

Managerial Accounting
Prof. Dr. Varadraj Bapat
Department of School of Management
Indian Institute of Technology, Bombay

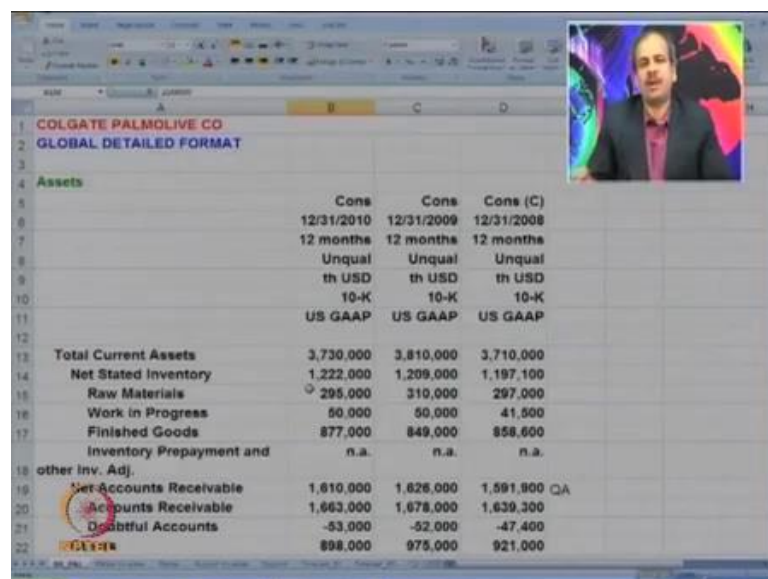
Lecture - 18
Financial Statements Analysis – Dabur India Case

Dear students, in last few sessions we are discussing about Financial Statement Analysis. I hope you have understood the basics, now we were going into details of ratio analysis. Ratio is a relationship between two items in the financial statements. There can be 100s and 100s to ratios, wherein we try to link one item to another. For example, it could be profitability ratios like net profit to sales or operating profit to sales. It could be solvency ratios like, equity to date or date to equity and so on.

In the last session, we were solving a rather longish problem on Colgate Palmolive, where we had taken their global consolidated financial statements prepared as per US GAAP. And then, we were trying to do a variety of ratios. We will continue to do that, we will do a few more ratios today, followed by we will also see how the ratios can be used for forecasting.

And then, perhaps we will take one more case and then we would complete this financial statement analysis, which is going on for last 4 or 5 sessions. So, let us go back to Colgate balance sheet and profit and loss account, which we were discussing.

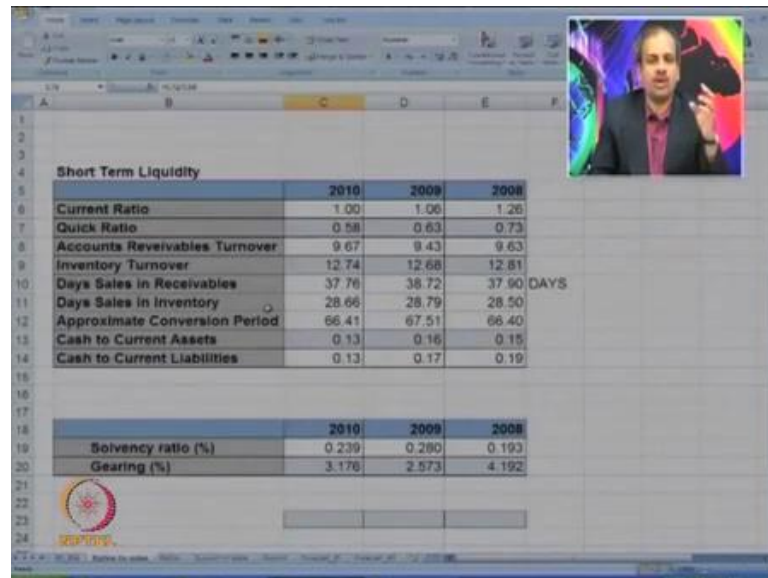
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COLGATE PALMOLIVE CO			
GLOBAL DETAILED FORMAT			
Assets			
	Cons	Cons	Cons (C)
	12/31/2010	12/31/2009	12/31/2008
	12 months	12 months	12 months
	Unqual	Unqual	Unqual
	th USD	th USD	th USD
	10-K	10-K	10-K
	US GAAP	US GAAP	US GAAP
Total Current Assets	3,730,000	3,810,000	3,710,000
Net Stated Inventory	1,222,000	1,209,000	1,197,100
Raw Materials	295,000	310,000	297,000
Work in Progress	50,000	50,000	41,500
Finished Goods	877,000	849,000	858,600
Inventory Prepayment and other Inv. Adj.	n.a.	n.a.	n.a.
Net Accounts Receivable	1,610,000	1,626,000	1,591,900
Accounts Receivable	1,663,000	1,678,000	1,639,300
Doubtful Accounts	-53,000	-52,000	-47,400
	898,000	975,000	921,000

Just have a look at their P and L and balance sheet statements once again. See this is the global detail format for Colgate Palmolive as per US gap. You can see the balance sheet items, which are categorized as first current assets, followed by fixed assets, followed by current liabilities, then non-current liabilities and lastly the equity. This is next is income statement, wherein total revenue and detailed expenses are given.

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Short Term Liquidity			
	2010	2009	2008
Current Ratio	1.00	1.06	1.26
Quick Ratio	0.58	0.63	0.73
Accounts Receivables Turnover	9.67	9.43	9.63
Inventory Turnover	12.74	12.68	12.81
Days Sales in Receivables	37.76	38.72	37.90
Days Sales in Inventory	28.66	28.79	28.50
Approximate Conversion Period	66.41	67.51	66.40
Cash to Current Assets	0.13	0.16	0.15
Cash to Current Liabilities	0.13	0.17	0.19

	2010	2009	2008
Solvency ratio (%)	0.239	0.290	0.193
Gearing (%)	3.176	2.573	4.192

Now, we will go to ratios, we have in the last session done a number of ratios, which you can have a few you have calculated the ratios like current ratio, quick ratio, account receivable turnover, which were all short term solvency ratios. Then, you had done at looked at financial ratios. We had also looked at the profitability ratios and asset utilization ratios and so on.

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	2010	2009	2008	2007	
23	7951000	7820000	7076000	6973150	NOA Net Operating Assets
24	3167000	3273000	2962300	3000800	Total Assets - Operating Current Liabilities - 1/2 x Deferred Tax Liabilities constant
25	2875000	3118000	1822100	2286300	
26	3276000	4704000	3163950	4889950	
27	2334290	2418700	2091740	1764100	Operating Current Liabilities = Total Current Liabilities - Other Short Term Debt
28	2169000	2281000	1929000	1709000	
29	165290	157700	182740	35100	
30	0.30	0.32	0.30	0.28	SE Stock Holders Equity
31	1.97	1.51	2.68	2.05	NFO Net Financial Obligations
32	0.03	0.03	0.03	0.01	NFO = NOA - SE
33	0.26	0.29	0.26	0.27	NOPAT Net Operating Profit After Tax
34	0.81	0.77	1.00	0.82	NOPAT = EBIT (1-tax)
35					
36					
37					NI Net Income
38					NFE Net Financial Expense
39					NFE = NOPAT - NI
40					
41					RNOA Return on Net Operating Assets
42					RNOA = NOPAT/Average NOA
43					
44					LEV Financial Leverage
45					LEV = NFO/SE
46					
47					NBC Net Borrowing Costs

In the last session, we were looking at the DuPont analysis for the company. In the DuPont analysis if you remember, we have again calculated some of the ratios like NOA, operating current liabilities SE and so on. And this much calculation we had done in the last session, we were to do the ROIC ratios and disaggregation of ROC and so on. Have a look at some of the key terms, so NOA is nothing but, Net Operating Assets which is calculated as total assets minus operating current liabilities minus half of the deferred taxes.

Then, SE is nothing but, Shareholders Equity, which we generally define as net worth or the owners fund. Then, NFO that is Net Financial Obligations, this is NOA minus AC. So, what it is looking at the money in the nature of long term depth is tried to we calculated by NFO. Then, NOPAT, NOPAT refers to Net Profit After Tax. So, NOPAT is calculated as EBIT into 1 minus tax. So, what is the operating profit and from which we deduct the taxation at the rate. So, we calculate the net profit after tax NI is Net Income.

NFE, that is Net Financial Expenses. This is similar to impress expense, but instead of taking the actual interest expense it is calculated notionally as NFE as NOPAT minus NI. Then, we did RNOA, that it Return on Net Operating Assets. You are aware of NOPAT, which is the return generated divided by average NOA. NOA you are aware now, Net

Operation Assets. So, this is the profit generated by using those assets. Next is LEV, that is the Leverage Financial Leverage, which is NFO upon SE.

NFO refers to debt, SE refers to equity. So, it is like a debt equity ratio. Next was NBC, that is Net Borrowing Cost. Here, it is calculated as NFE upon average NFO. So, NFE is a sort of interest divided by the debt used, that is why it is NFE upon NFO. Spread is a profit earned by the owners by using the debt money. That is why it is NRNOA minus NBC. Because, NBC is a interest or the financial cost, RNO is the total returned, ROE is a Return on Equity, which is RNOA plus LEV into spread, because ROE is a return available to the equity owners. So, equity owners essentially get the return on net assets plus they also make money by leveraging, which is equivalent to spread, so it is LEV into spread. And the last calculation is the equity growth rate, which is net income minus dividend paid upon average common equity. So, net income is a total profit earned from that the dividend is paid rest of the money is reinvested. So, that is a earning reinvested divided by the net worth. So, it is estimated at that rate the company is expected to grow. Now after once again looking at the terms.

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	2010	2009	2008		
ROIC Ratios					
RNOA	0.30	0.32	0.30		
ROE	0.81	0.77	1.00		
Equity growth rate	1.60	1.91	1.54		
Disaggregation of ROCE					
RNOA	0.30	0.32	0.30		
LEV	1.07	1.51	2.88		
Spread	0.28	0.29	0.26		
ROE (RNOA + LEV x Spread)	0.81	0.77	1.00		
Disaggregation of RNOA					
NOPAT margin	0.15	0.16	0.14		
NOA Turnover	1.96	1.96	2.17		
RNOA (margin x turnover)	0.29	0.31	0.30		
Calculation of Ratios					
	2010	2009	2008	2007	
NOA	7951000	7820000	7078000	6973150	NOA
Operating Current Liabilities	3167000	3273000	2982300	3006800	Net Operating Assets
SE	2679000	3116000	1922100	2286200	Total Assets - Operat
NFO	5278000	4704000	5153990	4888990	
NOPAT	2334280	2418700	2091740	1764100	
NI	2188000	2261000	1929000	1709000	Operating Current Liabilities = Tr
NFE	165280	157700	182740	55100	

Now, let us go for actual calculation in this case. We had started the calculation of RNOA as you are aware it is written on net operating assets. So, it is equal to D 30, you have already calculated this RNOA, if you remember. So, here we have calculated it as D 27 upon D 23 plus E 23. So, D 27 is nothing but, NOPAT wherein NOPAT upon NOA

is the RNOA, we already have the figure. So, let us drag it for the 3 years. So, it is round about around 30 percent slightly it went up to 32 in 2009.

Now, let us see what is ROE, ROE is again calculated by us. So, we will just pick it up from the calculation. So, you can see that ROE is much higher, which is pretty expected, because equity owners are the residual owners. So, after paying interest to the debt owners or to the providers of the debt all the remaining profit goes to ROE. So, you can see ROE was as high as 1 that is 100 percent in 2008 it went down to 0.77. And now it has somewhat improved to 0.81. Equity growth rate is automatically calculated here.

You can see, how it is calculated? It is we pick up a figure from balance sheet. So, I will just take back to the legend to make it more clear ((Refer Time: 08:25)). So, what we are doing in equity growth rate is we pick up the net income and minus the dividend and divide it by the average common equity. So, we have this average common equity and the other figures from the balance sheet from where I have picked up. So, equity growth rate is you can see is 1.54 in 2008 it slightly increased and now it has again gone down to 1.60.

Now, we try to disaggregate ROCE, I hope you know what is ROCE, that is written on capital employed. It consists of this sub parts. First is RNOA, which we are very much aware. So, which was roughly 30 percent as you are aware, then we look at LEV that is leverage. So, by leverage we are trying to find out the relationship of debt funds to equity funds. In this case there is much more reliance of debt funds, you can see in 2008 it was as high as 2.68 now it has gone down to 1.97.

By spread as you know, we try to find the additional earnings, which equity shareholders make. So, we have already calculated it in the last session. So, spread is 0.26 and ROE is also calculated by us earlier. So, you have to just extract it here. So, what it tries to tell is overall return on assets is 0.30 or about 30 percent. The amount which is paid to debt holders is very, very negligible, you can see this NBC. That is the borrower the money paid to on the borrowed funds, which is just 3 percent.

So, roughly you can say after reducing that 3 percent, 26 percent becomes the spread. And if you add the effect of this 26 percent for calculating the ROE, we get the ROE as high as 0.81. So, this is how you are able to explain, why the returns to the owners is as high as 0.81. We will also try to disaggregate the RNOA, which is a return on net assets.

That how the company is able to maintain that level of net assets. So, first we will try to look at NOPAT margin. So, we have already calculated the NOPAT margin.

So, basically that figure is to be taken. So, you know that NOPAT has been calculated as net profit after tax. We will try to relate it to the turnover. So, we will get in relative terms how much is a NOPAT. So, this NOPAT is this figure, we will divide it by the revenue earned. So, you will see that around 15 percent is a profit earned on the sales. Next we are trying to look at NOA turnover. So, how effectively we are able to use our net operating assets.

So, we try to link the sales and take them as a percentage of NOA. Earlier we have done this calculation of turnover ratio. So, I hope you are remembering it. So, what we are trying to do is? How many times the sales over NOPAT, so over NOA. So, NOA is say roughly 7951000s, so for those many assets how many times is the turnover, is our NOA turnover. So, it is 1.96 in 2008 it was slightly higher 2.7.

So, it is you can say roughly 2 times. So, now we know that company is able to make about 2 times the sales of it is assets. And on the assets it makes roughly 15 percent profit. So, if you relate these 2 figures multiply these 2 figures, you will get RNOA. So, you can see it is roughly about 30 percent. So, this is very close to the figure, which we calculated earlier. Are you able to see, it around 30 percent, there will be some difference marginal difference because of the rounding of figures.

And because of the earlier data sometimes you have done average data. But, you can see that roughly 30 percent is a return earned on net assets. How we are able to explain? Because 15 percent is a profit on sales. And company makes about 2 times the sales of it is assets. That is how they make 30 percent return per year on the assets. And further, because of the leverage which is very high, they can make as much as 80 percent return for the equity owners. I hope is it clear?

What we have done now is known as DuPont analysis. Wherein, we have definitely calculated ratios, we have also tried to show the relationship of those ratios. Like on one hand you have written ratios and on other hand you have turnover ratios. Both of them ultimately tell, how you are able to calculate the return to the equity owners. If this is clear. We will also try to look at forecasting.

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	2010	2009	2008	2007	2006
Current Assets	3,730,000	3,810,000	3,710,000	3,618,500	3,301,900
Inventory	1,222,000	1,209,000	1,197,100	1,171,000	1,008,400
Debtors	1,810,000	1,628,000	1,581,800	1,685,700	1,523,200
Others	898,000	975,000	921,000	768,800	769,400
Cash & Cash Equivalent	564,000	541,000	586,800	451,300	501,000
Fixed Assets	7,442,000	7,324,000	6,269,300	6,492,500	5,837,000
Tangible Fixed Assets	3,693,000	3,516,000	3,119,500	3,015,200	2,886,100
Intangible Fixed Assets	3,749,000	3,808,000	3,149,800	3,477,300	2,950,900
Other Fixed Assets	956,000	985,000	960,000	950,000	950,000
Total Assets	11,172,000	11,134,000	9,979,300	10,112,000	9,138,900
Current Liabilities	3,728,000	3,989,000	2,893,300	3,162,700	3,468,100
Loans	581,000	326,000	81,000	138,100	778,700
Creditors	1,165,000	1,172,000	1,061,400	1,066,800	1,038,700
Other	2,002,000	2,101,000	1,800,900	1,957,800	2,002,000
Non Current Liabilities	4,789,000	4,419,000	5,103,800	4,663,100	4,258,000
Long Term Debt	2,815,000	2,821,000	3,585,300	3,221,900	2,730,400
Other Non Current	1,974,000	1,598,000	1,518,500	1,441,200	1,527,600
Liabilities	8,517,000	8,408,000	7,997,100	7,825,800	7,726,100
Provisions	n.a.	n.a.	n.a.	n.a.	n.a.
Shareholders Funds	2,655,000	2,726,000	1,982,200	2,286,200	1,412,800
Capital	733,000	902,000	913,900	830,400	855,600
Other	1,922,000	1,824,000	1,068,300	1,455,800	557,200
Total Liab. Funds & Liab.	11,172,000	11,134,000	9,979,300	10,112,000	9,138,900

I will not go into actual details of how do you forecast, but ratios definitely help you to forecast. So, I have already done this calculation I would like to show it here. So, this where the actual figures of turnover as you can see from 2006 to 2009, there is a slow increase of turnover. Now, if you want to project, how much will be the turnover in 2011, because up to 2000 data is available. So, for 2011 we have to calculate CAGR. So, if you calculate the Cumulative Average Growth Rate on annualized basis, which has already been calculated.

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	CAGR
Sales	6.43%
Net Income	11.35%
Dividends	11.48%
Equity	14.65%

Short Term Liquidity	
Current Ratio	1.00
Quick Ratio	0.67
Accounts Receivables Turnover	9.67
Inventory Turnover	12.74
Days Sales in Receivables	37.76
Days Sales in Inventory	28.66
Approximate Conversion Period	66.41
Cash to Current Assets	0.13
Cash to Current Liabilities	0.13

Colgate's Financing Sources

	2010	2009	2008
Solvency ratio (%)	23.94	27.99	19.26

So, these are the figures of CAGR. So, CAGR is calculated for sales net income dividend as well as equity. You can see that there is around 6 percent growth in the sales on compounded and annualized growth rate basis. And there is slightly higher growth rate as far as the net income or the profits are concerned. And equity has been increasing at a higher rate, which is about 14 percent ((Refer Time: 16:10)).

Now, for forecasting purposes this CAGR are going to be used. So, for forecasting the sales, we have taken this C 13, that is the sales of 2010 as a base. And applying the average growth rate for 5 years, we will be able to calculate the projected figures, which come to this number. Are you able to see? You can also see the formula used it is C 13, that is this into $1 + \text{CAGR}$. Maybe I can write this for more clarity.

So, what we have done is we have taken sales for the earlier year, which is 2010 plus we have added the CAGR figure in percentage terms. That is why we get a projection for these sales. And then, the same has been dragged over the years. In the later years, it is assumed that, if the sale growth remains constant this will be the level of sales. Now, next important figure is cost of goods sold. Now, herein again we have already calculated the ratio of C 70. I will just show you the ratio. So, that it is more clear to you.

So, we have calculated the figure of gross margin, which tells us as to what is a percentage of margin, which is about 60 percent and remaining 40 percent is the cost. Now, for forecasting the income statement, we have used the same ratio, so we have assumed that on the forecasted sales, which is forecasted as per the CAGR of sales. If the gross margin remains constant. The cost of goods sold will be approximately 40 percent and 60 percent is going to remain the margin are you able to get me?

Now, next figure is we are also tried to link the other operating items, wherein you have calculated C 20 upon C 13 as you can see for this. So, C 20 is the figure for 2010. So, whatever is the percentage of operating items maintained in 2010? If it is maintained same at a same level for the projected statements, we are able to calculate other operating items, keep in mind there are 2 major expenses.

One is a cost of goods sold, which we have calculated using the gross margin, because, it is related to sales. In the same way, we have also calculated the other operating expenses as a percentage of sales as in 2010. And the same figure is linked now for 2011. And the calculation is made for the remaining years. Now, the next important figure which we

would like to calculate each is EBITDA. As you know in EBITDA, we are basically tried to link the earlier figures, which we have already calculated.

So, we have you know that we would like to get the, EBITDA figure as sales minus cost of goods sold minus other operating expenses. So, you get this figure I will drag it over the balance years. So, again using the earlier track record of gross margin and operating expenses. We are able to get the EBITDA. Next important calculation is depreciation, wherein again we will go to ratios C 81. If you remember, we have calculated the figure of depreciation earlier.

That figure we can use and using that figure we are able to calculate the projected depreciations for the coming years. Next figure is operating income. So, we have just taken EBITDA minus depreciation as operating income. And earnings before interest and tax. Since, we do not have any other unusual item in over all these years. This operating income after depreciation is nothing but, earnings before interest and tax, which is the operating profit for the concern.

So, this is the way we can calculate a projected operating figures based on our estimates. And using the ratios we have learnt. I hope it is clear to you? So, once you are able to calculate the CAGR and project the turnover. The other figures can be taken as a percentage of turnovers. However, depreciation we have calculated based on the assets and the relationship of depreciation, which we have. Now, let us go for projections of balance sheet.

Here, the balance sheet figures are given for projections. So, we have the data of current assets etcetera for the earlier years. Now, while projecting what has been done is forecasted H 13 is used. And ratio used is C 55. So, if you remember we have tried to link, the sales to inventory, sales to fixed assets and so on earlier, which are known as asset utilization ratios. Now, for calculating balance sheet, we look at the projected turnover. And we assume that the same asset utilization will continue.

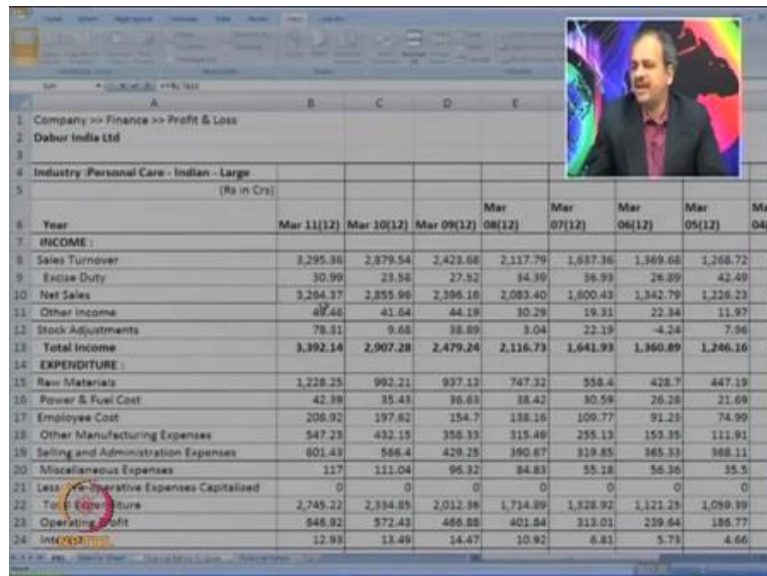
So, for generating that level of turnover, how much of current assets are needed. So, we are able to calculate the inventory and other information using those figures. So, we have estimated inventory, debtor others. Others have been assumed to be constant. Because, other fixed assets need not be link to turnover. So, they have been assumed to remain

constant. Cash is taken as a balancing figure, fixed assets again we have looked at fixed asset turnover ratio and fixed assets have been estimated.

Other fixed assets are assumed to remain constant. Though next is current liabilities, so current liabilities have also been alone is estimate to remain the constant, whereas current items like creditors are assumed to link to the turnover. So, once you calculate this figures, certain items like long term debt and other non-current liabilities we cannot estimate. So, again they are estimated to remain constant. Even shareholders equity is estimated to remain constant.

This is how the total some of the important items of balance sheet have been estimated. Are you able to see? So, what essentially we are doing is items, which are related to sales, like inventory, like debtors, creditors, fixed assets, you are able to estimate. Other figures we have assumed to remain constant. And the balancing figure is taken as the equity. This is how in a simple way, we can project and balance sheet and P and L using the earlier data and the ratios for the same. Is it clear to you? So, this was rather a longish case, because lot of data was available. And we have tried to calculate both the ratios and also the forecast.

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Year	Mar 11(12)	Mar 10(12)	Mar 09(12)	Mar 08(12)	Mar 07(12)	Mar 06(12)	Mar 05(12)	Mar 04(12)
INCOME								
Sales Turnover	3,295.36	2,879.54	2,423.68	2,117.79	1,837.36	1,369.68	1,268.72	
Excise Duty	30.99	23.58	27.52	34.39	38.93	28.09	42.49	
Net Sales	3,264.37	2,855.96	2,396.16	2,083.40	1,800.43	1,342.79	1,226.23	
Other Income	49.46	41.64	44.19	30.29	19.31	22.34	11.97	
Stock Adjustments	78.31	9.68	38.89	3.04	22.19	-4.24	7.96	
Total Income	3,392.14	2,907.28	2,479.24	2,116.73	1,641.93	1,369.68	1,246.16	
EXPENDITURE								
Raw Materials	1,228.25	992.21	937.13	767.32	558.4	428.7	447.19	
Power & Fuel Cost	42.39	35.43	36.83	38.42	30.59	28.28	21.69	
Employee Cost	208.92	197.62	154.7	138.16	109.77	91.23	74.99	
Other Manufacturing Expenses	547.23	432.15	356.33	315.46	255.13	153.35	111.91	
Selling and Administration Expenses	601.43	566.4	429.25	390.67	319.85	365.33	368.11	
Miscellaneous Expenses	117	111.04	96.32	84.83	55.18	56.36	35.5	
Less: Non-Operative Expenses Capitalized	0	0	0	0	0	0	0	
Total Expenditure	2,745.22	2,334.85	2,012.38	1,714.89	1,328.92	1,121.23	1,059.39	
Operating Profit	646.92	572.43	466.86	401.84	313.01	239.64	186.77	
Interest	12.98	13.49	14.47	10.92	6.81	5.73	4.66	

Now, let us go to one more case. This will be our last case. So, see that now all your doubts are cleared. In this we have the information about a leading pharma company, dabur India. So, you can see here, income statement for dabur India is given for a long

time. That is from 2002 to 2011 for a better estimate it is always better to take a longer time period of about 10 years, that is what has been done in this case.

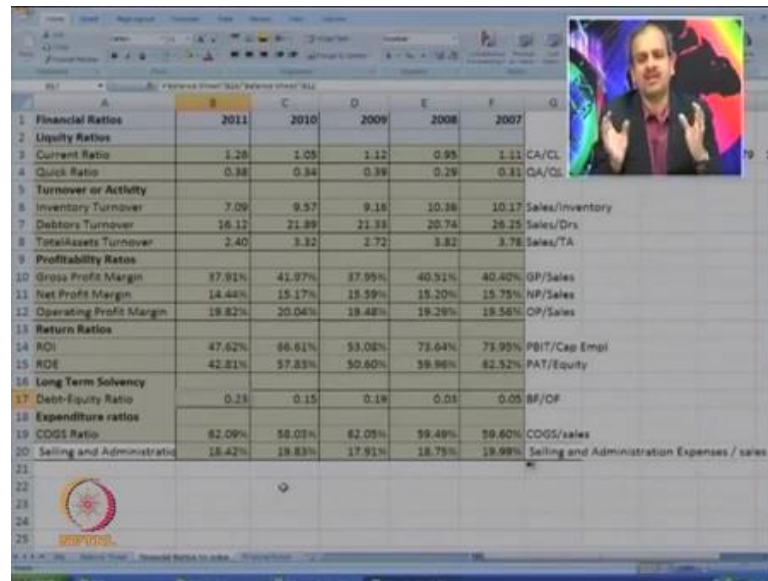
And based on that we will try to project the information. But, before going for projections let us try to calculate the ratios. Please have a look at the income statement. So, typically you are provided with sales turnover, excise duty, net sales, stock adjustments, then various expenditure like raw material, we will see that raw material consists of a major expense. So, 1228 crores that is 1200 crores is a raw material cost for a sale of 3300 crore. Another major expense is selling and admin expense.

Total expenditure is about 2700 crores for giving a net profit of 646 in your 2011. And they have a profit after tax, which is known as reported profit to the tune of 400 crores. This the data for last 10 years, as far as the profit and loss account is concerned. Now, have a look at their balance sheet, balance sheet again the last 10 years balance sheet is considered. So, we have share capital reserves, then secured and unsecured loans.

You can see that company is largely equity financed 1000 crores of equity and you have just 257 of debt, that to a large portion is unsecured debt, which is recently raised in 2011. Otherwise, in earlier years the proportion or debt was even less. We will anyway calculate it by ratios. If you look at the assets or the application of funds, you can see that the major assets are in the form of gross block, which could be the planted machinery being a pharma manufacturer they will need a lot of planted machinery.

So, company has it is steadily increasing it is gross block. They also have good amount of investments, which are also increased in recent years. You can see that, investments were about 270, then they became 436, 348 and now it is 519. Then, inventories also currently you can see as rather than on higher side 460 sundry debtors, loans the total current assets are 1295, the net current assets are about 1000 crores. So, this is the overall position as far as the assets and liabilities of the financial health of the concern is concerned. Now, let us try to calculate the ratios.

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The image shows a screenshot of a spreadsheet application displaying financial ratios for the years 2011, 2010, 2009, 2008, and 2007. A video inset in the top right corner shows a man speaking. The spreadsheet is organized into several categories: Financial Ratios, Liquidity Ratios, Turnover or Activity, Profitability Ratios, Return Ratios, Long Term Solvency, and Expenditure ratios. The data is as follows:

	2011	2010	2009	2008	2007	
1 Financial Ratios						
2 Liquidity Ratios						
3 Current Ratio	1.26	1.05	1.12	0.95	1.11	CA/CL
4 Quick Ratio	0.98	0.94	0.99	0.29	0.81	QA/QL
5 Turnover or Activity						
6 Inventory Turnover	7.09	9.57	9.18	10.38	10.17	Sales/Inventory
7 Debtors Turnover	16.12	21.89	21.33	20.74	26.25	Sales/Debtors
8 Total Assets Turnover	2.40	3.32	2.72	3.82	3.78	Sales/TA
9 Profitability Ratios						
10 Gross Profit Margin	37.91%	41.97%	37.95%	40.51%	40.40%	GP/Sales
11 Net Profit Margin	14.44%	15.17%	15.59%	15.20%	15.75%	NP/Sales
12 Operating Profit Margin	19.82%	20.04%	19.48%	19.28%	19.56%	OP/Sales
13 Return Ratios						
14 ROI	47.62%	66.61%	53.08%	73.64%	75.99%	PBIT/Capital Employed
15 ROE	42.81%	57.83%	50.60%	59.96%	62.52%	PAT/Equity
16 Long Term Solvency						
17 Debt-Equity Ratio	0.28	0.15	0.19	0.03	0.05	BF/OF
18 Expenditure ratios						
19 COGS Ratio	62.09%	58.03%	62.05%	59.48%	59.60%	COGS/sales
20 Selling and Administrative	18.42%	19.83%	17.91%	18.75%	19.99%	Selling and Administration Expenses / sales

So, I have tried to take only a limited ratios, now because now you know now number of ratios can be calculated. But, we will try to do some important ratios. And if there is time we will try to do some more ratios. As far as the liquidity is concerned the most important ratio is current ratio I will add the heading for more clarity. So, liquidity ratios is important ratio is current ratio. So, what is the formula for current ratio. You are right. Current ratio tries to link current assets to current liabilities. So, it is CA upon CL.

So, we will go to balance sheet, here you can see directly we are given the total current assets. And we will divide it by the total current liabilities wherein we take both current liabilities and provision. So, 1.26 if you drag to earlier years, you will know that current ratio is more or less constant. Though in recent years it has somewhat, only in the recent year 2011 it has increased. Now, let us go to quick ratio, what is the formula for quick ratio. It is QA upon QL that is quick assets upon quick liabilities.

Now, let us go to balance sheet to find out, which are the quick assets. So, you look at the current assets will you include inventory as a quick asset. Answer is no. Inventory cannot be a quick asset. Will you included sundry debtors? Yes, sundry debtors is one of the quick assets. So, that is the first item we are including cash and bank obviously, it is a quick asset. Will you include loans and advances? No, so we have two items as far as the quick assets are concerned.

So, I hope there is a clarity sundry debtors and cash you have added as quick assets. Now, as far as the liabilities are concerned we will take entire current liabilities that is quick liabilities, because except bank over drafts all other liabilities usually, fall and they are payable anytime. So, you have taken debtors plus cash divided by the total current liabilities. It gives a ratio of 0.38. So, you can see it is more or less constant. But, it has slightly increased now how will you interpret these ratios.

As far as current assets is concerned it is just above 1 in the recent year it has somewhat increased, which is a good sign. And you can also see the quick ratio also is not very high, but it has somewhat increased in the recent years. Now, let us look at the activity or the turnover ratio. So, what do the turnover ratios try to calculate, they try to link the sales to a particular asset wherein how effectively, the company is able to use that particular asset is evaluated.

So, first is inventory turnover, so we will get the sale figure from the P and L account. So, we will take net sales divided by the inventories. Now, there are two ways sometimes we can take it as sales upon average inventory or sometimes we can take it as sales upon closing inventory. Both the ways are acceptable right now I have take it as sales upon average inventory. You can see that the ration has gone down in the recent years is it good or bad sign.

It is not a very good sign, because it shows that company has more accumulation of stock in 2011 particularly, as the stocks are slightly moving faster than the moment in sales. So, it is not a good sign that company is able to turnover it is inventory only 7 times as far as the current data is considered. Now, let us to the sale turnover debtors. So, what was the formula of inventory turnover? I will just write the formula for your benefit so it sales upon inventory.

Now, what is the formula for debtors turnover? It is similar here it is sales upon debtors. So, again we will go to profit and loss account. We have picked up net scales divide by the figure of debtors. So, you can see the ratio was as high as 26 in 2007 it has gone down to 16. Is it good or bad sign? It is not a very good sign, it shows that, company's management of debtors has slightly gone down.

So, it is not able to increase it is sales as much as it is debtors arising, either they are required to give more credit period. Or there are not able to collect the money in the

prescribed credit period. There is also one more ratio on which is known as net asset turnover ratio. So, what will be the formula? You are right it is a similar formula. Here, we will try to find sales divided by net assets. So, what will you take as net assets now? So, we will take the total assets minus the liabilities.

There are different ways some people take only operation assets, some people will take the assets minus current liabilities. That is how I think we will try to take the net assets, as that is what is as by the ratio. So, we have a sales figure. Go to balance sheet, here you can see the total assets. Since, net assets has many quotations I think it may make sense if we call total assets turnover. Keep in mind that. Even if it is called total assets we do not literally take total of all assets.

We have taken it as assets minus liabilities, which is the total of assets which are used for the business. So, you can see the ratio was relatively higher in the earlier years it was about 3.78 and 3.82. Then it had gone down and in current year it is much lesser. So, which again is shows that the growth of sales is not as much as growth of assets. While the assets are going faster sales are going at a slower rate, the companies efficiency using the asset has somewhat declined.

That is why what it is reflected by a fall in the total asset turnover ratios. The next two ratios are gross profit and net profit. So, there are, which type of ratios? You are right they are called as profitability ratios. So, in profitability ratios there is a linkage between profits and the sales. So, basically both the figures will be available from P and L account. Now, here you can see there is no figure for gross profit. So, you will have to calculate.

So, we take the net sales minus raw material cost, minus power and fuel, minus employee cost, minus manufacturing cost. I hope everybody is clear. This is the gross profit I will put it in bracket. So, the items which were directly related to sales, directly related to production have been deducted. What we have not deducted is selling and admin expenses and miscellaneous expenses.

So, sales minus raw material, power fuel, employee and manufacturing costs gives us the gross profit, we will divide it by the sales turnover. So, 0.38 we can convert it as a percentage, because, usually it will be used as a percentage. So, the ratio is more or less same, but you can see in the recent year 2011 somewhat it has fallen. It was about 40

percent in earlier years. Now, it is slightly gone down indicating that there is some pressure on the margin company's profitability has somewhat fallen.

Now, on similar lines we try to, so what was the formula for GP margin, it was gross profit divided by sales. Now, what is the formula for NP margin, you are right it is quite similar. But, instead of gross profit we will look at the net profit. So, here we try to calculate net profit after tax, that is after all charges what profit remains as a proportion of sales. So, here the information of reported profit that is a final profit as earned by the company divided by net sales, this is also we will make it in as a percentage figure.

So, again you can see that there is slight pressure on the profit profits were above 15 percent now it is 14.44 percent. Still it shows a good profitability, but slight pressure and there is a some fall in the profitability as is evident. Now, two more ratios ROI and ROCE, they are what type of ratios basically they are called as return ratios. So, what do return ratios try to calculate? Essentially, return ratios are trying to link the profitability to sales.

So, we have a profit figure and it is not profitability to sales there are essentially trying to link profitability to the capital employed. So, owners are putting some money we try to find how much return they earn, that is the return of equity. The total money invested in the business and how much it returns is a ROI or return on investment. So, what is a formula of ROI? Here, we take PBIT in the numerator, which is a total profit earned divided by the capital employed, that is why it is also popularly known as ROCE.

So, PBIT we will get ((Refer Time: 40:34)) from profit and loss account. Here you can see we have a figure of operating profit, which is profit before interest and taxes. So, we have taken that figure divided by the total capital employed. So, we have two forms of capital, shareholders fund plus total fund, that is a total money or the capital employed. This is also generally put as a percentage.

So, you can see really a very good return on the profit on the investment currently it is 47 percent though it has gone down. Earlier it was as high as 23 percent, every year it is falling somewhat and currently it is below 50 percent still it is a excellent return on the money employed in the business. Now, let us look at ROE. So, what is the formula of ROE. Very similar to ROCE, but both numerator and denominator will change instead of profit before interest and tax.

Now, we will take profit after tax and in place of capital employed we will divide it by equity or the owners fund as it is popularly called. So, from P and L account we take the reported profit, reported net profit or the profit after tax. And from the balance sheet we get this total shareholder funds or network. So, you can see this also has fallen earlier it was about 62 percent now it is gone down to 42 percent. Now, we are also trying to calculate the operating profit margin, which is one of the profitability ratios.

So, I am trying to take it in profitability line. So, what will be the formula for operating profit margin? Very similar to NP margin, so here instead of NP try to take OP that is operating profit. So, from P and L account you have the figure of operating profit, we will divide it by net sales. So, again a similar picture it was about 20 percent somewhat it has gone down. So, you can see three levels of profitability here. Gross profit is a total profit, from their manufacturing and trading activities.

Operating profit is a profit from operations and profit after tax is a final profit. So, here all the important profitability related ratios we have found. So, you can see here we have done four types of ratios now, liquidity, turnover, profitability and return. Now, we will do one or two more types of ratios, what are the remaining type of ratios do you remember. One more ratios are related to long term solvency, which are the ratios in this category long term solvency. Just try to remember the popular ratio is debt equity ratio.

So, what is the formula of debt equity ratio? In debt equity ratio we try to link the profitability as a proportion of sales, so how to find. Do you remember? It is debt equity as the name suggest. So, we are trying to link debt that is borrowed funds to owner's funds. So, it is borrowed funds upon owner's funds or debt upon equity. So, from the balance sheet ((Refer Time: 45:26)) you can see the total debt divided by the owners fund. So, you can see, over the years the debt had increased.

In 2007 it was negligible it was just 0.05 of equity of late it is gone up to 0.23 or about 25 percent of the equity is now the borrowed fund. This shows that the financing pattern of the company has slightly changed. And now company is relying on the borrowed fund than on the owner's fund. Now, let us try to do some other type of... So, what are the remaining types of ratios? Any other types of ratios you would like to do? Just try to remember? What else is remaining?

We can still evaluate, how is company operating by looking at the expenditure ratios of the company. So, expenditure ratios are mainly for internal purpose, where company tries to find out how much is a proportion of expenditure on sales. So, one of the popular major is known as COGS ratio. As the name suggest it tries to link, the cost of goods sold or COGS as a proportion of sales. So, if you go to P and L account, if you remember you had taken the figures of raw material plus power plus sorry we will do it once again.

We have to take raw material plus power plus employee cost plus other manufacturing expenses. So, these all I will put in brackets. So, these are the expenses, which are related to the production and supply of goods. We will divide it by the nexus. Typically, this is shown as a percentage, so 0.62 and now it has in the current year earlier it was slightly below 60 percent. That to an extent it explains why profitability has gone down, because, the proportion of expenses has slightly gone up.

If you go to P and L there are one more important expense, which is known as selling and admin expenses. So, we will also try to see, how that is linked. So, we can take selling and admin expenses ratio. So, as the name suggest here it is selling and admin expenses divided by sales. So, selling and administration expenses upon net sales, this will also be in percentage terms. So, you can see that it is more or less same. It was 19.99 about 20 percent it has gone down.

So, it is a good sign, that means company is able to more or less control its selling and administration expenses. But, it is cost of goods sold are likely increasing, which is putting in turn the pressure on it is gross profit. Due to reduction of gross profit the operating profit and net profit has also gone down, in turn affecting the return of the company. This is how you should try to find the linkage, from expenditure ratio to profitability ratio to turnover ratio.

There is also another linkage which you can see, expenditure ratio to profitability to return. You can also see another linkage that is from turnover. So, the companies efficiency in use of asset is falling. Particularly, if you look at the inventory turnover ratio and the total asset turnover ratio. The company is not able to use assets as effectively as it was using in earlier. That is causing a fall in turnover ratios, because of this fall the final profit earned by the company is also falling.

This could somewhat explain why the return has somewhat gone down. So, you can see, ROI has gone down from 73 to 47 and ROE has also gone down from 63 to 42. And companies reliance on debt funds is slightly increasing. So, this was a brief discussion about the performance of dabur, for the last 4, 5 years using some important ratios. I hope now you have grasped the major concepts of ratio analysis, how the ratios can be used to analyze the performance and sometimes also to project the performance. So, we will stop here in our next session we will go into discussion about the cost accounting, how the cost are evaluated, how the cost are estimated and how also how the costs are controlled.

Thank you so much.