Chapter 8 *Students' questions*

QUESTIONS

Question 1 JJ Limited and KK Limited

Jefferson Jellaby Limited (JJ Limited) and Karma Kaplan Limited (KK Limited) are both manufacturing companies operating in the same industry. Kelly, a financial analyst, has noted down the following key details from the income statements for the two companies for 20X6:

	JJ Limited	KK Limited
	£	£
Revenue	984 980	1 006 251
Cost of sales	(666 831)	(657 082)
Gross profit	318 149	349 169

Notes:

1. Kelly notices that the two companies have different accounting policies in respect of depreciation of plant and machinery. JJ Limited depreciates its plant and machinery over a 5 year period on the straight line basis, whereas KK Limited depreciates similar assets at a rate of 10% per year on the reducing balance basis. Kelly estimates that, in order to make the results of the two companies comparable, she should add £26 000 to the cost of sales of KK Limited.
2. KK Limited's figures include the results of a retail business which was set up during the 20X6 financial year. JJ Limited has no retail business. Revenue from KK Limited's retailing operation was £102 570 and cost of sales was £85 450.

Required: adjust the sales, cost of sales and gross profit figures of KK Limited in order to provide figures which can be validly compared to those of JJ Limited. Which company has the better gross profit margin, once the figures have been adjusted?

Question 2 Dahlia Desmond Limited

A financial analyst has produced the following analysis of the results of Dahlia Desmond Limited for the financial year ending in 20X2:

	20X2 vertical	Horizontal analysis:

	analysis	20X2 compared to 20X1
	%	%
Revenue	100.0	3.7
Cost of sales	65.2	2.9
Gross profit	34.8	
Administrative expenses	6.2	6.4
Selling and distribution costs	5.7	(2.8)
Operating profit	22.9	
Finance costs	1.6	(17.3)
Profit before taxation	21.3	
Tax	6.4	5.7
Profit for the year	14.9	

The vertical analysis is worked on the basis that revenue = 100%. NB: the percentages in brackets in the horizontal analysis are decreases in the item between 20X1 and 20X2.

The gross profit in 20X2 was £983 772 and the profit for the year in 20X1 was £378 489.

Required: work out the income statement figures for 20X2 and 20X1. Work to the nearest £.

Question 3 Dingwall Derby Limited

Dingwall Derby Limited is a manufacturer of crockery. The company's results for a four year period are summarised as follows:

	20X4	20X3	20X2	20X1
	£	£	£	£
Revenue	686 432	662 750	668 921	695 551
Cost of sales	489 289	457 960	461 555	477 844
Gross profit	197 143	204 790	207 366	217 707
Administrative expenses	62 446	63 800	65 750	66 620
Selling & distribution	51 449	50 940	50 226	51 003
Operating profit	83 248	90 050	91 390	100 084

Finance costs	2 842	1 603	-	-
Profit before taxation	80 406	88 447	91 390	100 084
Taxation	20 100	22 850	25 570	29 870
Profit for the year	60 306	65 597	65 820	70 214

In recent years the company has struggled to retain its former levels of profitability. The directors have mainly concentrated on cost-cutting in order to keep profit levels up. However, during the 20X4 year they decided to try a new strategy of cutting prices in order to boost revenue.

Required: work out the percentages for both a common size analysis (where revenue = 100%) and a horizontal analysis of the four years' results. Work to one decimal place. Write a brief report on the performance of the company over the period reviewed. How successful do you consider the directors' cost-cutting and price reduction strategies to have been?

Question 4 Pace plc

Pace plc is a company listed on the London Stock Exchange (the company's website address is www.pace.com). It sells set-top boxes for the home entertainment market.

Pace plc's income statement for the year ended 31 December 2009 includes the following information:
(NB the information has been simplified slightly)

	2009 £000	2008 £000
Revenue	1,133,442	745,475
Cost of sales	(933,965)	(610,268)
Gross profit	199,477	135,207
Administrative expenses	(130,329)	(120,710)
Other operating income	508	-
Operating profit	69,656	14,497
Financial income	337	202
Financial expenses	(134)	(871)
Profit before tax	69, 859	13,828
Tax charge	(18,473)	(2,774)

Profit after tax	51,386	11,054

Analyse this information in whatever way appears helpful, and write a brief report on the performance of Pace plc in 2009. (You can enhance your report by consulting the company's website for information about trading conditions and markets during the period under review).

ANSWERS

Answer 1: JJ Limited and KK Limited

The adjustments to KK Limited's figures are as follows:

		£
Revenue (£1 006 251 – 102 570)		903 681
Cost of sales (£657 082 + 26 000 – 85 450)	597 632	
Gross profit		306 049

Gross profit percentage:

$\frac{306\,049}{903\,681} \times 100 = 33.9\%$

Gross profit percentage in JJ Limited:

$\frac{318\,149}{984\,980} \times 100 = 32.3\%$

KK Limited has the higher gross profit percentage.

Question 2 Dahlia Desmond Limited

In 20X2 gross profit is 34.8% of revenue. Because we have the gross profit figure we can work out revenue as follows:

$£983\,772 \times \frac{100}{34.8} = £2\,826\,931$

Revenue of £2 826 931 = 100%. Using this information we can calculate the rest of the income statement figures for 20X2:

Dahlia Desmond Limited: income statement for 20X2

£

Revenue (as above)	2 826 931
Cost of sales (£2 826 931 x 65.2%)	1 843 159
Gross profit (as above)	983 772
Administrative expenses (£2 826 931 x 6.2%)	175 270
Selling and distribution costs (£2 826 931 x 5.7%)	161 135
Operating profit	647 367
Finance costs (£2 826 931 x 1.6%)	45 231
Profit before taxation	602 136
Tax (£2 826 931 x 6.4%)	180 924
Profit for the year	421 212

Because we know the increases and decreases in the various income statement items between 20X1 and 20X2 we can work out the 20X1 income statement figures, as follows:

<u>Dahlia Desmond Limited: income statement for 20X1</u>

	£
Revenue (£2 826 931 x 100/103.7)	2 726 067
Cost of sales (£1 843 159 x 100/102.9)	1 791 214
Gross profit	934 853
Administrative expenses (£175 270 x 100/106.4)	164 727
Selling and distribution costs (£161 135 x 100/97.2)	165 777
Operating profit	604 349
Finance costs (£45 231 x 100/82.7)	54 693
Profit before taxation	549 656
Tax (£180 924 x 100/105.7)	171 167
Profit for the year (given in the question)	378 489

Answer 3 Dingwall Derby Limited

Dingwall Derby Limited: common size analysis of the income statement 20X1 – 20X4

	20X4	20X3	20X2	20X1
	%	%	%	%
Revenue	100.0	100.0	100.0	100.0

Cost of sales	71.3	69.1	69.0	68.7
Gross profit	28.7	30.9	31.0	31.3
Administrative expenses	9.1	9.6	9.8	9.6
Selling & distribution	7.5	7.7	7.5	7.3
Operating profit	12.1	13.6	13.7	14.4
Finance costs	0.4	0.2	-	-
Profit before taxation	11.7	13.4	13.7	14.4
Tax	2.9	3.5	3.8	4.3
Profit for the year	8.8	9.9	9.9	10.1

Dingwall Derby Limited: horizontal analysis of the income statement 20X1 – 20X4

	20X4	20X3	20X2
	%	%	%
Revenue	3.6	(0.1)	(3.8)
Cost of sales	6.8	(0.1)	(3.4)
Gross profit	(3.7)	(1.2)	(4.7)
Administrative expenses	(2.1)	(3.0)	(1.3)
Selling & distribution	0.1	1.4	(1.5)
Operating profit	(7.6)	(1.5)	(8.7)
Finance costs	77.3	-	-
Profit before taxation	(9.1)	(3.2)	(8.7)
Tax	(12.0)	(10.6)	(14.4)
Profit for the year	(8.1)	-	(6.3)

Report on the performance of Dingwall Derby Limited 20X1 – 20X4

The performance of the company has declined over the four year period despite the effort of the directors to maintain profitability. Gross profit margin declined from 31.3% in 20X1 to 30.9% in 20X3, but there has been a substantial fall to 28.7% in 20X4. This has probably occurred because of the deliberate policy of price cutting. This strategy can work if it helps to boost revenue. However, although revenue has increased (by 3.6%) between 20X3 and 20X4 the increase in volume has not been sufficient to offset the effects of the drop in gross profit margin, and gross profit fell by over £7000 between 20X3 and 20X4. (It is also noticeable that revenue in 20X4 had still not recovered its 20X1 level). However, it may be that the new strategy took effect only part way through the accounting year. It may take time for the effects of the price cuts to feed through into better results. The directors will have access to more detailed information (e.g. weekly sales figures and monthly internal accounts) which will help them to assess whether or not the strategy of price cutting is having the desired effect.

Administrative expenses have fallen each year and it seems that the policy of tight cost control may be having some beneficial effect. Selling and distribution expenses have remained at a fairly constant level throughout the period. It may be that cost cutting efforts by the departments concerned have been less effective and perhaps the directors need to make further efforts to cut these categories of cost. However, it should be noted that, while cost cutting can be effective, it may also have adverse consequences. For example, if there is a freeze on salary and wage increases staff may become unhappy and may move elsewhere.

In 20X3 the company started paying interest, indicating that it has borrowed cash. If the cash were invested in additional non-current assets the investment does not appear to have produced any significant beneficial result by the end of 20X4.

In summary, some aspects of the directors' profit maintenance strategies appear to have met with moderate success. However, there has been no overall improvement in the company's performance over the four year period and it may be that more radical action is required.

Answer 4 Pace plc

<u>Common size income statement statements: 2009 and 2008</u>

	2009	2008
	%	%
Revenue	100.0	100.0
Cost of sales	(82.4)	(81.9)
Gross profit	17.6	18.1
Administrative expenses	(11.5)	(16.2)
Other operating income	0.0	-
	6.1	1.9
Financial income and expenses	0.0	0.0
Profit before tax	6.1	1.9

Tax charge	(1.6)	(0.4)
Profit after tax	4.5	1.5

Horizontal analysis: 2009 compared to 2008

	2009
	% increase/(decrease)
Revenue	52.0
Cost of sales	53.0
Gross profit	47.5
Administrative expenses	8.0
Financial income	66.8
Financial expenses	(84.6)
Profit before tax	405.2
Tax charge	565.9
Profit after tax	364.9

Pace plc: report on 2009 performance

The analyses above show that Pace's performance in 2009 was very good indeed. At a time when many businesses are showing the adverse effects of the global recession, Pace has turned in a 52% increase in revenue and a 47.5% increase in gross profit. The Chairman's letter in the company's 2009 Annual Report contains the following: 'Pace's performance over the last 12 months represents a significant achievement, where the management team delivered record results ahead of all expectations. Pace is now working at a new level, having achieved over £1bn revenues....' The Chairman also notes rapidly evolving technologies within the industry. These technological developments are no doubt helping to grow sales rapidly.

Further evidence about the nature of the sales growth is found in the segment analysis of the business. Geographical analysis of revenue by destination shows huge revenue growth in Europe, North America, Latin America and the rest of the world. The only market which has declined is the UK market, which, presumably, is a relatively mature market.

The company appears to have controlled costs well. There is a slight reduction in gross profit percentage, although the total gross profit figure has increased substantially. This may be attributable to price differentials in different markets, or to additional costs of exporting. More information would be required to confirm this . Administrative costs as a percentage of revenue have actually decreased substantially in the year, giving rise to very substantially increased profits both before and after tax.

Although there have been large percentage increases in both financial income and financial expenses, the figures involved are relatively small. Financial expenses have dropped substantially suggesting that the company may have paid off borrowings during the year. It would be necessary to examine the statement of financial position in order to confirm this.

In summary, Pace's performance in 2009 has been excellent.

Note to students: by the time this exercise is published at least one more year of Pace's financial statements will have appeared. Those students who are interested in the development of the group can access the most recently published accounts via the group's website: www.pace.com to see whether or not the strong growth was maintained into 2010 and beyond.