Financial Statements Analysis and Reporting
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Lecture – 38
Different Sets of Ratios Part-I

Welcome students. So, we are in the previous lecture we were talking about the liquidity ratios, or the liquidity analysis of the firm and I explained you that how the lower part of the balance sheet is important as far as the liquidity analysis is concerned.

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So, now we will learn about the liquidity ratios in a different liquidity ratio like first ratio is the current ratio. It is called as CR current ratio; current ratio we calculate with the help of CA current assets divided by the current liabilities. Total current assets divided by the total current liabilities this is the current ratio; whatever the total current asset saw here in my previous lecture I discuss with you right from the inventory to the cash or the prepaid expenses, or the current assets are taken together and all the current liabilities are taken together, and then we try to see that how many times the current assets are of the current liabilities.

Earlier if you look at the old literature, you will find that the current ratio is normally considered as good, if it is the rule of thumb for the current ratio is or was two is to one; that is old rule two is to one was considered as a good ratio, current ratio that the current

asset should be two times of the current liabilities. But now these days the latest rule of the current ratio is or the rule of thumb of the current ratio is 1.33 is to 1. 1.33 is to 1. So, 1.33 is to 1 means when we talked about the current assets and the current liabilities, so the people who are interested in the liquidity position of the firm they are interested that the level of current assets.

So, the amount of the current assets in the firm should be certainly more than the current liabilities right. So, this extent of 0.33 or one third of the current assets is considered as a question. Means as we saw here that different current assets where, one was say inventory then it was the sundry debtors, then it was bills receivable, and then we had the marketable securities and then we had the cash.

So, these are the current assets, here this side we have the sundry creditors then we have the bills payable, then we have the expense creditors and the above that is the short term credit or short term loans; short term loans. Now short term loan so when we talk about the total current liabilities and the total current assets, here means when any liability will become due to be paid; say short term loans, then we have sundry creditors, then we have bills payable, then we have expense creditors.

And similarly say, maybe sometime the bank overdraft is considered as different from the short term loans. So, this is also the one liability bank overdraft. So, what happens that all these suppliers of the short term and the spontaneous finance there interested, to know that what is the level of the current assets; and if yes we are asking here the ratio should be 1.33 is to 1, because we know that all the current liabilities are not becoming due to be paid on the same date or the same time they become due to be paid on the different dates.

So, accordingly we keep the amount of the current assets, because we know that first you will use the cash, cash in hand and cash at bank, once it is over we have fully exhausted the cash level then we will use the marketable securities by converting these securities into cash and after that we will be talking about the sundry debtors. So, it means by the time cash will be exhausted the marketable securities will be exhausted; these sundry debtors will be recovered because the due date for the sundry debtors will arrive. And because of any reason if the sundry debtors are not they are not going to receive the sundry debtors still, they can be got discounted from the banks and we can immediately

have the at least 80 percent of the cash with us and after that we talked about the inventory, so in this order to use the liquidity of the firm.

So, we know that if all the liabilities are not going to be due to be paid on the same date, but if whatever the amount of the current liabilities are becoming due to be paid on the one particular day, whether sufficient amount of the cash the firm as or not. And we keep it more than the current liabilities we assumed that even if all the liabilities become due to be paid on the same date right. On the same date in that case also the firm should be able to honor it is liabilities and makes the payment of the due date.

And in that case we keep a question of 0.33 means that say for example, cash if you are using, marketable security can be easily converted into cash, sundry debtors can also be converted into cash these days, but for example, inventory is not saleable because inventory you cannot sell in the market as in when you want it. Inventory can be sold in the market when there is depend from the market. So, for example, even if their entries cannot convertible into cash, others assets are convertible into cash still we have the 100 percent of the current assets equal to the 100 percent of the liabilities.

So, even that 30 means even when the inventory is not convertible into cash maybe it is 33 percent, so we have 100 percent current assets, which are convertible into cash to fulfill 100s percent of the current liabilities. So, liquidity position of the firm is acceptable it is there is no problem in that; there is no worrying factor in that. So, this is the current ratio and normally this say for example, when we talk about that the current assets and current liabilities are 100 percent then from where this 0.33 will be funded; this 0.33 will be funded from long term sources.

So, this is the source that if you have the say current assets if you are going to keep current assets if we are going to have current assets more than the current liabilities. So, it means you say that this is the level of current liabilities, this is the reason it means if the current liabilities up to this level then the current assets should be up to this level; and if the current assets are up to this level then from where this level is going to be funded. Additional requirement which is 0.33 more than the current liabilities, from where it is going to be funded, this will be funded because here the short term sources are ending it means here the long term sources are starting.

So, it means one third of the current assets will be funded from long term sources; and this long term sources funding is called as the net working capital and WC, this is called as the networking capital. So, it means when you have the long term sources available with you and you are using for funding the short term asset current assets, liquidity is automatically maintain because long term fund are always with us. So, even some of the current assets are not convertible into cash as and when we wanted; in that case we have sufficient amount of the liquidity, because at least we have 100 percent of the current asset equal into the 100 percent of the current liabilities and even one person part of the assets is not convertible into cash may be inventory that it can be ignored.

So, it means you have the current assets, current ratio is the is a boarder analysis of the liquidity; simply by studying the level of current assets as compared to current liabilities, we come to know then what is the level of the boarder, level of the liquidity in the firm that is known with the help of the current ratio, and the current ratio is always considered as good when it is 1.33 is to 1. When it is more than 1.33 1 it is very good from the it is suppliers point of view from the lenders point of view, but it is not good from the firms point of view whose liquidity position we are going to study.

So, it is considered as a optimum level or you can say it is a minimum level, and if it is more is good for these people, but not good for the firm because keeping current assets more than a level is not advisable for the firm because current assets not earn anything for the firms. So, this is the first ratio current ratio, second ratio is the quick ratio; then you calculate the quick ratio, for calculating quick ratio we use the formula current assets minus inventory. Current asset minus inventory divided by inventory current assets minus inventory divided by the current liabilities; now as I told you now we are moving toward the narrower studying the means towards the narrower analysis of the work this liquidity. So, first we have studying the judging the broad from the broader prospective what is a current ratio.

Now, we are moving we have be now tightening the scope, and now you are saying that we are moving toward the say finest level of the liquidity. So, we study the quick ratio level that if some payments current liabilities are required to be quickly paid, then whether the firm is able to pay them quickly or not. And for that reason we what we do from the total current assets we subtract the inventory, because inventory out of the all current assets is considered as the least liquid. Among solve the current assets it is

considered as the least liquid, so it means because inventory you cannot sell in the market as an you wanted it.

So, it cannot be converted into cash as and when we wanted earlier even we were subtracting the sundry debtors also that is current assets minus inventory minus sundry debtors, but now we have started removing we removed the sundry debtors now from this particular numerator, because sundry debtors are easily convertible into cash, even when the buyer is not ready to pay or he is not able to pay we can get this sundry debtors are discount from the banks, if we they are of the good quality means you have sold to the credit, but the buyers in that case we can easily get discounted and as and when we wanted we can get a discount from the bank. So, they are removed from now the quick ratio.

So, what calculating the quick ratio you take total current assets minus inventory, and divided again by the current liabilities denominator remains the same. And the rule of thumb where for this ratio is that is one is to one; that your quick assets, not current assets current asset should be more than the current liabilities by one third, and because they include the inventory. But the quick assets involve almost all those assets which can quickly be converted into cash, so in that case we have lower down the ratio, and their 1.33 is removed now. So, it means the quick assets should be current quick assets are current assets minus inventory at the quick assets. So, quick assets should be equal to one is to one it means quick assets should be 100 percent of the current liabilities, and then the third the ratio is that is a super quick ratio.

Super quick ratio or you call it as asset text ratio also asset text ratio this is called as asset test ratio also. Super quick ratio or the asset test ratio which is almost talking about the cash part; cash ability of the firms current assets, which is almost cash on near cash and for calculating this ratio what we takes into account marketable securities ms plus cash that is in hand and at plus cash at bank, and then denominator remains same that is the current liabilities, we do not take other current assets into account. Now inventory is also out, sundry debtors are also out, prepaid expenses are also out, bills receivables are also out, only those current assets are taken in as the numerator which are almost cash; of course, cash in hand cash at bank is cash and similarly your marketable securities are also cash because even today we have the demand deposits.

You as and when you give it today and take it tomorrow for 24 hours over night deposits we can make this some investment avenues, in the bigger cities like Bombay Delhi this money market is say really very very strong. So, even the forms if they have the surplus cash that can be invested in the market and (Refer Time: 14:11) when you want it back you can get it back, we have pay some transaction cost or something like that, but it can be easily converted into cash. So, marketable securities and cash in hand and cash at bank are the three important current assets, which for normally two cash in hand and cash at bank is same, and then the marketable securities so we talked about the cash part, and divided by the current liabilities. So, it is a super quick or the asset test ratio, and this ratio has to be 0.5 is to 1. This ratio has to be 0.5 is to 1, that cash or the near cash as assets should be say half of the total current liability.

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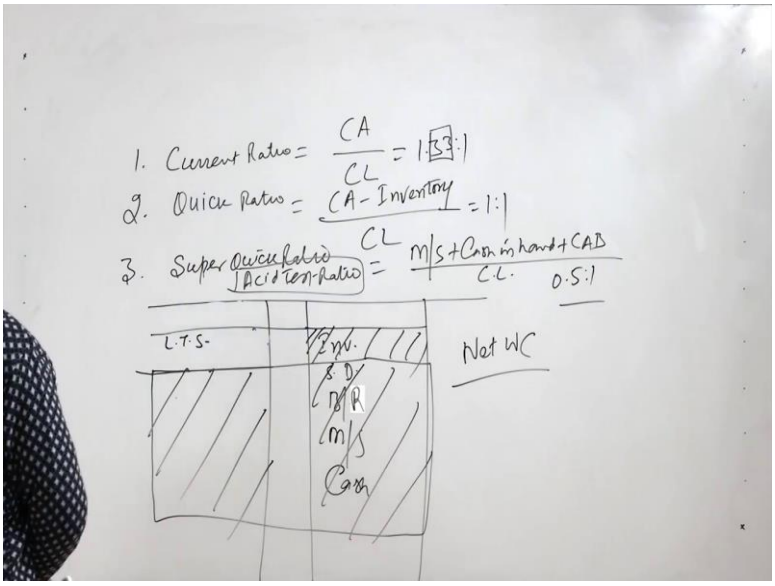

So, the extent of the cash and marketable securities; so there is no need to keep as this current asset as cash, you can easily convert the cash into marketable securities and for calculating super quick ratio this cash and the marketable securities are considered as same. So, we can invest the surplus cash in the marketable securities, also been returned on that and whenever we need that cash we can sell the marketable securities and we can replenish the cash level to the one where which is the say minimum level, or which is the required level of cash.

After that we have the some other ratios, which are again considered as good for studying the liquidity position of the firm, and these ratios are like debtors turnover ratio; some turnover ratios we use though we will be talking about the turnover ratios in the next part, but turnover ratios are of two kinds, that is turnover ratios calculation of turnover ratios using the long term assets and funds, and turnover ratios using the current assets.

So, turn over ratios are normally to turn over for the assets current assets, and one for the liabilities. So, we also study the turnover of asset and liabilities current assets and current liabilities, then how quickly this current assets can be converted into cash or what amount of the current assets is being kept by the firm, and for that purpose we know the turnover level of the current assets, that we can make out that even the firm is keeping selling the means keeping inventory or selling on credit generating sundry debtors in the balance sheet, but the turnover of these this inventory and the sundry debtors is very high. So, there almost considered as good as liquid, so some turnover ratios we have to calculate.

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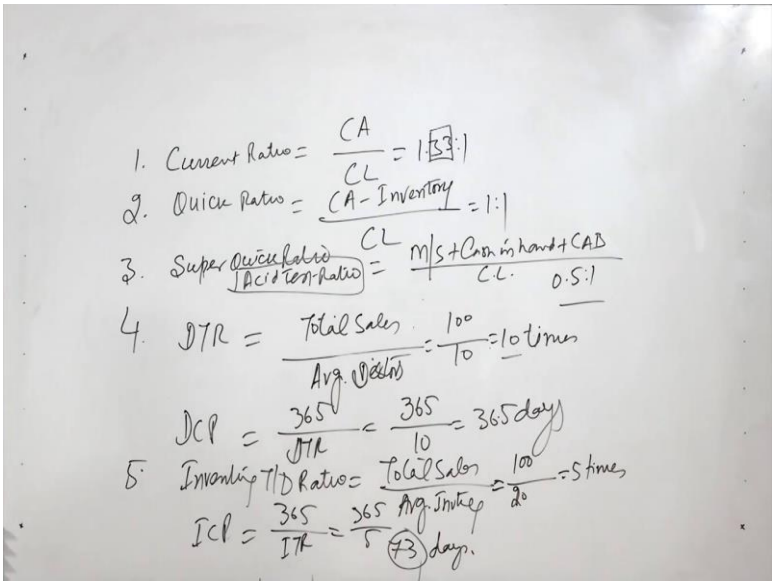

So, the forth liquidity ratio here is that is the debtors turnover ratio which is called as DTR debtors turnover ratio DTR. So, when you calculate the debtor's turnover ratio, we normally take here the credit sales divided by the sundry debtors. Credit sales divided by

the sundry debtors, but you see normally information about the credit sales is not available in the profit and loss account.

So, we remove these word credit sales and we take it as the total sales; we take the total sales, but if we have the credit sales figures with us then it is fine. So, we do not have the credit sales figures so it means total sales, and divided by the we do not take the closing sundry debtors, is always better if you have the average sundry debtors. That is the opening balances of the sundry debtors when you started the business and the closing balance of the sundry debtors, when you preparing the balance sheets. So, if you take the average sundry debtors, in that case this is average debtors. So, if we divide the total sales by average debtors, then it will give us the debtor's turnover ratio.

So, it means for example, now the total sales of the firm are say 100 rupees, and sundry debtors are only 10 percent, it means out of the total sales which we made in a year they are 400 rupees and only 10 percent we have the credit sales left on collected at the end of the year, which means it is only 10 percent or you can call it as the ratio is going to be 10, means debtors turnover ratio is 10, and this 10 is otherwise of no good use, to us to have a meaningful conclusion with the help of this debtors turnover ratio we can calculate the debtors DCP that is the debtors collection period. And debtor's collection period can be calculated by dividing 365 days and year with the debtor's turnover ratio. So, you can call it as the 365 divide by DTR, and DTR here it is 365 and it is DTR is 10. So, your debtor collection period is 3.63.5 days, so then it becomes meaningful for us.

Debtor turnover ratio is also good means people who know the finance and the financial analysis, for them also mean 10 times. If the debtor turnover ratio is 10 times this is called as the ratio in times means this is 10 times, again we can make out that if the sales are 10 times of the debtors it means the debtors are credit sales are only one tenth. So, it is not a big figure it is acceptable level, but you want to draw the better conclusion logical conclusion then you always convert this debtor's turnover ratio into debtor's collection period, and the debtor's collection period is 36.5 days in this case.

So, normally, but ever the credit sales this firm is making or the firm in question is making that is collectible in the 36.5 days almost you can see little more than a month. And when you compare this credit period, we given by this firm to the other firm then it means normally in India the credit period ranges from 45 to 60 days, one and half month

to two months credit period can be given and enjoyed by the users. So, if it is 36.5 days it is much less than the industry average. So, it is considered as good.

So, it means then you are having the sundry debtors only one tenth of the total sales, it means is a very small amount. Larger part of sales are either on cash, and if they are collective on credit they are collective and within a year. So, firm is maintaining a good amount of liquidity. Then we have the credit sorry inventory turnover ratio this ratio tells us that in how many days the inventory of the finance goods or maybe any kind of inventory is convertible into cash. It means if the inventory of finished goods that will be converted into sales and sales will be converted into cash. So, how many times how many days the inventory can be converted into the cash? We have to look for this, and when you want to calculate the inventory turnover ratio. So, you can again use the either we take that total sales or we take the again. So, for calculating this also we can take the total sales divided by the average inventory.

So, this is telling us that how much amount of the finished goods are kept as inventory, as compared to the sales. And for example, again we take it here as that the total sales are for 100 rupees in a year, and inventory is again for say 10 rupees for say 20 rupees inventory is there, it means the ratio is 5 times; that the total sales as against the average inventory is 5 times, it means now we have to compare that how much is the inventory in the other firms, and what is the position of inventory in this firm as compared to the previous years in the current year, that can be a way of comparison, but better way of comparison is that you convert this into also ICP this is called as inventory conversion period.

Inventory conversion period and here also the same miss battle we use that is the 365 that divided by inventory turnover ratio; 365 divided by inventory turnover ratio ITR and we have calculated it 5 times, so it is 365 divided by 5. So, it is how many days are being taken that is 73 days; that in 73 days the inventory is be converted into cash. You can talk about that is taking first the raw material raw material to work in process work in process to finished goods and finished goods to sundry debtors and sundry debtors to cash. So, the total cycle is taking 73 days. So, for example, in this format is taking 73 days, how much is taking the other forms in the same industry or whether the credit inventory collection period conversion period is same in this form over the years or it has

gone up gone down. So, if the, but normally the inventory conversion period should be as short as possible.

So, that quickly it can raw material can be converted into the work in process, and the work in process can be converted into the finished goods, and finished goods can be converted into the sales. So, these are the asset means I can call it as the 5 ratios, which can be calculated with the help of current assets; means current assets and current liabilities first 3 ratios then this is only with the help of sundry debtors, this will be the help of inventory, and means two that is inventory turnover ratio and the say the debtors turnover ratio and then one more ratio is important for us, studying the liquidity position of the firm and that ratio is called as the creditors payment ratio or creditors turnover ratio.

With the help of this ratio we normally study that in how many days the firm in question who is balance sheet we are analyzing is paying it is a current liability to it is suppliers. So, it is called as the last ratio is the sixth ratio is the creditor's turnover ratio which is called as CTR.

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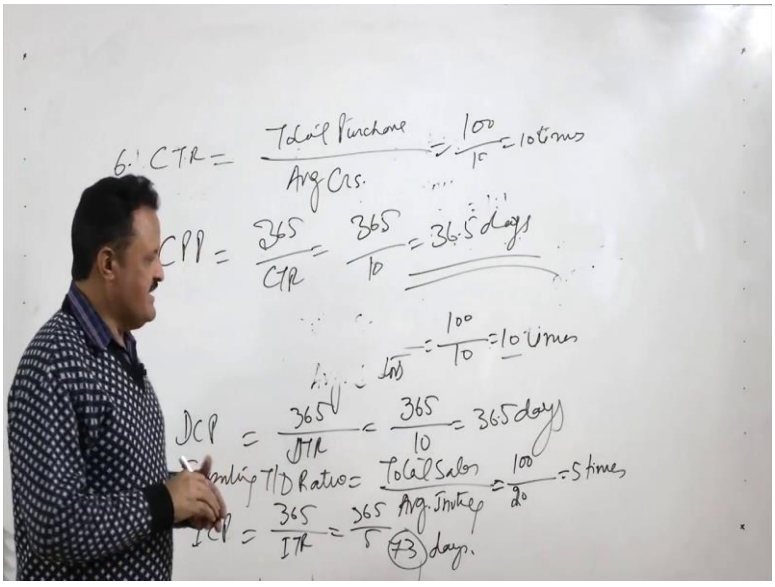

Creditor's turnover ratio and creditors turnover ratio is talking we are talking about total purchases. Normally we should take the credit purchases, but the figure of credit purchase is not available in the balance sheet. So, it is always better to take the total

purchases and there it is the here you take the average creditors, and which will gives us this ratio we will get in times like debtors turnover ratio.

So, for example, total purchases are say again 100 rupees, and the sundry average creditors are 10 so this ratio is 10 times; which is not considered very high 10 times means the ratio is average very high amount purchases amount is very high, but the credit purchase which are still un paid, at the end of the year is only one tenth it means firm is having a properly could be better liquidity and all the payments are being made on time, and then it can be converted into credit payment periods CPP, and again it is 365 divided by the creditors turnover ratio and this is 365 divided by 10 it is again 36.5 days period in which the ratios are being converted; in means the creditors are being paid.

Generally the creditors are being paid suppliers are being paid by the firm in a period of 36.5 or 37 days. So, it means again if you compare with the normal credit period being enjoyed by the other firms in the , if that is say about one and half month or two months, but this form is only enjoying 37 days, it means this firm is a good pair from to pair and they are making the payment of their supplies or to their suppliers in a prompt manner at the earliest manner, within say about say 37 days little more than a month, it means this also shows that firm is maintaining the proper liquidity in itself. So, these 6 ratios credit this current ratio quick ratio, and super quick ratio, for which we have the very good rules of thumb 1.33 is to 1, one is to one and 0.5 is 0.05 is to 1 are the three rules for this first three liquidity ratios.

So, we simply can apply these three rules and we correct the firm as far as liquidity is concerned. Then we have the three turnover ratios, two are from the asset side of the balance sheet one from the liability side a balance sheet using current assets and current liabilities. Now when we use the asset side we use the we calculate the debtors turnover ratio, that in how many days the debtors are being debtors are paying back to this firm or the debtor collection period, and then is the inventory conversion period that in how many how fast the inventory is being converted into sales, and inventory conversion period.

And lastly it is the payment side that how quickly this firm is paying to it is own suppliers and by calculating the creditors turnover ratio or by say calculating the

creditors payment period, and the both the ratios should be is all these three ratios; debtors turnover ratio, inventory turnover ratio, and creditors turnover ratio they should always be as low as possible. Means or other way round it can be that is you want to look it at that at least the debtors turnover ratio and inventory turnover ratio they should be as low as possible in times terms, and if the less in time terms automatically the collection period will also be short like that.

So, means they are paying to there or the collection is taking place in the conversion and collection is taking place in at the earliest possible time, but the other ratio the that is credit is payment period or the creditors turnover ratio, that should also be optimum; because if it is a on the higher side it gives a wrong signal that this firm is not a prompt pair and this ratio is very high for example, it comes up as 60, 70 or 80 days, it means it is conveys the feeling to outside word that this firm is having a liquidity problem that is why there is using more credit period, and they are not making the payment to their suppliers on time. So, these are the three sets of ratios we have talked so far and then mean this is the return on investment ratio, solvency ratios liquidity ratios.

So, you memorize the formulas keep it in your mind and then we will finish the other ratios also turnover ratios, profitability do point and valuation, and then we will discuss a case so we will be able to know much better that if we talk about the ratios we have learnt here, and if we apply that to analyze the financial statements of a company, what conclusion we can draw out of it and how we can study the overall say financial position of the firm.

So, remaining four sets of the ratios I will be talking to and talking to you, and discussing with you in the next part of discussion.

Thank you very much.