other current asset, here it is 70 also, the same that it can be converted easily, but in this case, inventory amount is quite higher for compare to company b, and other assets non inventory current asset is higher; in this case, non inventory current asset is lower in this case.

So, since the inventory is not that liquid, so what happens in this case, we go for something called Quick Ratio; in Quick Ratio, we talk about the quick assets to current liabilities, and the quick assets is defined as current assets except the inventories. So, in this case, in this, in our example, we have at the quick assets that is q a for company a and company b; if you look at that is 200 minus 100, that is 100 for company a, and 200 minus 70 that is 130, and the current liability for both the companies are 100, in that case, the Quick Ratio appears to be one is to one and 1.3 is to 1.

So, Quick Ratio is supposed to be a more stringent measure of Liquidity, unlike the Current Ratio, and if you look at the Current Ratio, in this case, say in this case we have both the companies has same that is 2 is to 1, 2 is to 1 Current Ratio, whereas in Quick Ratio, we have got 1.3 is to 1 as the Current Ratio, for company b compare to 1 is to 1 for the company a. So, company b is actually overall liquid manage in better than company a, because it has got a better Quick Ratio. So, that is the implication of having a Quick Ratio as such.

Then in the Liquidity short term solvency is also, we do talk about inventory conversion period and average collection period, as we have discussed in the previous slide, we talk about efficiency ratio, we talked about inventory conversion and average collection period.

So, inventory conversion talks about how well, how quickly this particular inventory purchase is procured is converted into cash, that is inventory gets into sales then sales; that means, credit sales then credit sales may Receivables the Receivables gets converted into cash. So, how much time it takes actually for converting the inventory that is from inventory sales level is known as the inventory collection conversion period, from these sales Credit sales to collection of the cash that is called average collection period.

So, these two components are major components of something known as working capital cycle, working capital cycle is something you one purchases inventory, then it go and comes back in terms of cash by realizing from the Receivables, that full cycle is known as working capital cycle and out of that inventory conversion period and average collection period are actually major components.

So, these two ratios as we have discussed earlier, these two ratio also should ideally be as low as possible. So, that is the known as these are the things that we talked about Liquidity or short term solvency.

Now, we talk about something called Long Term Solvency; the Long Term Solvency we talk about over a long period of time, how comfortable with the company in repaying the debt or debt obligations for that matter.

So, the fast ratio that we have in this case is debt to equity ratio. So, debt to equity ratio talks about something like leverage of the company; that means, a company having all the finances from equity is known as unlevered company or 0 Leveraged company, and why it is called leverage is that, by having the debt in the capital structure of the company, the Earnings for the equity holders can be maximized.

So, that actually that is why with the same profit level, but one company with in debt as a component to capital structure can earn a better return on equity than a company

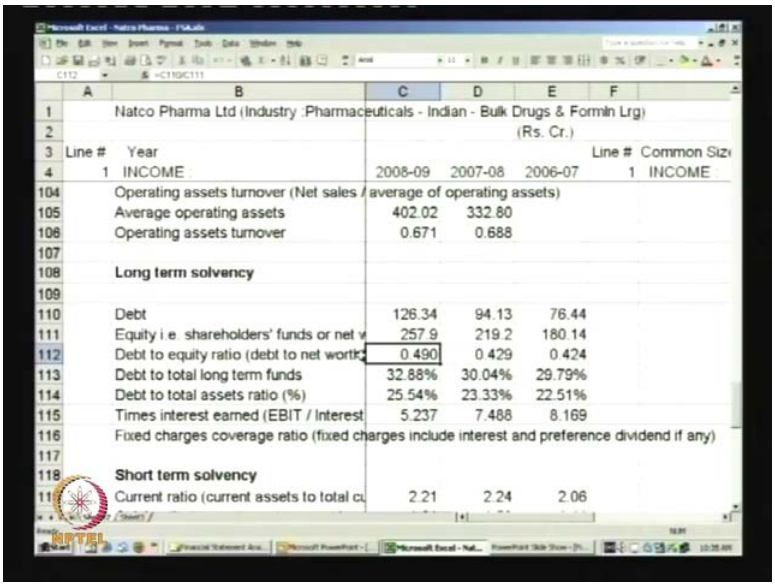
having no debt or less debt in the capital structure that is why, that means, leveraging the position with the help of debt, that is why there as known as leverage ratio.

So, use of leverage will lead to the, if the company has no debt also, then which we do not talk about anything like Long Term Solvency debt to equity ratio or any other ratio for that matter. So, debt to equity on this case equity is defined as the network of the particular company, instead of saying only the paid of capital, we talk about paid of capital plus any reserves and surplus that the company has got. So, debt equity ratio is measured by debt to equity as such.

Then we have the next one is called liabilities to equity ratio; in this case, we do not distinguish between long term debt or short term, all the liabilities except the equity is captured in the numerator, and as accordingly it is found out, and there is no rule that debt equity ratio is should be high, because it gives the leverage, rather high debt equity ratio can lead to high risk in the company, we have discussed in the risk and return that we talk about the financial leverage risk as such.

The company which has got more debt to equity ratio is absolutely more risky than company which has got the less debt equity ratio. At the same time, 0 debt equity ratio is also not advisable the company has ability to raise the debt; it can as we will go for. So, that because of leverage the return on equity can be magnified. So, to take care of that particular problem, one can as well go for a moderate level of debt, but high debt equity ratio is not advisable for any company.

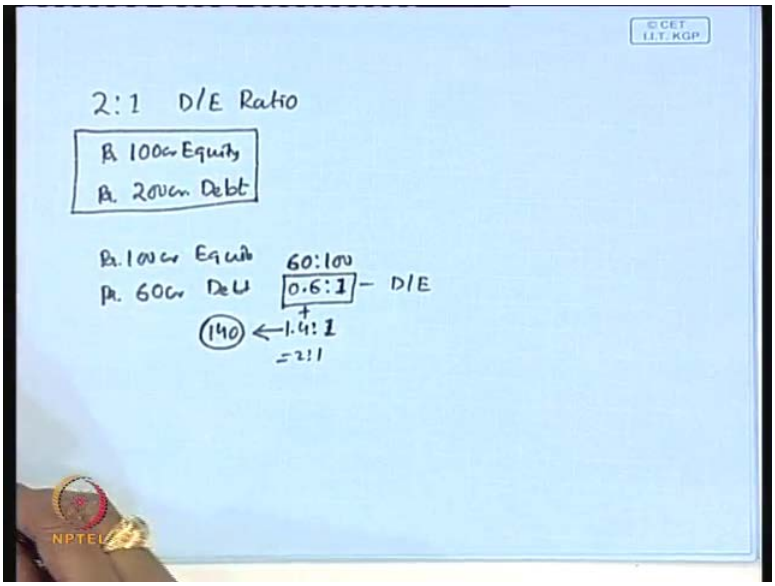
(Refer Slide Time: 40:44)



	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Siz
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
104		Operating assets turnover (Net sales / average of operating assets)				
105		Average operating assets	402.02	332.80		
106		Operating assets turnover	0.671	0.688		
107						
108		**Long term solvency**				
109						
110		Debt	126.34	94.13	76.44	
111		Equity i.e. shareholders' funds or net w	257.9	219.2	180.14	
112		Debt to equity ratio (debt to net worth	0.490	0.429	0.424	
113		Debt to total long term funds	32.88%	30.04%	29.79%	
114		Debt to total assets ratio (%)	25.54%	23.33%	22.51%	
115		Times interest earned (EBIT / Interest	5.237	7.488	8.169	
116		Fixed charges coverage ratio (fixed charges include interest and preference dividend if any)				
117						
118		**Short term solvency**				
11		Current ratio (current assets to total cu	2.21	2.24	2.06	

So, if you look at our example, we have got the debt equity ratio of this particular company the debt network which was 0.424 in the 2006-07, it has become 0.490 in latest year. The interpretation of this 0.49 figure is that, for every 1 Rupees equity of this company, the company has got around 50 paisa or 49 paisa of debt, that means, a total is 1.50 total of debt, and equity this company has got 1 Rupees as equity, and 49 paisa as debt, certain bankers will look at the equity level of this particular company, before they actually lend.

(Refer Slide Time: 41:30)

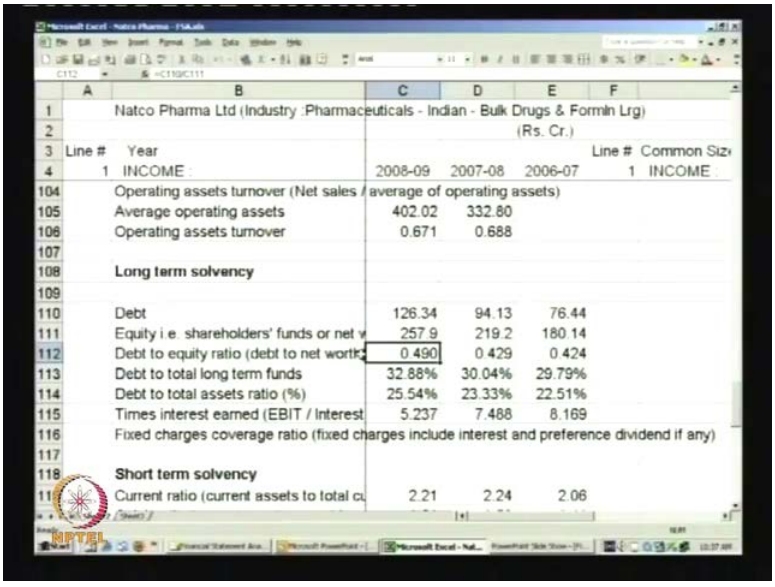


If a banker has a policy that it can give a loan to the extent of 2 is to 1 debt equity ratio, and if the company has got 100 Rupees as 100 crore Rupees as equity; obviously, this company should be having Rupees 2 crore as debt that is the limit the bank can tolerate.

If another company has got100, same Rupees 100 core as equity, and it has got, let us say 60 core as debt, in that case 6 is to 10, 602 or 6 to 6 is to 10 or 0. 6 is to 1 is the debt equity ratio, in this case looking at this particular value, if the banker can feel happy to the extent of giving 2 is to1 to the debt to the extent of maintaining debt which is 2 is to 1; that means, if it is 2 is to 1.4 is to 1 debt equity ratio can still be taken care with the additional debt.

So, 1.4 is to 1, this is becomes 2 is to 1, that means, the company can go to the extent of 1.4 times of equity that is 100, another 140 core Rupees of debt can be taken by this company comfortably, because this banker themselves believe for this company 2 is to 1 debt equity ratio is ideal, and in that case, the company can go for another 100 and 40 core Rupees of debt. So, lower debt equity ratio gives the, provides an ability to the company to go for a higher debt, whenever it is actually required.

(Refer Slide Time: 43:14)



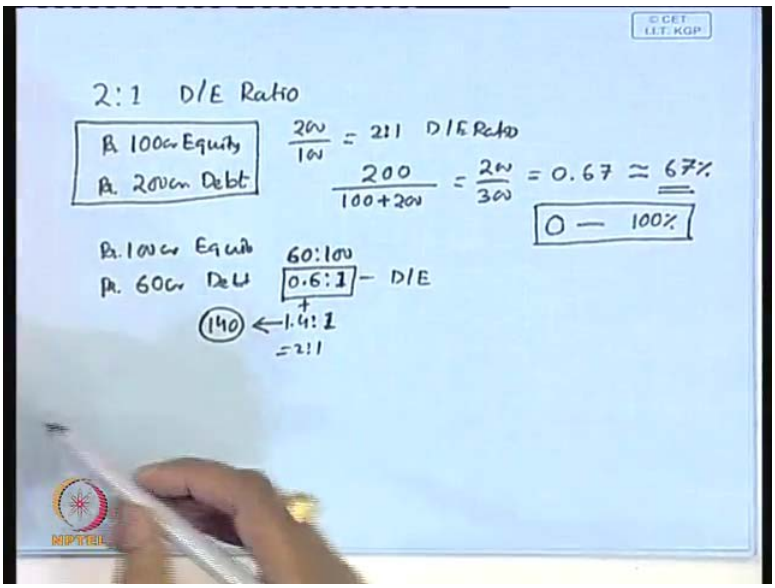
	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Siz
4	1	INCOME :	2008-09	2007-08	2006-07	1 INCOME
104		Operating assets turnover (Net sales / average of operating assets)				
105		Average operating assets	402.02	332.80		
106		Operating assets turnover	0.671	0.688		
107						
108		**Long term solvency**				
109						
110		Debt	126.34	94.13	76.44	
111		Equity i.e. shareholders' funds or net w	257.9	219.2	180.14	
112		Debt to equity ratio (debt to net worth	0.490	0.429	0.424	
113		Debt to total long term funds	32.88%	30.04%	29.79%	
114		Debt to total assets ratio (%)	25.54%	23.33%	22.51%	
115		Times interest earned (EBIT / Interest	5.237	7.488	8.169	
116		Fixed charges coverage ratio (fixed charges include interest and preference dividend if any)				
117						
118		**Short term solvency**				
119		Current ratio (current assets to total cu	2.21	2.24	2.06	

So, in any case as we have discussed debt equity ratio should not be very high, it should be moderately there. So, that and also the company which will like to preserve the borrowing power. So that, they will have initially the very lower equity ratio, whenever

they need money, they can go for a higher debt, and then the debt equity ratio actually can go up.

Next we have is the total debt to total capital, in this case, nothing it is same thing as debt equity ratio, but here instead of saying debt to equity, we said debt to total capital.

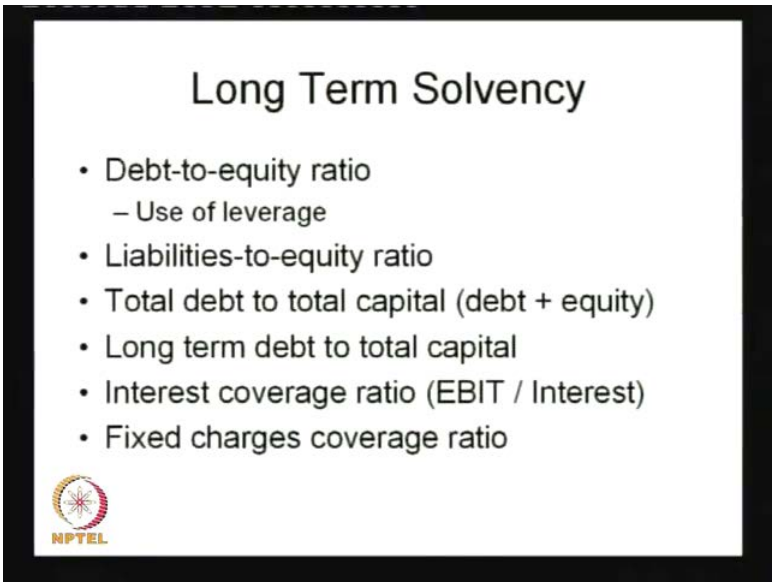
(Refer Slide Time: 43:44)



That means, if you look at this particular example, where 100 Rupees, 100 is equity 2 is debt, so, we say 200 by100, that is 2 is to 1 is the debt equity ratio, whereas as per debt to total capital is concerned, we say it is 200 debt divided by equity plus debt that is 100 plus 200, that becomes 200 by 300, and that is nothing, but 0. 67, that means, approximately 67 percent of total finance of this company is raised through debt.

So, this is, in as per debt equity ratio is concerned, this ratio can vary from any figure to any figure, from 0 to anything, whereas in this case, the figure can vary from 0 to maximum100 percent. So, interpretation wise, this figure becomes little better than the debt equity ratio, otherwise the implication of both the ratio is one and same.

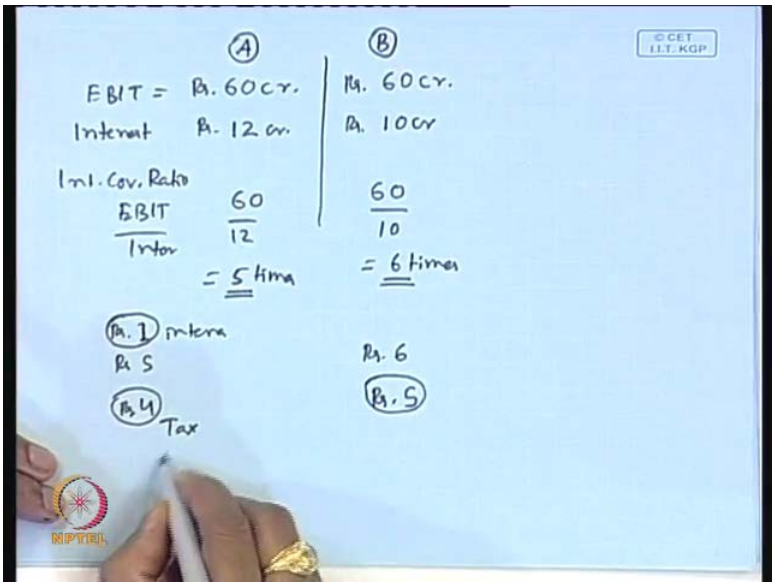
(Refer Slide Time: 44:43)



Then the other category of financial ratio, that we have the leverage or Long Term Solvency ratio we have, instead of taking the debt as total debt, one can talk about something like long term debt to total capital.

So, when you say long term debt to total capital, we do not talk about short term debt, only long term debt, because capital is supposed to be long term. So, finance, so, total capital is any way, again total debt plus debt plus equity, and in that, we take only long term debt to total capital, this is the another variation of ratio. And next another important ratio, that we have is called the interest coverage ratio; in the interest coverage ratio, we talk about is, what is we say Earnings before interest and tax divided by interest.

(Refer Slide Time: 45:33)



So, what happens in this case, if Earnings before interest and tax of particular company is Rupees 60 core for one company, for another company, company a is Rupees 61, and for company b is Rupees, let us say also 60 crore, both the company has got same Earnings before interest and tax, but because of degree of leverage or interest rate whatever reason, interest amount as a total debt raised, whatever reason for that may be, interest amount for this particular company is, let us say 12, and for this company the interest amount is actually 10 crore. So, Rupees 10 core, Rupees 12 core, so the interest coverage ratio which is EBIT by interest is nothing but 60 by 12, that is 5 times in case of a company a, and 60 by 10, that is 6 times in case of a company b.

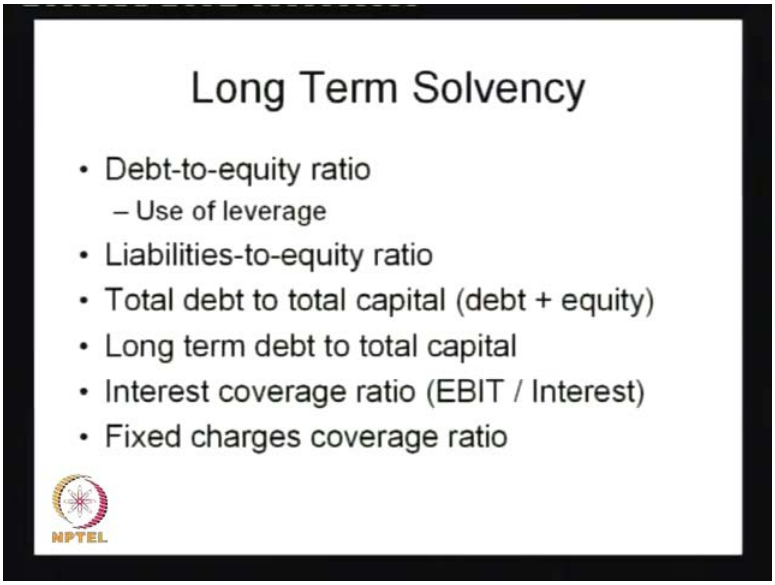
Now, one can obviously feel here, that the company has this company b has earned 6 times of interest as far as EBIT is concerned. So, the company has earned 5 times of interest as far the company a is concerned. That means, for every 1 rupee of interest required 1 Rupees as interest, the company has an Rupees 5, and this case the company have Rupees 6, what happens in this case, after meeting the interest expense of 1 rupee in this case Rupees 4 is left, in this case Rupees 5 is left. This Rupees 4 or Rupees 5 as the case may be, will be now taking care of the tax, and then we find profit after tax, then we find how much dividend is there.

So, higher the interest coverage ratio is obviously good for the company; this talks about how well the company can meet the interest obligation of the company, very low interest coverage ratio is not advisable for any company.

In fact, a lower interest coverage ratio will lead to no lending by any company for further requirement as such the lenders, obviously lend lot of importance on this type of company, which has got a high interest of ratio, they will be very much willing to lend to this company. So, a company which is not able to earn enough money to take care of its Fixed obligations, like the interest one of the, one of the permanent, one of the compulsory obligation, because interest something which is mandatory, which has to be paid by the company come, what may, whether company makes profit or company makes loss the interest has to be paid.

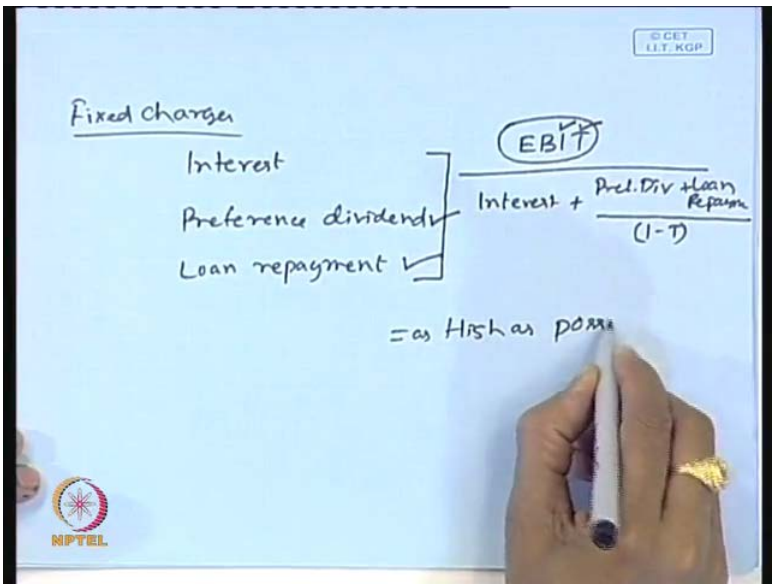
If the company is not able to comfortable pay, the interest and not earns that much money to take care of interest, where interest coverage ratio is very low; obviously, this company cannot be that much attractive for any other investor. So, investor equity investors, though they are not bother about interest, as such they may still look at this ratio, because only if the interest is taken care any profit left over that belongs to equity holder. So, high interest coverage ratio can also give a some sort of comfort level, even for the equity levels besides lenders, who will always look for this particular ratio.

(Refer Slide Time: 48:50)



Then we have the next one is called Fixed charges coverage ratio; in this we talk about the Earnings before interest and tax plus any other thing, which is Fixed for the company to be taken care.

(Refer Slide Time: 49:02)



For instance the other fixed charges for the company could be, all fixed charges could be the one is the interest which has to be taken care then the company has got something like a preference dividend that also has to be paid by this company, then any loan repayment portion that also has to be taken care.

So, instead of taking only interest as in the denominator, one can take for the, in this we have Earnings for before interest and tax as the numerator at the end of the day, the company has to earn as much operating surplus to take care of interest, to take care of tax, and then to take care of preference dividend also take care of loan repayment, though the loan repayment is not a part of income statement, but still the surplus created by this company should take care of all the obligations of company towards the outsiders including government because of tax of interest tax preference dividend, who has to prevents or who has to which has to be paid to the preference share holders, and any loan repayment that is scheduled for that day has to be taken care.

So, what happen in this case, EBIT in the numerator, interest is in the denominator plus preference dividend, and the loan repayment portion, whatever is there, that is to be

there, but that has to adjusted for 1 minus tax, because interest something where you have got the tax effect, because your tax really because you claim interest, whereas in 1 minus t it is more divided, because you do not get anything any tax benefit, by claiming preference dividend or by claiming loan repayment.

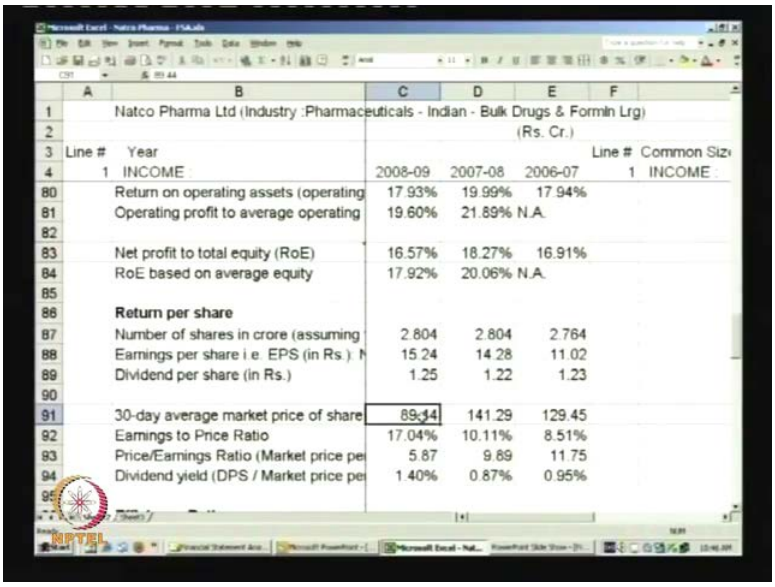
So, to take care of that to tax effect, it divide 1 minus t and at the end of the day the Fixed average, Fixed average coverage ratio should always be as high as possible, that talks about that yes, the company is going to meet the Fixed obligations as comfortable as possible. So, all the investors will always like to see that the fixed assets cover ratio is very high. So, higher the fixed assets cover ratio better preferred by investors across the world as such.

(Refer Slide Time: 51:22)

Then we go to the next (( )) ratio, that is our capital Market standing as we discussed; in this ratio, we talk about what are the, how this particular Market, particular company stands in the capital Market the first ratio, that we have in this case is the price Earnings ratio, where we talk about the Market price per share to Earnings per share.

So, in this case what happens we find the Market price for this particular share, we find from the capital Market, and instead of taking Market price per share on a particular day, one can take the average Market price during a particular period and divided by Earnings per share of the particular company.

(Refer Slide time: 52:05)



	A	B	C	D	E	F
1		Natco Pharma Ltd (Industry :Pharmaceuticals - Indian - Bulk Drugs & Formln Lrg)				
2				(Rs. Cr.)		
3	Line #	Year				Line # Common Siz
4	1	INCOME	2008-09	2007-08	2006-07	1 INCOME
80		Return on operating assets (operating	17.93%	19.99%	17.94%	
81		Operating profit to average operating	19.60%	21.89%	N.A.	
82						
83		Net profit to total equity (RoE)	16.57%	18.27%	16.91%	
84		RoE based on average equity	17.92%	20.06%	N.A.	
85						
86		**Return per share**				
87		Number of shares in crore (assuming	2.804	2.804	2.764	
88		Earnings per share i.e. EPS (in Rs.)	15.24	14.28	11.02	
89		Dividend per share (in Rs.)	1.25	1.22	1.23	
90						
91		30-day average market price of share	89.44	141.29	129.45	
92		Earnings to Price Ratio	17.04%	10.11%	8.51%	
93		Price/Earnings Ratio (Market price pe	5.87	9.89	11.75	
94		Dividend yield (DPS / Market price pe	1.40%	0.87%	0.95%	

Then if you look at our example, we have Earnings per share of this company as 15.24 and the 30 days average Market price prior to march 31 is 89.4. So, the 89.4 divided by 15.24 gives us a price Earnings multiple of 5.8 7, and this price Earnings ratio of this company is 11.7 5 2006-07, which has gone down to 9.89, it is going to 5. 87, though the Earning in this is because of 2 things, one is that Earnings per share itself has gone up, second one is that the Market price of the share has gone down from 129.4 5 to 89.4, suppose because of decrease in the numerator value, and increase in the denominator value, that is Earnings per share, this price Earnings ratio actually has come down.

Now, this price Earnings ratio to mean, if the price Earnings ratio of this particular company is taken as let us say as in this particular case is 5.87 is the price Earnings ratio of this company in 2089, what does it mean, that if this company is going to earn same amount of Earnings per share, that is Earning in 2089, it will take 5.87 years for the company to cover all the price in terms of Earnings as such.

So, in this case, lower the p ratio is always in good sign, in a way that the company shares can be actually bought. So, how to know lower or higher that will be certain benchmark price Earnings ratio, benchmark price Earnings ratio can be defined as median p ratio of different companies as such.

If the median p ratio of the particular company, a particular group or particular sector is let us say 10, and we let us say this price Earnings ratio of this target company is less than 10 in that case, obviously, it says that we can go for buying this particular (( )), because that shows this particular company is undervalued compare to the peer group or compare to the Market as such, but if the p ratio average or median p ratio of the industry group is 10, whereas the p ratio particular company, that we are evaluating is, let us say 12, that means, 12 is more than 10, that means, this company is actually over value. So, in that case, that is the sign that company can go the investor can actually sale the shares, because it is overvalued and or not go for any more acquisition in this particular sector p ratio is relative evaluation measure, where we can say relative to the Market by the industry, whether this particular share is overvalued or undervalued.

(Refer Slide Time: 54:55)

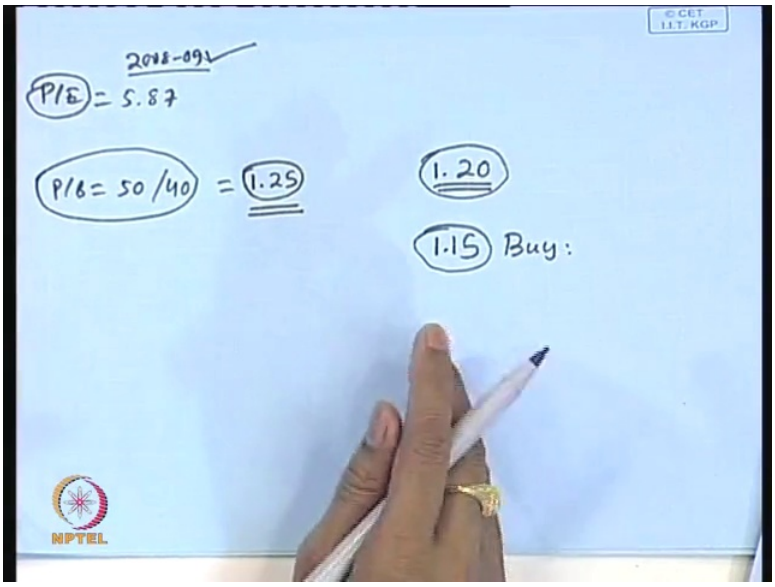
Then we go to the next one, that is our next ratio is called the enterprise value to EBITA, in this case, what you say instead of taking the value of only the equity in the numerator, we take the value of the entire company, that we talk about the value Market value of equity as well as Market value obtained divided by Earnings before interest depreciation tax and amortization. And in that case, what you will say, in this case, this is also popularly known as EBITA multiple, EBITA multiple, and this particular thing is taking care of the leverage effect is neutralized, the asset structure is also the, because the asset structure instead of Fixed asset structure depreciation is also neutralized.

So, this makes a more comparable across the company in the different particular sector of the new company or the old company, it can be compared with the entire value EBITA, and again higher or lower, it can be multiply compare to the average multiple, and accordingly one can say is overvalued or undervalued.

Then we have got next category of the ratio is the dividend yield, and then we have got price-to-book ratio; so, dividend is nothing but the dividend per share to Market price per share. So, if the dividend is 2 Rupees Market price is let us saying 10 Rupees, So, 2 by 10 comes to 20 percent of the dividend yield.

And then we have got the price-to-book ratio, where we talk about the book value of the share is defined as the net worth divided by number of share, the Market price per share is 50, and the book value per share is let us say 40.

(Refer Slide Time: 56:17)



So, price-to-book ratio is known as now 50 to 40, that is 1.25. So, again, in this can be the benchmark comparable ratio is, let us say for the industry is 1.20, if this company is 1.25, obviously, this company is overvalue than the industry, and we will, if I have already invested in this company, then we will like to sale this shares of the company or if I am not invested not like to go for, but if you find a company, which has got if p by v ratio is our benchmark and the average p by ratio of the industry 1.20, if you come across

a company was a p by ratio is 1.15, then that case we will always like to go for a buy decision for this particular share.

So, these are the different tools of financial statement analysis, this is, this is not an exertive list, rather can be n number of ratios, that can be found out with the help of information from capital Market, as well as from the statements published by the company in terms of the balance sheet income statement all; so, this is the end of the financial statement analysis unit. Thank you.