Chapter 19 *Students' questions*

QUESTIONS

Question 1 Cash levels

Identify and, briefly, explain the consequences to a business of maintaining a level of cash resource that is:

(a) too high

(b) too low.

Question 2 Limitations of the EOQ model

While the EOQ model can be useful for determining optimal order size, the assumptions on which it rests may not be realistic. Explain these assumptions, identifying the limitations of the model.

Question 3 Coriander Franklin Limited

Coriander Franklin Limited has the following relevant data for its financial year ended 31 May 20X6 (with comparative figures for 20X5)

	20X6	20X5
Opening inventory	327 736	300 447
Closing inventory	325 500	327 736
Opening trade receivables	285 663	300 206
Closing trade receivables	277 404	285 663
Opening trade payables	350 555	307 700
Closing trade payables	361 723	350 555
Cost of sales	2 133 563	2 010 431
Revenue	2 315 667	2 197 556
Purchases	1 997 704	1 903 672

Required: calculate the company's operating cycle for 20X6 and 20X5 and comment on any differences arising.

ANSWERS

Answer 1 Cash levels

(a) Where cash levels are surplus to requirements, the business has the problem of what to do with the surplus cash. Cash that is not immediately required can be placed in a deposit or other interest-earning account, but the rate of return earned in this way is likely to be fairly modest relative to the potential return from investment in a business. The owners of the business could earn the same return if they had the cash themselves - the reason they invest in business is to make higher returns. Where there is a permanent cash surplus, it may make sense to return it to the owners of the business.

(b) The management of working capital is difficult where cash levels are too low. Management may make sub-optimal decisions where cash is scarce; for example, they may delay payments to suppliers to the point where the business's relationship with its suppliers is endangered. Ultimately, suppliers may withdraw credit terms altogether, or even refuse to supply the business unless cash is paid in advance. Where a shortage of cash is a chronic, on-going, problem it may be necessary to boost cash resources by inviting investors to increase their investment in the business, or by obtaining loan finance.

Answer 2 Limitations of the EOQ model

(i) The EOQ model assumes that holding costs are constant, i.e. that they vary in line with quantities held. However, this may not be realistic. Holding costs may include some elements that are stepped in nature; for example, if inventory reaches a level where another member of staff is required to control it, there is a stepped increase in costs.

(ii) The EOQ model rests upon various assumptions and estimations of costs. If these assumptions and estimations are incorrect, then the EOQ is incorrect.

(iii) The EOQ model assumes that demand for a product is spread equally over a period, but in practice there may be seasonal fluctuations in demand for a product. Application of the EOQ model may result in order quantities that are insufficient to guarantee supply at times of peak demand.

Answer 3 Coriander Franklin Limited

	20X6 £	20X5 £
Workings:		
Average inventory	$\frac{327\,736 + 325\,500}{2}$	$\frac{300\,447 + 327\,736}{2}$

	= 326 618	= 314 092
Average trade receivables	285 663 + 277 404 2 = 281 534	300 206 + 285 663 2 = 292 935
Average trade payables	350 555 + 361 723 2 = 356 139	307 700 + 350 555 2 = 329 128

Operating cycle:

	20X6 £	20X5 £
A. Average inventory turnover period	326 618 x 365 = 55.9 days 2 133 563	314 092 x 365 = 57.0 days 2 010 431
B. Average trade receivables turnover period	281 534 x 365 = 44.4 days 2 315 667	292 935 x 365 = 48.7 days 2 197 556
C. Average trade payables period	356 139 x 365 = 65.1 days 1 997 704	329 128 x 365 = 63.1 days 1 903 672
Operating cycle: **A + B - C**	**35.2 days**	**42.6 days**

Comment: the operating cycle has shortened by 7.4 days in 20X6 compared to the previous year, which is a significant fall. It appears that the company has made major efforts to improve its working capital management. All three components of the operating cycle calculation have improved. On average, inventory is stored for over a day less than in 20X5. The company is taking longer (2 days) to pay its trade payables. But the most significant change is in respect of trade receivables; the collection period has improved by over four days. This suggests that there have been major improvements in the company's credit control facility or that the terms of trading with customers have been altered, or both.

Generally, the improvement in the operating cycle is a positive effect, and shows good working capital management. However, the company's management must be careful to ensure that it does not run out of inventory and that it retains good relationships with its suppliers and customers.