Working Capital Management

Dr. Anil K. Sharma
Department of Management Studies
Indian Institute of Technology-Roorkee

Lecture-42
Credit Risk Analysis-I

Welcome students showing the previous class you were talking about the say credit analysis of the firms that how to find out that any borrower is worth giving the credit or not and I discuss with you that we should we are looking at the operating structure of the firm and the financial structure of the firm and we had this detailed discussion also here that while preparing this format of the income statement trading and profit and loss account.

And then I emphasize the upon that we must look at the first your trading part trading account part and trading account is the reflection of the operating performance of the firm. Because they say you have 5 items are largely that is sales and then the closing stock and then this side we have the three inputs that is a direct material, direct labour and direct overheads. So, we have to compare these 5 with each other and they may be with the two sides debit in the credit side.

So, we have to see that your net results that is the sales minus cross has a direct expenses is the gross profit and that gross profit must be intact that gross profit must be kept safe for that must be intact because reason for that is that all the 5 items in the trading account are variable right. So, it means if the cost of input is going out than the selling price also must go up for must be capable to fetch the essay increased cost from the customers and that should be passed on efficiently to the customer.

So, selling price increased selling price must reflect the increased input cost so it means if both the sides are variable even if the cost is going up and sales are also going up or the selling price is also going up.

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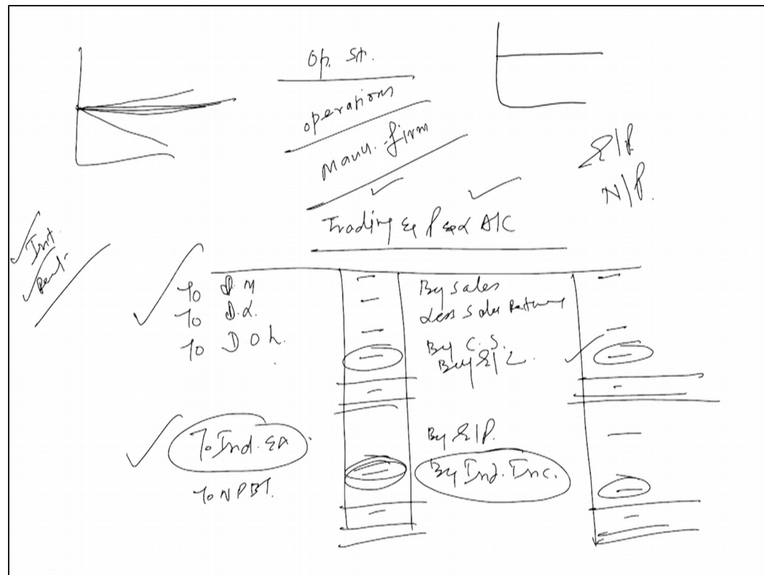

So, we have seen here that you again I would say that your GP line will be something like this maximum it should be like this that should remain stable period should have the rising trend or if it is not then at least it should be stable in and none of the cases depicting the declining trend. If the GP of the firm is declining it means you must be careful that the operating performance of the firm is questionable it is coming down and that will have the impact upon the financial performance also.

And then we talked about the financial structure which is indicated to us by the lower part of the income statement that is why the profit and loss account. Here we saw that the net profit if there is a net profit in the business then that made profit must be coming from the trading account say first we should have the GP and then we should have other expenses and indirect expenses and incomes and the net result can be NP that is before tax.

But the reverse is the case that in the trading account there is a gross loss and in the net profit there is profit so it means something fishy about it that this firm despite being a manufacturing organisation major source of the revenue and profit is not the operations but the indirect incomes. So, if this the income for example I give you the interest if it is from the interest means the surplus funds which the firm as earned either in the market then the firm is earning interest income out of that.

And because of the increase interest income the cross has been converted into the net profit or there might be surplus investment that is invested in the building and buildings are rented out now rent is coming from the buildings or huge fixed assets are there which are not being used in

the firm outside the firm and rented out and huge rent is earned by the firm. So, that rent income is converting the gross loss into profit.

So, we would all agree that there is interest income which is the source of the profitability it means this firm is not a finance company. This firm is the manufacturing organisation so major source of the profit must be the operations and your rent incomes your interest incomes they can supplement the profits but we should start the say looking at the profitability from the trading account and from the gross profit.

If the trading account is good is strengthened and strong and this is reporting the gross profit then you can say that the operating structure of the firm is good and if the operating structure of the firm is good then certainly even the weak financial structure currently might see that their financial structure is very heavy. They are borrowed money from the sources as a loans which is very, very expensive.

So, if you have a good operating structure and your earning a good gross profit then slowly and steadily those heavy and expensive sources of funds can be replaced with the cheaper sources of the funds at our own priority and the choice that is possible. But if the reverse is the case that the trading account is reporting a loss and net profit and loss account is reporting a profit then you can see that the days of the firm are numbered.

That a strong financial structure will be killed will be eaten away by the weak operating structure so we will have to make a detailed analysis of the operating structure of the firm and the financial structure of the firm and the analysis be a manufacturing sector firm that should be analysed in the way as we discussed now starting from the trading account moving down to the profit and loss account and finding out what is the source of profitability.

Now apart from your this basic analysis of the income statement there are certain ratios also that which we can use and we can quickly try to find out something about the operating management of the operating structure of the firm. And there are three ratios we will not put you in trouble by giving you more number of the ratios only 3 ratios are enough to evaluate the operating structure of the firm 3 ratios are enough there good enough.

If you probably calculate the ratios you will be able to find out the signals about the operating structure of the firm and these resources are first ratio is fixed assets turnover ratio, second ratios is ROI that is return on investment and third one is the gross profit ratio.

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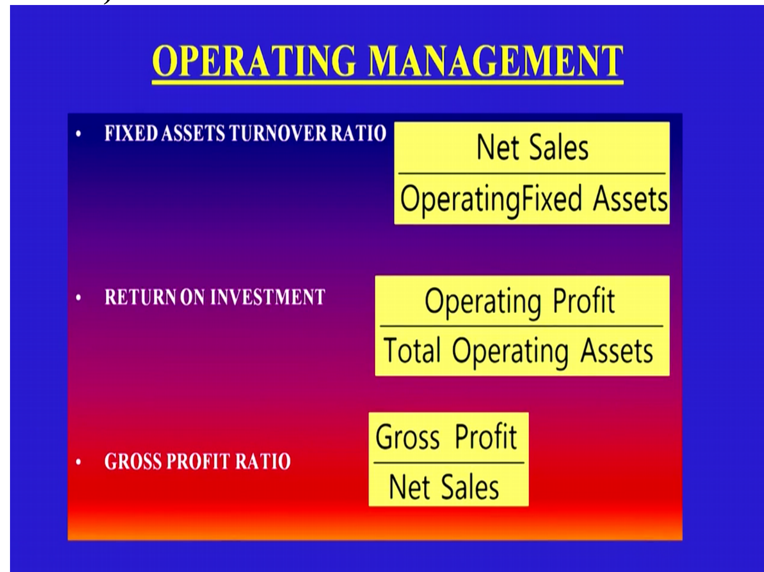

First one is fixed asset turnover ratio we all understand how we calculate this issue this ratio is calculated as net sales divided by the operating fixed assets net sales divided by the operating fixed assets which are the operating fixed asset not non-operating fixed assets right. Say if you talk about the; if it is a good deal for example that is not your operating fixed asset, operative fixed assets are the plant, building, machinery which is in use.

So, it means how many times the sales are of the operating fixed assets and that is a net fixed assets just not gross fixed asset we have to take care that is the gross assets minus depreciation. So, we will have to find out the ratio and how to analyse this ratio higher the ratio better it is means this ratios is used two times in one firm, this ratio is 3 times in another firm; this ratio is 4 times in another firm.

So, it means that means the firm which is repeating the ratio 4 times I think that is considered as a better firm because their use of the fixed asset is maximum. This ratio indicates the use of the fixed assets and any firm which is able to maximize sales in the market by utilising its fixed assets to the maximum possible extent that firm is considered as efficient. And if you are utilising a fixed assets efficiently manufacturing more selling more in the market I am sure that your trading account will be depicting a very strong picture right.

So, this is the one thing that we have to look at the operating system is the operations of the firm can be valued or can be evaluated with the help of the relationship between the net sales and the operating fixed assets and net sales should be this ratio should be as high as possible. Then we talk about the ROI return on investment operating profit divided by the total operating assets, operating profit divided by the total of operating profit is that we are talking about the profit from the operations first right.

You only have to take the profit from the operations that is not from the interest income not as a rent income only the profit from the operations that is both taking into consideration the direct and indirect expenses. So, if you take only direct expenses pictures only considered in the trading account then we will be coming to the third ratio that is GP ratio. But we are talking about the operating profit ratio should have to calculate the profit from operations.

Profit from operations is only that from the manufacturing operations in which the firm normally deals and in that profit in that revenue in that Income we will not have to include the indirect incomes. So, we will have to take the direct expenses direct income and indirect expenses also both. Both expenses 3 expenses in the trading account and other indirect expenses in the P and L account profit and loss account and then we will have to subtract those from the sales revenue only largely.

And no other revenue that is indirect income that should be totally excluded. So, operating profit we have to calculate as a ratio of the total operating assets that is both fixed and the current assets total operating, fixed and current asset have to take care in the upper ratio we are taking only fixed asset but in the lower ratio we are taking both of total operating assets that is the both current assets and the fixed assets and we have to see how many times or what is the percentage normally we calculate the ROI in terms of the percentage and fixed asset turnover can be in times.

But this return on investment should be calculated in the percentage so what is the percentage of the operating profit as compared to the total operating assets and total operating assets means that fixed assets as well as the current assets we have to take the total operating assets means fixed assets minus depreciation plus current assets. Then we have the GP ratio is the gross profit ratio we have discussed at length what is a GP ratio here we have to calculate the ratio from the trading account only.

Because GP is in the trading account so from the if analyze the trading account find you will find out what is the gross profit ratio in the trading account and taking the GP from the trading account and the net sales from the again from the trading account we have to calculate ratio. So it means we are calculating ratio at number 3 but the other two ratios are also largely depending upon the third ratio right.

Because I told you that operating profit should also be coming from the trading account and net sales should be maximum so is then the sales are going up only then the cost should increase right in the trading account when you talk about we are seeing here that if the sales are going up, these are the sales, if the sales are going up only then these 3 cost have to increase. If this cost is going up and this is raising trend but the sales are is a depicting rolling down trend.

So, it means there is something wrong about that firm is not that efficient that people are not ready to by the firms finished product at the increase price despite the fact that the cost has increased and firm is simply passing out the increased cost to the buyer they are not ready to pay the increase price to the firm. So, that is an important question issue, so we should be able to increase the sales maximize the sales and as a result of the maximization of the use of the operating fixed assets we should maximize the sales.

And then if the sales are maximum certainly your operating profit will also be highest and operating profit will be highest because sales are maximum and profit cost is taken care and the gross profit is higher. So, these three ratios are normally can be calculated by the trading account and balance sheet and from the profit and loss account we will have to recalculate the operating from him because profit and loss account depicts only the net profit before tax and net profit includes are indirect income or the indirect revenue also.

we should be careful about that we have to subtract the indirect revenue that is a revenue from the rent income from the interest income as a commission on some business transactions or maybe a interest income or maybe there any other source of say or maybe the dividend on the say investments made in the equity of the other companies we will have to subtract everything and then only the sales income that is a direct revenue and both direct and indirect cost which are related to the business only both have to be subtracted so the operating profit will be worked out.

So operative management first you look at the trading account part and how much is a GP and whether GP is depicting a stable picture or depicting a rising trend that is the case. if it is lowered and declining trend not good should be depicting either the rising trend or the stable trend this is a first thing from the trading account and then calculate 3 important ratios that is the fixed asset turnover ratio looking at how to clear how efficiently we are using the fixed assets.

Return on investment that how much return we are generating from this investment we are generating the return on and GP that is what is the ratio of the gross profit to the sales because you are the sales are going out gross profit should also be going up if the sales are going out gross profit should also be going up maximum it can be as I told you that it can be stable because if the sales are going out and expenses are also going up.

So, what will happen GP will remain stable that if it is possible picture or slightly rising picture that if the GP is declining so it means there is something wrong about that you have to be careful about it. So, make analysis of the trading account and then the three important ratios. Now we talk about the some important ratios for the first aid in the financial structure of the firm. There a number of ratios which can be used to study the financial structures of the firm but here for our purpose the purpose of our discussion we will only talk about the 3, 4 ratios maximum not more than that right.

So, financial management or the financial structure of the firm these 3, 4 ratios are important here and if we apart from studying the profit and loss account in the net profit position we should calculate and work out some ratios also so that to understand the financial management part of the company who is the prospective buyer or the borrower from the seller. So first ratio is the lead ratio that is the total debt to equity ratio total debt to equity ratio; so it means for calculating this ratio we take into account that ratio into total outside liabilities to the net worth, now what do you means by this ratio here.

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We have a balance sheet here preparing it in the T form this is the balance sheet and we are analyzing this ratio from the liabilities and capital side of the balance sheet. This is our balance sheet and this is liabilities capital and the assets and this is the amount, liabilities and capital so what is the ratio is;

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FINANCIAL MANAGEMENT

- TOTAL DEBT-EQUITY RATIO: $\frac{\text{Total Outside Liabilities}}{\text{Net Worth}}$
- SHORT TERM DEBT-EQUITY RATIO: $\frac{\text{Current Liabilities}}{\text{Net Worth}}$
- FINISHED GOODS INVENTORY TURNOVER RATIO: $\frac{\text{Cost of Goods sold}}{\text{Finished Goods Inventory}}$

That is the total debt equity ratio means we are only talking about the liabilities and capital of the balance sheet right we are talking about the what the ratio is say the ratio total outside liabilities to net worth total outside liabilities total outside liabilities to net worth first of all we must be clear about what is the net worth what is the net worth, net worth is there the two definitions of the net worth. First definition is total assets minus total outside liabilities means to finance the total asses this side total assets here right.

The total amount here to create this level of the assets we have invested the funds in the business and the funds in the business come from the two sources internal sources and external sources. And total funds become the equal to the total funds invested in the business should be equal to the total assets right. Now when you are calculating the net worth simple ways total assets total of the balance sheets assets side total assets minus total outside liabilities outside sources of the funds.

So, you have the long term loans you have debentures have bonds you have short term loans you have anything else or maybe creditors or anything subtract everything from the total assets. Then what is left with you is that is called as net worth or NW other way around. Second way of defining this that you take the equity capital or you can say not capital I will call it as this is share capital because it includes the preference capital also share capital sorry share capital plus the reserve and surplus that is free reserves and surplus so it is also the net worth.

Naturally because in the balance sheet share capital here then you the reserves and surplus that is a free reserve and surplus which is not having any claim current claim on the contingent claim against that that part. So, this is the first part then we have the outside liabilities outside liabilities means your long term loan then you have the debentures you have bonds and then you have the short term liabilities so many things.

You subtract total outside funds from the total assets what is left over is that is called as net worth. So, either you use the formula total assets minus total outside funds find out the net worth or you simply look at the liabilities and capital side of the balance sheet and you see share capital + free reserves is the net worth. So, first of all you calculate the net worth and then you see that the ratio in this case the ratio is that is a total outside liabilities divided by the net worth it means indirectly can say this is the ratio between the insiders' funds and outsiders funds invested in the company.

Inside are owners, shareholders on promoters and shareholders and outsiders are the lenders. So, promoters create a company when it runs for the sufficient time and converted into a public limited company shareholders will also gives fund and subscribe shares of the company they also give funds to the company they also become owners. Promoter plus all the share holders they will become the owners of the company they are called as insiders.

So, the total funds provided by the insiders will be considered and how much funds are invested by the insiders and against that how much funds are borrowed from the outside sources as loans or as debentures are as by issuing the bonds or maybe the supplier credit or other things everything will have to take into account which will give you an idea that what is the intention of the owners of the business.

If the standard ratio we all know that this is the total debt equity ratio the standard ratio is 2:1 if you invest 1 money in the business you can borrow 2 rupees from the market this is the standard ratio which standard rule of thumb. In the is a practice there can be different also for example this ratio can be fine instrumental 5:1 or even 6:1 that if the company is doing very well exceedingly well and financial Institutions are satisfied with the performance of the company and they are ready to lend them any amount how much they want.

Then there is hardly any problem there is hardly any problem that issue can be 5 times 6 times are any times for standard is that if you invest 1 rupee from your own pocket as your owner of the company both promoter and shareholders. Then you have the right of you have the say expectations you can have from the market that is you can expect to borrow 2 rupees from the market right you can expect to borrow 2 rupees on the market.

The standard ratio is 2 : 1 so it means we will have to see that how much funds are invested by the owners of the company in the company and how much is borrowed from the outside and then you have to see that what is the ratio between the insider and outsider of funds. Because it just got to tell the intentions of the owners. Whether the owners want to continue with the business or he wanted to just play with the interest of the outsiders grab the money declare insolvent business and run away.

So, financial management or the furniture structure can be studied what is the proportion if for example large investment is coming from the internal sources and only part of the investment is coming from the external sources then there is no issue at all companies financial structure is good because every say shareholder or the promoter would like that outsider claim on the company should be minimum.

And most of the funds requirement should be made from the internal funds. But if that is not happening in that case we have to be careful that something is fishy about it more investment the

companies seeking in the firm of the borrowed funds their own investment is very limited. So, it means they do not want to carry on the business for the longer duration so we should be carefully thinking about it right.

Similarly you talk about the short term debt equity ratio in the upper ratio we will be taking the total outside liabilities including short term and in the second ratio we are taking into account only current liabilities to net worth that how much spontaneous finance is available to the firm from its sources current liabilities that is expense credit and then that is the same bank finance then it can be the suppliers credit all the current liabilities to net worth.

Higher the amount of current liabilities better is the indication because current liabilities are spontaneous finance and who gets the spontaneous finance in the market who enjoys a very good financial reputation in the market. If the financial reputation of the firm is not good, no supplier will supply to the firm on credit no bank give the funds to firms to the firm and no say worker of the company would wait for their wages to be paid after even 30 days they would like that they should you paid every week or every 15 days.

So, if this ratio is high then we should consider it good but we should carefully analyse it that after how many times companies pay what is borrowed this buyer is paying suppliers claims. How efficient they are in making the payment of the bank loans or the bank funds and how efficiently means what is the level of happiness of their employees and how they are utilising this shot maybe spontaneous sources of the finance. We can collect information from the suppliers also about the borrower; we can collect the information from the bank also.

We can collect information from the employees also and if we get the good information that the current liabilities are high is a good indication positive indication because spontaneous finance extent is high. So it means you should consider this ratio and that is the second ratio to study the financial structure of the firm. So, first case more investment from the internal sources and or maybe it is a comparable investment from the internal and external sources standard ratio is 2:1 but the ratio is higher that we should be carefully analysing it.

Second issue is the short term debt to equity ratio that is a current liabilities to net worth we have to see higher the ratio better it is but again carefully the caution here is that we should carefully analyser ratio. Finished goods inventory turnover ratio just another important ratio cost of goods

sold divided by the finished goods inventory. Finished goods inventory turnover ratio cost of goods sold divided by the finished goods inventory.

So, how many times the cost of goods sold is as compared to the finished goods inventory however issue is better it is because if the denominator is smaller numerator is bigger what bit but indication day gives it gives indication that the finished goods inventory with the firm is very, very small it means most of the production of this borrower is going to the market quickly and they are not keeping are they are not bound to keep much of the part as inventory.

So, it should be the ratio as higher as possible then we have the other issues days of stock holding that for how many days the stock is say is being capital stock finished goods are kept as stock. It gives an idea that finished goods are going from the plan to the market or its going from the plant to the warehouse ratio is finished goods inventory divided by the CUG. So, now what is we are doing here we are converting that ratio to the previous ratio that this ratio we have reversed it.

So, for example you calculate this cost of goods sold divided by the finished goods inventory so we get this ratio that cost of goods sold his say;

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You can see here that cost of goods sold is something like 300 and the inventory is for example here is say for 30 rupees 300 rupees received 30 rupees inventory. So, what is the ratio this is 10 times right after calculating this ratio that is a inventory turnover ratio we have to calculate the

next ratio now then that ratio is reverse that is the again now we are CUG is divided by the finished goods inventory so it means me this ratio we have already calculated.

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RATIO ANALYSIS

- DAYS OF STOCK HOLDING $\frac{F\ G\ I}{COGS} \times 365$
- RECEIVABLES TURN OVER RATIO $\frac{\text{Gross Sales}}{\text{Trade Receivables}}$
- DEBTORS COLLECTION PERIOD $\frac{\text{Trade Receivables}}{\text{Gross Sales}} \times 365$

So, what have to do is that you have to divide this 365 by 10 and 6 days of stock holding 36.5 on an average for 36.5 days the inventory is staying in the warehouse finished goods inventory is staying in the warehouse and maybe whatever inventory there keeping that everything is not going from the plant to the market part of the inventory is going from the plan to the warehouse and in the warehouse after the production the inventory is staying finished goods inventory is staying in the warehouse only for 36.5 days or 37 days.

So, we have to now see that we can say how whether it is good or bad that will depend upon the industry average you can take the industry average industry average easily available that in that particular industry what is the average stock holding a day's number of days is blocked in the in the in the stock. So, we can take the industry average or we can take the say becoming the comparison with the other similar firm in the market not if industry than 2, 3, 4 more firms you can take the average of those firms in the market.

And if this companies for example is on an average performing on an average basis then I think we should consider that it is a good company but for example the company which we are evaluating their days off the stock holding are higher as compared to the others in the markets gives a feeling that this company is not a good manufacturers and their production not like in the market. So, it means if their stock is not converting into that sales quickly you can expect that

they will have the liquidity problem and the suppliers funds can also be get stuck to be should be very careful about that.

So, compare it with the other firms compared with the industry average and then draw a conclusion that their days of stock holding weather 30 days 35, 36, 25, 10 days is acceptable or not. Then is the receivables turnover ratio with the help of this ratio is always ratios are the ratios of the working capital where they are not ratios of the fixed may be they have their ratio for example they have ratio like say first ratio was the long-term analysis of the funds that the debt and equity.

But lower is the short term debt and equity ratio and all these ratios are the working capital because these resources the working capital ratio whether it is a inventory turnover ratio receivables turnover ratio for debtors collection period. All these are the working capital ratios and then are the creditor's turnover ratio, creditor's payment period and current ratio all these are the working capital ratios.

So, the financial Management we have complete idea about the overall financial performance of the firm the liquidity positions of the firm of and to know whether investment in these companies is safe or not. Here next ratio receivables turnover ratio receivables turnover ratio is that gross sales divided by the trade receivables. How much of their total sales are on credit the company is going to be the borrower from the company is making the analysis.

This ratio is also important that is gross is divided by the trade receivables are you can take you the net sales also there is no harm in it crosses - sales returns you can take the net sales also and then you can find out the trade receivables divided by the trade receivables means the accounts receivables. So, again the higher the ratio better it is because the proportion of the total sales must be very high and the proportion of the credit sales out of the total sales must be very, very low.

So, gross sales or net sales are very high and credit sales are very low they certainly in this ratio will be very high right. And next ratio which is related to this receivables turnover ratios that is the that is the debtors collection period as in case of the inventory turnover ratio we have seen that is true that we calculated the first we calculate the inventory turnover ratio and then be calculated the calculate the days of the stock holding.

Similar is the case now that we calculate the receivables turnover ratio and then we say calculate the debtors collection period then we calculate the date that was collection period so it means gross sales and trade receivables again we calculate here that is the again we take the groceries are 300 and then is the average receivables are 30 this ratio is again 10 times and then you have to reverse the ratio and then divide the 365 that is the number of days in a year by 10 is again it is the 36.5 days.

So, it means that is debtors collection period is trade receivables divided by the gross ratio is a reverse of that upper ratio and this period comes out as again 36.5 days or if you take 360 days a year than 36 days it means the company who is going to the prospective buyer from the company is making analysis there sales credit sales are being collected in 35 days so it means 35 days is appropriate credit period in the market.

So, there say total sales and proportion of the total shares as a credit sales is acceptable level so this ratio is indicating the acceptable level and that can be as I can take taken for considered as a good indicator. So, apart from these ratios these are few ratios about the financial analysis we are many other issues also which are given 3,4 more ratios not many 3,4 more ratios we will have to discuss.

And then we will have to arrive at the conclusion so looking at the total financial performance related ratios with long term and short term ratios. Largely these are the short-term ratios are you call them as are working capital ratio and we have discussed till now say 4, 5 ratios and the remaining ratios in the series or to know about the financial performance of the company we will discuss in the next class thank you very much.