

RATIO ANALYSIS

1. Liquidity Ratios (AS Level)
2. Profitability ratios (AS Level)
3. Efficiency ratios (A2)
4. Shareholders or Equity ratios (A2)
5. Gearing ratios (A2)

LIQUIDITY RATIOS

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{Acid – test ratio} = \frac{\text{current assets} - \text{stocks}}{\text{current liabilities}}$$

or Quick ratio

PROFITABILITY RATIOS

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

$$\text{Net Profit margin} = \frac{\text{Net profit}}{\text{Sales}} \times 100$$

$$\text{Return on Capital employed} = \frac{\text{Net profit}}{\text{Capital Employed}} \times 100$$

ACTIVITY PAGE 420 (Peter Stimpson)

Q.1. Profit and loss account for Tobago Traders Ltd. For the year ending 31st March 2002.

Sales revenue (4000 units @\$4.5 each)	18000
Cost of Goods Sold (@\$1.25 per item)	(5000)
Gross profit	<u>13000</u>
Overhead expenses (3000, 10% (3000))	(3300)
Operating or net profit	<u>11900</u>
Interest (50% (1000))	(500)
Profit before interest	<u>11400</u>
Corporation tax @25%	(2850)
Profit after tax	<u>8550</u>
Dividends paid	<u>1200</u>
Retained profit	<u><u>7350</u></u>

Q.2. The bank manager might ask to see the latest profit and loss account to see the profitability of the business. The company may currently be asking for an overdraft so the bank would want to know the necessity of the overdraft to the business so that a rate of interest could be decided upon or to decide if to allow the business to take this overdraft. It may also want to decide if an overdraft facility should be continued or not.

ACTIVITY PAGE 422 (Peter Stimpson)

	Share Capital	Reserves	Long-term Liabilities	Current Liabilities	Current Assets	Fixed Assets
Company Car						✓
Materials in Warehouse					✓	
Four-year bank loan			✓			
Tax owed to Government				✓		
Ins. In value of property		✓				
Issued shares	✓					
Cash in bank					✓	
Money to suppliers				✓		

Balance Sheet for Energen Ltd.
as at 29 March 2002 (\$m)

Fixed Assets		2800
Current Assets:		
Stocks (80/100x120)	96	
Debtors (650 – 50)	600	
Cash	<u>20</u>	
Less:		
Current Liabilities:		
Trade Creditors (450 + 30)	480	
Overdraft	<u>30</u>	
	(570)	
Net Current Assets:		206
ASSETS EMPLOYED		<u>3600</u>
Financed by:		
Long-term Liabilities	300	
Share Capital	2000	
Profit and loss reserves	706	

ACTIVITY PAGE 425(Peter Stimpson)

Expenditure	Capital or Revenue Spending	Reason
Purchase of computers for use in administration	Capital	They are fixed assets that could be used for more than 1 year.
Salaries of the administration staff	Revenue	Incurred daily overhead expenses
Stock bought for resale	Revenue	Their day-to-day trading

Maintenance costs of the building	Revenue	Overhead expense
Extension to the existing offices	Capital	Expansion which is long-term.

ACTIVITY PAGE 427 (Peter Stimpson; top one)

Q.1.a. Annual depreciation = $\frac{\text{Historic cost} - \text{residual value}}{\text{Expected useful life}}$

$$= \frac{20,000 - 2000}{6}$$

$$= \frac{18,000}{6}$$

$$= \$3000$$

b.	Years	Worth	
	1	20,000 - 30,000	= \$17000
	2	17,000 - 3000	= \$14000
	3	14,000 - 3000	= \$11000
	4	11,000 - 3000	= \$ 8000
	5	8000 - 3000	= \$ 5000

c. At the end of Year 3

Value of machine	= \$11000
Sold at price	= \$13000
Profit on disposal	= Sale price - Book Value
	= 13000 - 11000
	= \$2000

Q.2.a. Annual depreciation = $\frac{\text{Historic cost} - \text{residual value}}{\text{Useful life}}$

$$2500 = \frac{12000 - R.V.}{4}$$

$$10000 = 12000 - R.V.$$

$$R.V. = 12000 - 10000$$

$$= \$2000$$

b. Annual depreciation = $\frac{\text{Historic cost} - \text{residual value}}{\text{Useful life}}$

$$\begin{aligned} &= \frac{12000 - 2000}{3} \\ &= \frac{10000}{3} \\ &= \$3333 \end{aligned}$$

- c. Depreciation on fixed assets is an expense which like all other overheads is deducted from net profit. Therefore, increasing the depreciation charge further reduces the net profit by the amount that the annual depreciation has been raised.

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CASE STUDY PAGE 432 (Peter Stimpson)

Shivani Beauty Salon Ltd.
 Year Ending 31st March 2002

	\$(000)	\$(000)
Fixed Assets		
Property		50
Equipment	8	
Less depreciation	(2)	<u>6</u>
		56
Current Assets:		
Stock	4	
Debtors	5	
Cash	2	
	<u>11</u>	
Less:		
Current Liabilities		
Creditors	(5)	
Overdraft	(12)	
	<u>(17)</u>	
Net Current Assets		<u>(6)</u>
Net Assets Employed		50
Financed by:		
Long-term loan	14	
Share Capital	30	
Reserves	6	
Capital Employed	<u>50</u>	<u>50</u>

ACITIVITY – CASE STUDY PAGE 437 (Peter Stimpson)

		AHMED	FLASH	
1. GROSS PROFIT RATIO	$\frac{G.P.}{Sales} \times 100$	$\frac{100}{350} \times 100 = 28.6\%$	$\frac{150}{600} \times 100 =$	=
25%				
NET PROFIT RATIO	$\frac{N.P.}{Sales} \times 100$	$\frac{20}{350} \times 100 = 5.7\%$	$\frac{60}{600} \times 100 =$	=
10%				
RETURN ON CAPITAL EMPLOYED	$\frac{N.P.}{C.E.} \times 100$	$\frac{20}{200} \times 100 = 10\%$	$\frac{60}{400} \times 100 =$	=
15%				

2. From the gross profit ratio, it appears that Ahmed Builders has done better the Flash Builders due to its higher gross profit ratio. It shows that for every \$100 worth of goods sold Ahmed makes gross profit of \$286 while Flash makes gross profit of \$25. This means that Ahmed has less cost of sales i.e. has succeeded to add value to his goods while incurring lower costs.
- However, the Net Profit margin of Ahmed is nearly half of Flash i.e. he has incurred a very high level of overhead expenses like selling and distribution and advertising expenses. Also the return on capital employed of Ahmed is lower i.e. he is getting low

levels of profit on the capital that has been invested into the business as compared to Flash Builders which has a 5% higher return.

Ahmed shouldn't be satisfied with the performance of the business. He has to work on reducing the overhead expenses whilst maintaining sales or by increasing sales without an increase in overhead expenses. His business isn't very profitable and so his returns are lower too. It may be that Flash is a larger scale firm perhaps and so Ahmed has to be more efficient.

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3. There are several ways in which Ahmed can improve his return on capital employed. One way is to increase the capacity utilization of its fixed assets i.e. the machinery so as to increase productivity which would result in an increase in the profits of the business. However, working at full capacity requires greater contribution from the workers which may result in their feeling frustrated and tired. It would also place greater strain on machinery which may cause quicker wear and tear of machinery and so maintenance costs may increase.

Another way is to control the overhead expenditure which would enable it to increase its net profit. It may be that Ahmed is spending too much on marketing and selling and distribution. So he should try to control this expenditure. However, reduction on marketing expenditure could result in the fall of sales if advertising becomes inefficient or if researching further into markets suffer.

Finally Ahmed could try to increase sales revenue by increasing sales through higher marketing and promotion into more market segments. But this would also cause marketing expenditure to rise. So Ahmed has to make sure that sales are increased by more than the increase in marketing expenditure. Finally the price elasticity of demand should be analyzed. If the product's price is inelastic, then slightly increasing the price would result in an increase in the sales revenue as demand doesn't decrease by the same amount as price. Elastic demand would mean that Ahmed could slightly decrease its prices. This would cause the revenue to increase. So the net profit would increase improving the return on capital employed for the business.

$$4. \quad \text{CURRENT RATIO} \quad \frac{\text{current assets}}{\text{current liabilities}} \quad \frac{100}{45} = 2.2:1 \quad \frac{150}{120} = 1.25:1$$

ACID – TEST RATIO

$$\frac{\text{current assets} - \text{stock}}{\text{current liabilities}} \quad \frac{100 - 50}{45} = 1.1:1 \quad \frac{150 - 60}{120} = 0.75:1$$

5. The liquidity position of Ahmed is excellent. The current ratio as well as the acid – test ratio is ideal. This means that Ahmed would have no difficulty in paying back his short – term debts from current liabilities. However, the position of flash is very bad. Flash is in a serious liquidity crises. It is surely able to pay back its current liabilities from current assets. And in fact flash isn't able to pay back its short – term debts from its quick assets (i.e. without stock). This could cause serious problem for Flash if its creditors demand to be paid immediately because Flash would be unable to do so and its creditors may sue it or take it court which would be very damaging for the reputation of the business.

6. Flash could use several methods to increase its liquidity position which is very poor at the moment. It could take long – term loan from banks which would provide it with a large amount of cash improving its liquidity as working capital increases. However, interest has to be paid which may prove to be greater that could cause difficulties in the future for the business.

It also has a large amount of fixed assets. So if there are any redundant fixed assets, they could be sold to increase cash and so current assets. The drawback is that they may be needed later on and then it would be difficult to buy them. Another way is of sale and lease back of fixed assets which would give the cash to business. However, sometimes much larger installments have to be paid for leasing than the original cost.

Then another way to make the debtors pay quickly while get a longer credit time from suppliers to again increase the cash to reduce illiquidity. However this could make customers go to competitors who do give a higher credit time which could mean loss of sales. Also creditors could be frustrated or may not agree to longer credit times.

Then the company could also issue more shares, increasing their capital invested and so avoid liquidity problems. But this means an increase in the owners of the business and

greater difficulties of control. Also dividends have to be paid. However, this form is permanent finance.

Keeping in mind all the drawbacks of the options, the company would have to decide on the best possible ways to improve its liquidity positions.

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