**Lecture – 41**
**Ratio Analysis- A case of Grasim Industries Part-II**

Welcome students. So, we were talking about the solvency ratios and in the process of discussing the solvency ratios, we learn that how to calculate the net asset value for the NAV ratio and we found that NAV net asset value per share has improved significantly for this company and which was 543.3 rupees per share, in 2006 has gone up to 679.38 rupees per share. It means significant improvement and this improvement is only because of the very good improvement in the profitability, consequent improvement in the reserve and surplus and then because equity capital is same. So, it means there is a increase in the reserve and surplus because of the increase in the profitability and as a result of that the net asset value has improved or has gone up.

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Now, the next ratio in this category is the DE ratio or that is called as the Debt Equity ratio. So, for calculating this ratio what we take is that is a long term debt, we take the long term debt divided by the net worth, long term debt divided by the net worth. So, I was talking to you that in a previous lecture I was talking to you that, why we take the net this reserve and surplus as a year and figure and not as the say as average of the 2

years. Because, while calculating the debt equity ratio we take the net worth as in the net worth we take reserve and surplus as a year and figure because we take the long term loans as the year and figure.

So, when the numerator is year and figure the denominator has to be the year and figure. That is why in the long term say for calculating the debt equity ratio when we are taking the year and figures of the reserve and surplus and the long term loans, similarly we are taking the year and figure in case of the reserve and surplus is in case of the NAV also. So, to maintain the consistency for studying that solvency of the firm for calculating 1 ratio debt equity when we are taking the year and figure of the reserve and surplus, so for the NAV also we are taking the same figure and then this is the debt equity ratio we are we will be calculating with the help of the say this long term debt and the net worth.

So, if we talk about the net worth here, we have already calculated the net worth figure and the net worth figure here it is that is 6230, 6230.04 [FL] which is this plus this. So, was the denominator is this. So, it means numerator we have to calculate now. Why we have to calculate the numerator?

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GRASIM INDUSTRIES LIMITED
Balance Sheet
AS ON 31st March 2007

| | Schedule | | | Current Year | Previous Year |
|---|---|---|---|---|---|
| SOURCES OF FUNDS | | | | | |
| Shareholders' Funds | | | | | |
| Share Capital | 1 | 91.69 | | | 91.69 |
| Reserve and Surplus | 2 | 6,138.35 | | | 4,890.39 |
| | | | | 6,230.04 | 4,982.08 |
| Loan Funds | | | | | |
| Secured Loans | 3 | 7,291.00 | | | 1,386.12 |
| Unsecured Loans | 4 | 660.56 | | | 593.55 |
| | | | | 7,951.56 | 1,979.67 |
| Deferred Tax Liabilities | | | | 582.55 | 584.38 |
| TOTAL | | | | 9,764.15 | 7,546.13 |
| | | | | | |
| APPLICATION OF FUNDS | | | | | |
| Fixed Assets | | | | | |
| Gross Block | 5 | 6,770.97 | | | 6,114.12 |
| Less Depreciation Amortization | | 1,380.53 | | | 1,109.49 |
| Net Block | | 5,390.44 | | | 5,004.63 |
| Capital Work in Progress | | 1,192.35 | | | 293.64 |
| | | | | 4,582.79 | 5,298.27 |

Because if you go to the balance sheet you find in the balance sheet that you are given the figure of unsecured loans, which is 2291 in case of 2007 and unsecured loans is the 660.56 [FL]. So, this is the total loans figure, but you go to the additional information you will find something interesting here.

That this information says that secured loans includes short term debt of 331.20 [FL] and unsecured loans included debt of the 75.5 [FL] for as a short term debt for the year 2007 and 198.31[FL] for the previous year in case of the secured loans and 144.61 [FL] in the previous year as for as the short term loans are concerned in the unsecured loan.

So, we will have now to calculate the real figure of the long term debt and for calculating the long term debt we will have to make a small analysis here. So, first we talked about the secured loans. Secured loans and for the secured loans we take the years 2006 and 7 and then we take the 2005 and 6 these are 2 years and we are talking about the secured loan. So, what is a secured loans? The total amount of the secured loans is 2291, 2291.00 and previous year how much it was 1386, 1386.12 this is 2291 if you look at the secured loans figure, it is 2291, 2291 [FL] and 1386.12 [FL] it is the figure for that 2 years that is a secured loans.

Now, less us short term, less short term loans we have to subtract the short term loans. So, what is a short term loan figure now? If you see the short term loan figure, which is given to us in the additional information and that is the 331.20 [FL]. So, we have to subtract this 331.20 [FL] and here it is 198.31 [FL], 198.31 [FL] of the secured loans for calculating the long term loans we will have to subtract this figure and if you calculate this. So, we will you will you find this, what is a balance here this where comes out as a

1959.80 [FL] and in this case it works out as 1187.81 [FL]. So, it means these are the 2 long term loans for the year 2005- 6 and the 6 - 7 these are the long term loans.

So, when you take the long term loans figure here we will have to take this figure as long term debt and the long term debt total long term that will have to take here is, we have to find this figure and for calculating the total long term debt this is the long term debt of the secured loans.

Now we talk about the unsecured, unsecured loans. So, when you talk about the unsecured loans what is the total figure of unsecured loans? Unsecured loans total figure is 660.56 and 593.55[FL] and in this what is the short term loans less. That short term loan short term loan here is 660 minus 75.51 and in this case second is the 144.61 [FL] this is the secured short term loan. So, finally, we are left with the short term loan that is 585, 585.05 and in the next case it is 448.94 [FL].

So, now this is the total of these 2 is the long term loans secured and unsecured is the total of these 2. It means total loan you have to take secured loan and minus short term loan adjusting the additional information. In case of both secured and unsecured you have to subtract the short term and then only the figure of the long term will be left and if you to calculate if you total it up this and this and this and this. So, figures for the 2006 if you take these 2 figures, the figures for the 2006 are finally, the long term loans figure is going to be 2544.85 [FL], 2544.85[FL] divided by 6230.04 [FL]. So, what is the debt equity ratio? This works out as 0.41 is to 1 and in the previous year this ratio works out as for the previous year this ratio works out as 0.33 is to 1, these are the 2 debt equity ratios for the 2 years means debt equity ratio for the 2 years and this is 0.41 is to 1 and 0.33 is to 1.

So, you can easily find out that, you can easily find out that what is the debt equity position of the firm what should, what is the rule of thumb? The rule of thumb says that the debt equity ratio can be or should be that is 2 is to1, but in this case what is the debt equity ratio that is the 0.4 is to 1 and even less than half and when it is 0.33 one-third of the net worth. One-third of the net worth for the equity you can say and this is 0.33 is to 1, so how solvent the structure of this company. So, means the solvency if you try to study NAV is also very good growing very a significantly and debt equity if you calculate if the ratio is really very very low which means this form is going to be the very

preferred organization for any kind of the lenders everybody would like to finance to this kind of the firms because they are borrowings capacity is saved. Properly saved by the firms they can borrow as much as they want in the market means they have a sufficient borrow capacity left on use and anytime they can whatever they want to borrow from the market, they can borrow from the market.

Now, we talked about the next 2 ratios and these are first is the interest coverage ratio ICR interest coverage ratio, that is the ICR ratio. So, for calculating the interest coverage ratio, but we were talking here is that is interest coverage ratio is we have to take what? We have to take the pat profit after tax plus noncash charges and CC divided dividing it by the pat that is a non cash charges plus say pat plus noncash charges plus interest on, interest on long term loans. This is in the numerator we have to take and in the denominator we have to take only the interest on the long term loans, interest on long term long term loans. So, this is the comparison of these 2 figures numerator and denominator. So, how much is the capacity interest in paying capacity of the firm how many times the numerator is as compared to the denominator.

So, if you calculate this interest coverage ratio for this. So, you will find the pat will be what is the profit after tax? 1511.71 [FL] plus 317.91[FL] that is the depreciation part plus here are the interest component is 96.43 [FL] and dividing it by the interest component that is 96.43[FL]. Now 96.43[FL] look at what is the interest component given in the profit and loss account. If you look at the interest paid on the profit and loss account this is the figure of interest that is 111.84 [FL], 111.84[FL], but we are taking here as the 96.43[FL] why? Why we are taking here as a 96.43[FL]? Because, we have to this is the total interest payments, this payment is the total interest payment on all kind of the borrowings that is the long term borrowings and the short term borrowings and in this case we have to now calculate only the interest on the long term borrowings or the interest on the long term loans and when you calculate the interest on the long term loans or the long term borrowings in this case we have to calculate that.

So, we have calculated the say total borrowings we are given the long term borrowings we are given they have calculated the long term borrowings this and if you calculate the short term borrowings in this case the short term borrowings for the 2006 and 7 is the sum total of the secured and unsecured loans.

So, what is the total of these 2? This is that 331.4020 and 75.51[FL]. So, this is the total and this works out as somewhere 440, 406.7 on [FL]. So, this interest of 111 point how much was interest figure interest is here interest component here we have in the profit and loss account is that is the 111.84 [FL]. So, 111.84 [FL] has to be divided in the ratio of that is 2544.85 that is a long term loans now taken here and that second is how much is a short term short term is that totally we have given the additional formation 406 point the total short term debt for the 2006 and 7 is 406.71 [FL] and this if you work out this ratio then the interest for this long term that works out as 96.43 [FL]. And remaining interest is that is 111.84 minus 96.43 is the interest on the short term debt and that short term debt component we have now to take for calculating this ratio. So, interest on the long term debt is 96.43 [FL] which we have taken and similarly we have calculated the interest on the long term loans for the 2005 and 6.

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So, if you calculate the ratio the ratio works out as interest coverage ratio is, this works out as interest coverage ratio here is 19.97 times 19.97 times and for the previous year this works out as 14.48 times, 14.48 times these are the ratios. Interest coverage ratio, interest paying capacity of the firm is about 20 times even if it is double of the denominator considered as good.

So, for example, if this figure is double this figure is double of this figure given the ratio is 2 is to 1 it is considered as good acceptable you can say not good, but acceptable in

this case we have 20 times of the total funds available that is some of the profitability profits plus noncash charges plus interest component which has been paid and if it is to be calculated it used for ratio that first it has to be added back then we will see how much is available with us. So, we have to pay this availability is this and if you work out in times this worked out works out as 20 times. So, 20 times it is there and previous year if you talk about it was 14.48 times about 14 and half times it was in 2005 and 6. It means the firms interesting capacity is very very good.

Because the debt equity ratio shows that they have borrowed very less from the market, their profitability is very high and large amount of the profits is coming from the investment from internal sources that is a share capital and reserves. So, they are borrowings very less from the market depending upon the market borrowings to a minimum extent using the say a borrowed funds. So, it means when they have the very low amount of the borrowed funds and high profitability. So, you can easily make out that interesting capacity of the firm is very high. So, this is a very going to be a very I say and call it is favorable organization favorable firm for any, any, any, any kind of the lenders.

Now, we calculate the last ratio on this category that is this debt service. Debt service coverage ratio and debt service coverage ratio is how much when you calculate the debt service coverage ratio. So, what we do here is for servicing of the debt means how much funds the firm has, how efficiently they can serve their debt, how efficiently they can pay their debt. So, whatever the means what is the level of the funds they have. So, numerator will remain the same and in the denominator you will add here the payment of the principal part the payment of the principal component you will be adding here.

So, we are to find out how much company is paying as a principal amount for the year 2006 and 7, if you look at and that you will find in the additional information if you look at the additional information. So, it means we are paying long term debt component that is item number 8 it is written here that long term debt that is rupees 182.27[FL] was redeemed during 2006 and 7. So, it means this much of the long term loan has been paid back in the year 2006 and 7. So, your numerator will remain the same. So, if you talk about the numerator part here numerator will be saying and that is 190 1926.04 and the denominator is going to change here because this is sum of this this and this this works

out as 1926.04 [FL] and it has to be divided by the 2 things now 1 is 96.43 and then we are going to pay the debt part also and that is going to 182 point 182.77 [FL]

So, this is going to be the total amount of the denominator. So, if you calculate this ratio this ratio is also very good time very good that is 6.91 times, it means about 7 times of the total funds including the in 1 year we are talking about for the payment of your interest for payment of the principal component you have total funds which are 7 times of the total applications for 1 year it is the revenue financial expense and the return of the capital part of the principal part, we have the sufficient funds available with us and that ratio works out as 7 times. So, now, you look at the overall solvency position of the firm if you look at the overall solvency position of the firm you try to analyze the solvency position of the firm. Means one thing more before we discuss the solvency position here is that we have calculated this ratio for the year 2006 and 7, but for the year 2005 and 6 the ratio cannot be calculated because we do not the information about this particular part.

So, it means firm is not paying anything, if you assume that the firm is not paying any returning as any part of the long term debt then the ratio for even the debt service coverage ratio will be the same for this year that is 14.48 times because the denominator will remain the same numerator is not, denominator is not changing. So, no principal payment is due in 2005 and 6 nothing is being paid. So, only they are paying surfing the interest component and for that only you can calculate the ICR that is interest coverage ratio we cannot calculate the debt service coverage ratio for the previous year and if you calculate for the current year this works out as 6.91 times about 7 times of the funds they have to pay the debt of the debt it means is again a very good solvent position of the firm.

So, now you look at that if you look at all these 4 ratios here if you look at significant increase about for 5 is 543 rupees per share to 679 more than 100 or 150 rupees near about 150 rupees increases there in the net worth and large later because of the profits and the increase in the reserve and surplus. Look at the second ratio the rule of thumb says that it should be 2 is to1, but it is not even 1 it is 0.41 is equal to 0.41 is to 1 and 0.33, 0.33 is to 1. So, it means debt equity ratio is also very very favorable interest coverage ratio is really a wonderful that is 20 times they have in the current year and about 15 times 14 and half times we had in the previous year and if you talk about the

debt service coverage ratio debt service coverage ratio is really again very very good ratio if you talk about the current year for which they are making the payments.
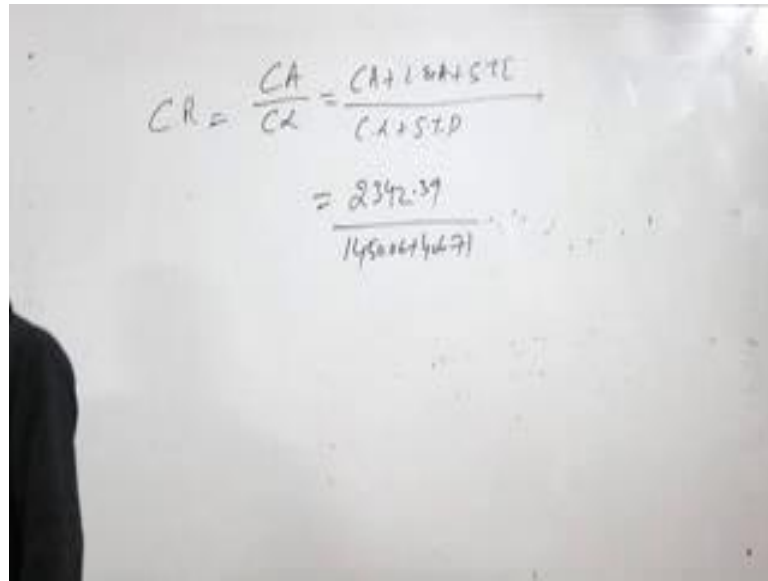
So, it is a wonderful financial position financial performance of the company solvency position of the company is really very very good and the firm is even call it as very favorable organization you talk about maybe of the financial institutions, we talked about the lenders or you talk about any other kind of the stakeholders everybody is going to love to good, love to finance to this company or provide the funds to this company.

Now, after this we will be talking about the other ratios and next set of the ratios we talked in the last part of discussion or maybe in the previous lectures where the liquidity ratios. And when we talk about the liquidity ratios will be learning about the important ratios these liquidity ratios are your current ratio, quick ratio and the super quick ratio and then 3 turnover ratios will be talking about and these 3 turnover ratios are really going to be very important indicators to understand the overall financial position of the firm.

So, in this case next set of the ratios will be talking about will be discussing about is to study the liquidity position of the firm and we have seen that are RoI position that is return on investment ratios if you look at the return on investment in this company is really very good. Similarly if you look at the solvency position of the firm it is very good and now we are sure not even hopeful, but we are sure that the overall liquidity position of the firm will also be very very good. So, we have to talk about here about the liquidity ratios and the liquidity ratios we are going to talk in terms of the current ratio quick ratio and the super quick ratio.

So, when we talk about these 3 ratios we take into consideration the current assets, current liabilities, quick assets, current liabilities and super quick assets and then the current liabilities. So, we are going to talk about these ratios this liquidity ratios and first ratio in the liquidity ratios is the current ratio.

So, this is the CR we call it as current ratio and what is the rule of thumb for the current ratio for the interpretation 1.33 is to 1, earlier it was 2 is to1, but now it has been brought down to 1.33 is to 1.

So, let us calculate the current ratio and if you look at the current ratio this is the total current assets divided by the current liabilities and if you look at the total current assets and current liabilities, we will find out the figures here that is what makes a total current assets. So, this will make your current assets plus loans and advances the firm has given plus the short term investments STIs short term investments will be taking into account and in the current liabilities part we will be taking in case of this firm that is the current liabilities plus short term loans or the short term debt and we have calculated the short term debt, how much it was? It was 406 [FL] about short term debt the year 2006 and 7. So, we will be taking these important figures into account and then we will calculate the ratio.

So, if you calculate these ratios total of the current assets if you look at the balance sheet you all find here the total current assets and the total current assets here are, will go to the balance sheet here and let us talk about the current assets. So, total current assets are current assets loans and advances interest accrued on the investment is 0.7 inventories, sundry debtors, cash and bank balances, loan and advances which works out as 2342.39, 2342.39 [FL] and in this we have to add the short term debt part which we have

calculated now in the previous ratios that works out as the from the total secured and unsecured loans the short term component is that is 406 and 406 if you add in to this the total amount becomes that is that is added in this also that. So, the total current assets will be short term debt will be in the liabilities part.

So, if you talk about the current assets we are given the total current assets. So, here it is a current assets inventory debtors, then we have the loans and advances which is 824.6[FL] and then we have the say a short term investments I think short term investments information is not available firm has not made any short term investment. So, we will be taking here only the total current asset which are given to us readily available and this for the year 2006 is 2342.39 [FL] and here you have to take now the current liabilities.

Now, current liabilities are there this is current liabilities information 1266.86. So, this is 1266.86 figure we have to take the total current liabilities and in this total current liabilities we have to add the provisions also and provisions figure if you take the total current liabilities and provisions amount this works out as 1450.06 plus short term debt. So, total current liabilities are how much? Total current liabilities are 1450.06 plus 406.71 as the short term debt we have already calculated for studying the solvency of the firm and if you take this into account then this is the if you calculate this ratio for the current year this ratio works out as how much is this ratio a current ratio of the firm is 1.26 times, 1.26 times and if you calculate for the previous year then this ratio would be 1.25 times, 1.25 times is going to be the current ratio for the previous year.

So, it means the current ratio is 1.26 time, what is the standard rule of thumb? 1.33 it should not be less than 1.33 not more it can more than1.33, but normally acceptable ratio should be 1.33, but it is meant either maintaining the show with the less than 1.33 because they are hardly borrowing any money from the bank. Normally if you have to go to the bank and borrow the short term funds as the working capital finance from the bank then the bank could insist for that you maintain the current ratio of 1.33 minimum, if it is more than that its good for the bank, but if it is less than that then not good for the bank they will not allow it.

So, but in this case because we have seen that the sufficient funds available internally. So, they are hardly going to the bank borrowings for meeting their short term

requirements. So, they are able to maintain this ratio and that is 1.26 times current year and previous year if you talk about almost the same 1.25 times and ratio is well maintained properly, liquidity not more not less optimum liquidity they are maintaining and they are really and that that liquidity optimum optimization of the liquidity is also reflecting in the their overall financial performance also.

After this we will be talking about the next ratio that is a quick ratio and super quick ratio and some turnover ratios and then we will draw a conclusion about the liquidity position of this firm and then we will see that how they are maintaining this liquidity and what is the impact of this liquidity upon the overall profitability of the firm financial performance of the firm and this all I will be talking to you in the next part of discussion.

Thank you very much.