
Answers

Section A

1 B

2 C

3 D

Expected return $= 4\% + 1.5(9\% - 4\%)$
 $= \underline{11.5\%}$

Predicted share value $= 30/0.115$
 $= \underline{261p}$

Option A uses the wrong CAPM formula and wrong dividend valuation formula

Expected return $= 4\% + 1.5(9\% + 4\%)$
 $= \underline{23.5\%}$

Predicted share value $= 30 \times 23.5$
 $= \underline{705p}$

Option B uses the wrong CAPM formula

Expected return $= 4\% + 1.5(9\%)$
 $= \underline{17.5\%}$

Predicted share value $= 30/0.175$
 $= \underline{171p}$

Option C also uses the wrong CAPM formula

Expected return $= 9\% + 1.5(9\% - 4\%)$
 $= \underline{16.5\%}$

Predicted share value $= 30/0.165$
 $= \underline{182p}$

4 D

	£
Original shares (4 x £8)	32.00
Rights share	<u>5.00</u>
	37.00
Ex-rights price £37/5	<u>7.40</u>
Cost of acquiring rights share	<u>5.00</u>
	<u>2.40</u>
Value of rights per original share £2.40/4	<u>£0.60</u>

Hence, Option D is correct.

Option A is total value of the rights = £2.40

Option B is the Ex-rights price (£7.40) divided by number of original shares (4) = £1.85

Option C is original share price (£8.00) less rights price (£5.00) divided by number of original shares (4) = £0.75

5 C

$$\begin{aligned} \text{Dividend per share} &= \text{EPS/Dividend cover} \\ &= 45\text{p}/2.5 \\ &= \underline{18\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Share price} &= \text{DPS/Dividend yield} \\ &= 18/0.02 \\ &= \underline{900\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Price/earnings ratio} &= \text{Share price/EPS} \\ &= 900/45 \\ &= \underline{20 \text{ times}} \end{aligned}$$

Option A calculates the share price incorrectly.

$$\begin{aligned} \text{Dividend per share} &= \text{EPS/Dividend cover} \\ &= 45\text{p}/2.5 \\ &= \underline{18\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Share price} &= (\text{EPS/DPS})/\text{Dividend yield} \\ &= (45/18)/0.02 \\ &= \underline{125\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Price/earnings ratio} &= \text{Share price/EPS} \\ &= 125/45 \\ &= \underline{2.8 \text{ times}} \end{aligned}$$

Option B calculates the share price incorrectly

$$\begin{aligned} \text{Share price} &= \text{EPS} \times \text{Dividend cover} \times \text{Dividend yield} \\ &= 45 \times 2.5 \times 2 \\ &= \underline{225\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Price/earnings ratio} &= \text{Share price/EPS} \\ &= 225/45 \\ &= \underline{5 \text{ times}} \end{aligned}$$

Option D calculates the share price incorrectly.

$$\begin{aligned} \text{Dividend per share} &= \text{EPS/Dividend cover} \\ &= 45\text{p}/2.5 \\ &= \underline{18\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Share price} &= \text{Dividend percentage/Dividend yield} \\ &= (18/50) \times 100/0.02 \\ &= \underline{1,800\text{p}} \end{aligned}$$

$$\begin{aligned} \text{Price/earnings ratio} &= \text{Share price/EPS} \\ &= 1,800/45 \\ &= \underline{40 \text{ times}} \end{aligned}$$

6 C**7 A****8 D**

$$\begin{aligned} \text{Cost of discount} &= 3/(100 - 3) \times 365/30 \\ &= \underline{37.6\%} \end{aligned}$$

$$\begin{aligned} \text{Option A uses the formula:} &= 3/(100 - 3) \times 100/30 \\ &= \underline{10.3\%} \end{aligned}$$

$$\begin{aligned} \text{Option B uses the formula:} &= 3/100 \times 365/40 \\ &= \underline{27.4\%} \end{aligned}$$

$$\begin{aligned} \text{Option C uses the formula:} &= 3/(100 - 3) \times 365/40 \\ &= \underline{28.2\%} \end{aligned}$$

9 C

$$\begin{aligned} \text{Share price} &= \text{£}60\text{m}/20\text{m} \\ &= \underline{\text{£}3.00} \\ \text{Dividend per share} &= [(\text{£}15\text{m} \times 1.2) \times 0.3]/20\text{m} \\ &= \underline{\text{£}0.27} \\ \text{Expected return} &= (27/300) + 0.04 \\ &= \underline{13.0\%} \end{aligned}$$

Option A uses the dividend growth formula incorrectly

$$\begin{aligned} \text{Expected return} &= (27/300) + 4 \\ &= \underline{4.1\%} \end{aligned}$$

Option B uses the current year profits and dividends.

$$\begin{aligned} \text{Share price} &= \text{£}60\text{m}/20\text{m} \\ &= \underline{\text{£}3.00} \\ \text{Dividend per share} &= (\text{£}15\text{m} \times 0.3)/20\text{m} \\ &= \underline{\text{£}0.225} \\ \text{Expected return} &= (22.5/300) + 0.04 \\ &= \underline{11.5\%} \end{aligned}$$

Option D also uses the dividend growth formula incorrectly.

$$\begin{aligned} \text{Expected return} &= (3.00/0.27) + 4 \\ &= \underline{15.1\%} \end{aligned}$$

10 B

$$\begin{aligned} \text{EPS of Opal Ltd} &= \text{£}240/2,000 \\ &= \underline{\text{£}0.12} \\ \text{EPS of Kyanite plc} &= \text{Dividend cover ratio} \times \text{DPS} \\ &= 2.5^* \times \text{£}0.30 \\ &= \underline{\text{£}0.75} \end{aligned}$$

* Dividend cover ratio is the reciprocal of the dividend payout ratio (40%)

$$\begin{aligned} \text{P/E ratio of Kyanite plc} &= \text{£}9/\text{£}0.75 \\ &= \underline{12 \text{ times}} \\ \text{Value of Opal Ltd shares} &= 12 \times \text{£}0.12 \\ &= \underline{\text{£}1.44} \end{aligned}$$

Option A calculates the EPS of Opal Ltd incorrectly.

$$\begin{aligned} \text{EPS of Opal Ltd} &= \text{£}140/2,000 \\ &= \underline{\text{£}0.07} \end{aligned}$$

Hence:

$$\begin{aligned} \text{Value of Opal Ltd shares} &= 12 \times \text{£}0.07 \\ &= \underline{\text{£}0.84} \end{aligned}$$

Option C calculates the EPS of Opal Ltd incorrectly.

$$\begin{aligned} \text{EPS of Opal Ltd} &= \text{£}320/2,000 \\ &= \underline{\text{£}0.16} \end{aligned}$$

Hence:

$$\begin{aligned} \text{Value of Opal Ltd shares} &= 12 \times \text{£}0.16 \\ &= \underline{\text{£}1.92} \end{aligned}$$

Option D calculates the EPS of Kyanite plc incorrectly:

$$\begin{aligned} \text{EPS of Kyanite plc} &= \text{Dividend payout} \times \text{DPS} \\ &= 0.4 \times \text{£}0.30 \\ &= \underline{\text{£}0.12} \end{aligned}$$

$$\begin{aligned} \text{P/E ratio of Kyanite plc} &= \text{£}9/\text{£}0.12 \\ &= \underline{75 \text{ times}} \end{aligned}$$

$$\begin{aligned} \text{Value of Opal Ltd shares} &= 75 \times \text{£}0.12 \\ &= \underline{\text{£}9.00} \end{aligned}$$

11 C

12 B

$$\begin{aligned}1.2 &= \beta \times [60 + 40(1 - 0.2)]/60 \\1.2 &= 1.53 \beta \\ \beta &= \underline{0.78}\end{aligned}$$

Option A uses the debt in the denominator of the equation

$$\begin{aligned}1.2 &= \beta \times [60 + 40(1 - 0.2)]/40 \\1.2 &= 2.3 \beta \\ \beta &= \underline{0.52}\end{aligned}$$

Option C applies the following equation:

$$\begin{aligned}1.2 &= \beta \times [40 + 60(1 - 0.2)]/60 \\1.2 &= 1.47 \beta \\ \beta &= \underline{0.82}\end{aligned}$$

Option D applies the following equation:

$$\begin{aligned}1.2 &= \beta \times [(60 + 40)(1 - 0.2)]/60 \\1.2 &= 1.33 \beta \\ \beta &= \underline{0.90}\end{aligned}$$

13 C

$$\begin{aligned}\text{Keg} &= 10\% + (1 - 0.20)[(10 - 4)\% \times (30/70)] \\ &= \underline{12.06\%}\end{aligned}$$

Option A uses the formula:

$$\begin{aligned}\text{Keg} &= 10\% \times (1 - 0.20) + [(10 - 4)\% \times (30/70)] \\ &= \underline{10.57\%}\end{aligned}$$

Option B uses the formula:

$$\begin{aligned}\text{Keg} &= 10\% + (1 - 0.20) [(10 - 4)\% \times (30/100)] \\ &= \underline{11.44\%}\end{aligned}$$

Option D uses the formula:

$$\begin{aligned}\text{Keg} &= 10\% + (1 - 0.20) [(10 - 4)\% \times (70/30)] \\ &= \underline{21.20\%}\end{aligned}$$

14 B

15 B

$$\begin{aligned}\text{Forward rate } \$ (1.4545 - 0.0020) &= \$1.4525 \\ \text{£ sterling received} &= \$300,000/1.4525 \\ &= \underline{\text{£}206,540}\end{aligned}$$

Option A adds the premium to the spot rate.

$$\begin{aligned}\text{Forward rate } \$ (1.4545 + 0.0020) &= \$1.4565 \\ \text{£ sterling received} &= \$300,000/1.4565 \\ &= \underline{\text{£}205,973}\end{aligned}$$

Option C takes the higher premium.

$$\begin{aligned}\text{Forward rate } \$ (1.4545 - 0.0025) &= \$1.4520 \\ \text{£ sterling received} &= \$300,000/1.4520 \\ &= \underline{\text{£}206,612}\end{aligned}$$

Option D uses the higher spot rate and higher premium.

$$\begin{aligned}\text{Forward rate } \$ (1.4505 - 0.0025) &= \$1.4480 \\ \text{£ sterling received} &= \$300,000/1.4480 \\ &= \underline{\text{£}207,182}\end{aligned}$$

16 A**17 B**

The equivalent annual interest rate of the premium is $[(£10,000/£10,000,000) \times (365 / 92)]$
 $= 0.4\%$

If LIBOR is 5.0%, the option will not be exercised and so the borrowing cost will be:

	%
Premium	0.4
LIBOR	5.0
Cost over LIBOR	<u>0.2</u>
	<u>5.6</u>

Option A calculates the equivalent annual interest rate of the premium as
 $(£10,000/£10,000,000) = 0.1\%$

	%
Premium	0.1
LIBOR	5.0
Cost over LIBOR	<u>0.2</u>
	<u>5.3</u>

Option C is based on the miscalculation of the premium (as in A above) and the use of the strike rate:

	%
Premium	0.1
Strike rate	5.5
Cost over LIBOR	<u>0.2</u>
	<u>5.8</u>

Option D is based on the maximum borrowing cost, which is:

	%
Premium	0.4
Strike rate	5.5
Cost over LIBOR	<u>0.2</u>
	<u>6.1</u>

18 D**19 B**

The effective interest rate is made up as follows:

	%
Interest paid (7.6 + 1.0)	8.6
Net premium paid (0.5 – 0.2)	0.3
Cash settlement (7.6 – 6.0)	<u>(1.6)</u>
	<u>7.3</u>

Option A takes the cash settlement as the difference between the actual interest rate and the LIBOR floor

	%
Interest paid (7.6 + 1.0)	8.6
Net premium paid (0.5 – 0.2)	0.3
Cash settlement (7.6 – 4.5)	<u>(3.1)</u>
	<u>5.8</u>

Option C assumes that, as the floor is not exercised, there is no premium received.

	%
Interest paid ($7.6 + 1.0$)	8.6
Premium paid	0.5
Cash settlement ($7.6 - 6.0$)	<u>(1.6)</u>
	<u>7.5</u>

Option D ignores the cash settlement.

	%
Interest paid	8.6
Net premium paid	<u>0.3</u>
	<u>8.9</u>

20 C

Section B

1 (a)	Year	Incremental cash flows					
		0 £m	1 £m	2 £m	3 £m	4 £m	5 £m
	Operating profit (loss)		54.0	(46.0)	(15.0)	22.0	
	Add Depreciation and amortisation		5.5	5.5	5.5	5.5	
	Operating cash flows		59.5	(40.5)	(9.5)	27.5	
	Sale of machinery and equipment	(5.0)				2.0	
	Redundancy payments	3.4				(2.2)	
	Lease rental and community centre contribution		(6.0)	(6.0)	(6.0)	(6.0)	(1.5)
	Working capital	(3.6)				3.6	
		(5.2)	53.5	(46.5)	(15.5)	24.9	(1.5)
(b)	Discount rate 10%	1.00	0.91	0.83	0.75	0.68	0.62
	Present value	(5.20)	48.69	(38.60)	(11.63)	16.93	(0.93)
	Net present value	9.26					

Note: The cost of building the community centre has not been included in the above calculations as this has to be paid whichever choice is made.

(c) The net present value of the decision is positive: shareholder wealth will, therefore, be increased by continuing the mining operations. However, the net present value figure is not large in relation to the size of the project and two key issues should be given careful examination:

- (i) the accuracy of the forecast of operational cash flows, and
- (ii) the viability of the offer made by the miners' co-operative.

The question states that there are no other bids to continue mining operations and so the company has only the offer from the miners' co-operative to consider. If the co-operative fails to fulfil its offer, it would have a significant impact on the profitability of the decision. The estimated net present value of the decision to continue operations would increase significantly.

2 (a) (i) Number of shares in Olivine plc offered to Halite plc shareholders:

$$\begin{aligned}
 5/4 \times 16.0\text{m} &= \underline{20.0\text{m}} \\
 \text{Earnings per share of Olivine plc} &= \text{£}25.0\text{m}/40\text{m} \\
 &= \underline{\text{£}0.625} \\
 \text{Value of a share in Olivine plc} &= 20 \times \text{£}0.625 \\
 &= \underline{\text{£}12.50} \\
 \text{Total bid value} &= \text{£}12.50 \times 20.0\text{m} \\
 &= \underline{\text{£}250.0\text{m}}
 \end{aligned}$$

(ii) Earnings per share of Olivine plc following successful takeover:

	£m
Earnings of Olivine plc prior to takeover	25.0
Earnings of Halite plc prior to takeover	9.6
Cost savings arising from takeover	2.4
	<u>37.0</u>
Shares of Olivine plc in issue following takeover	= 40m + 20m
	= <u>60m</u>
Earnings per share following takeover	= £37.0m/60m
	= <u>£0.617</u>

(iii) Share price of Olivine plc following takeover

$$\begin{aligned}
 &= \text{EPS} \times \text{P/E ratio} \\
 &= \text{£}0.617 \times 19 \\
 &= \underline{\text{£}11.72}
 \end{aligned}$$

(b) The effect of the proposed takeover on the wealth of a shareholder in Olivine plc can be evaluated as follows:

	£
Value of a share prior to takeover	12·50
Value of a share following takeover	<u>11·72</u>
Reduction in share value	<u>0·78</u>
Reduction in shareholder wealth [(£12·50 – £11·72)/£12·50] =	<u>6·2%</u>

The effect of the takeover on the wealth of a shareholder in Halite plc is calculated as follows:

Earnings per share of Halite plc before takeover	= £9·6m/16m
	= <u>£0·60</u>
Value of a Halite plc share	= EPS x P/E ratio
	= £0·60 x 15
	= <u>£9·0</u>
Value of four shares prior to takeover	= 4 x £9·0
	= <u>£36·0</u>
Value of 4 shares following 5-for-4 exchange	= 5 x £11·72
	= <u>£58·60</u>
Increase in wealth [(£58·60 – £36·0)/£36]	= <u>62·8%</u>

(c) The effect of the takeover will mean that shareholders in Olivine plc will suffer a decrease of 6·2% in the value of their shareholding whereas shareholders in Halite plc will receive an increase of 62·8% in the value of their shareholding. Thus, the proposed offer would only benefit the shareholders of Halite plc.

It is worth pointing out that the 6·2% decrease in value expected by Olivine plc shareholders is based on the assumption that the P/E ratio of Olivine plc will decline by only 5% (i.e. from 20 times to 19 times). The revised P/E ratio following takeover is higher than the weighted average of the existing P/E ratios of the two companies and requires careful examination. If the P/E ratio figure proves to be lower following takeover, the existing shareholders in Olivine will suffer an even bigger reduction in wealth.

Although the shareholders of Halite plc should enjoy a significant increase in the value of their shareholdings, the dividend per share in future years could be lower. The current dividend per share of Halite plc is 25 pence whereas the current dividend per share for Olivine plc is only 15 pence. Thus, 4 shares held in Halite plc will produce a total dividend of £1·00 compared to a total dividend of £0·75 for five shares held in Olivine plc.

If the figures provided are accurate, there are benefits to be gained by combining the two businesses. The total market capitalisation of the businesses, when separate and when combined, are as follows:

	£m
Market capitalisation when separate	
Current market capitalisation of Olivine plc (40m x £12·50)	500·0
Current market capitalisation of Halite plc (16m x £9·0)	<u>144·0</u>
	<u>644·0</u>
Market capitalisation when combined	
Market capitalisation of the combined business (60m x £11·72)	<u>703·2</u>

The directors of Olivine should therefore reconsider the existing deal structure to see whether the benefits from combining can be divided more equitably between the two groups of shareholders.

3 (a) The costs of holding stocks include:

- storage costs
- handling costs
- security and maintenance costs
- financing costs
- deterioration or obsolescence
- pilferage

The above costs will normally be taken into account when reporting the financial performance and position of the business. However, these costs are not usually reported in such a way that the stockholding costs can be separately identified and assessed. Often they are subsumed within larger categories of expense. For example the financing costs of stock may be subsumed within the larger category of interest payable etc.

In addition to the above costs, there may be an opportunity cost incurred in investing in stocks. This type of cost is not reported by the traditional financial reporting systems even though it can be substantial. Accounting is transactions based and, as this type of cost does not involve a transaction with an external party, it will not be captured by the accounting system.

The costs associated with holding too little stock include:

- higher purchasing costs as a result of the need to acquire stocks quickly
- higher transportation costs in order to secure fast delivery
- production scheduling costs and production stoppages as a result of having insufficient stocks to complete production runs

These costs will be reported by the conventional financial reports but will again be subsumed under different cost categories such as purchases, carriage inwards etc. Thus managers will not be able to separately identify and assess these costs. In addition to the costs mentioned above, there may be lost revenue and lost customer goodwill arising from a lack of available stocks. Although these costs can have a significant impact on the performance of the business, there are no external transactions involved and so will not be reported.

- (b) The just-in-time (JIT) approach to stock management requires that stocks be delivered to the customer at the moment they are required to enter the production process. Such a precise approach to stock delivery means that the customer and supplier must have a close working relationship. The supplier must be aware of the production requirement of the customer in advance and so the customer must be prepared to divulge potentially sensitive information to the supplier. In addition, the customer must be confident that the appropriate quantity and quality of stocks will be delivered at the right time. The efficiency of the production process becomes highly vulnerable to any delivery problems.

The JIT approach is not necessarily a means of reducing overall costs, even though stockholding costs may be reduced. This approach effectively transfers the stockholding problem, along with the associated costs, to the supplier. This is likely to mean that the supplier will charge the customer higher prices in order to compensate. The close relationship between customer and supplier may also mean that it is not possible to reduce costs by taking advantage of cheaper sources of supply easily.

The JIT approach is closely associated with Japanese companies where it is embraced as part of an overall commitment to excellence and the elimination of inefficiency. It is seen as contributing towards an ideal manufacturing environment where there are no defects, no waste or production inefficiencies, and where supplies are delivered on time. Whilst this environment may be impossible to achieve in practice, it does provide the business with demanding goals that it should seek to achieve.

- (c) The economic order quantity (EOQ) without discounts can be calculated as follows:

$$\text{EOQ} = \sqrt{\frac{2 \times 50 \times 8,000}{80}}$$

$$= \underline{100 \text{ units}}$$

If the EOQ approach is used, the total annual costs associated with the item is:

	£
Annual purchases (8,000 x £60)	480,000
Annual ordering costs [(8,000/100) x £50]	4,000
Annual holding costs [(100/2) x £80]	4,000
	488,000

The discounts will only apply to orders above the economic order quantity. Thus, if 200 items are ordered, the total annual costs of the item will be:

	£
Annual purchases [8,000 x (£60 x 97.5%)]	468,000
Annual ordering costs [(8,000/200) x £50]	2,000
Annual holding costs [(200/2) x £80]	8,000
	478,000

If 400 items are ordered, the total annual costs of the item will be:

	£
Annual purchases [8,000 x (£60 x 96%)]	460,800
Annual ordering costs [(8,000/400) x £50]	1,000
Annual holding costs [(400/2) x £80]	16,000
	477,800

Thus, it seems that it would benefit the company if 400 units were ordered on each occasion. However, there is little to choose between the two discount options.

Section C

4 (a) The borrowing rates for each company are as follows:

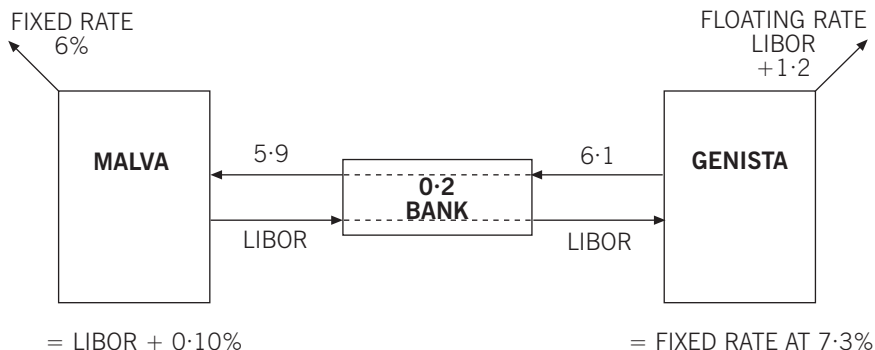
	Fixed %	Floating %
Malva plc	6.0	Libor + 0.5
Genista plc	<u>7.8</u>	<u>Libor + 1.2</u>
Difference	<u>1.8</u>	<u>+ 0.7</u>

The following table shows how these differences in interest rates can be used to the benefit of both companies.

	%
Difference between fixed and floating rates (1.8 – 0.7)	1.1
Less bank commission	<u>0.2</u>
Available for division between the two companies	<u>0.9</u>
Malva plc required savings	0.4
Genista plc required savings	<u>0.5</u>
	<u>0.9</u>

The table shows that a swap arrangement can be devised to meet the requirements of both companies concerning future savings.

The swap arrangement is shown in diagrammatic form below.



(b) Malva plc has the larger comparative advantage with fixed-rate borrowing and so should borrow at the fixed rate. Interest payments and receipts for the company will be as follows:

	£m	£m
Interest paid on fixed rate loan (£100m at 6.0%) to its own bank		6.0
Interest received from swap bank	(5.9)	
Interest paid (LIBOR) to swap bank	<u>6.2</u>	<u>0.3</u>
Total interest cost (Variable at LIBOR + 0.1%)		<u>6.3</u>

Interest payments and receipts for Genista plc will be as follows:

	£m	£m
Interest on floating rate loan (£100m at 7.4%) paid to own bank		7.4
Interest received from swap bank (LIBOR)	(6.2)	
Interest paid to swap bank	<u>6.1</u>	<u>(0.1)</u>
Total interest cost (Fixed at 7.3%)		<u>7.3</u>

(c) If LIBOR increases by 1.4% in the second year, the annual interest payments and receipts for each company will be as follows:

Malva plc

	£m	£m
Interest paid on fixed rate loan (£100m at 6.0%) to its own bank		6.0
Interest received from swap bank	(5.9)	
Interest paid (LIBOR) to swap bank	<u>7.6</u>	<u>1.7</u>
Total interest cost (Variable at LIBOR + 0.1%)		<u>7.7</u>

Genista plc

	£m	£m
Interest on floating rate loan (£100m at 8·8%) paid to own bank		8·8
Interest received from swap bank (LIBOR)	(7·6)	
Interest paid to swap bank	<u>6·1</u>	<u>(1·5)</u>
Total interest cost (Fixed at 7·3%)		<u>7·3</u>

Malva plc may, with hindsight, regret entering into the swap agreement. The effective rate of interest for the second and subsequent years is 7·7% and the company could have borrowed at a fixed rate of 6·0%. However, Malva plc may be able to reswap with another counterparty during the period of the swap agreement if it wishes.

Genista plc will continue to pay the same effective rate of interest.

(d) Interest rate swaps have a number of advantages including:

- **Flexibility** They can be designed to suit the particular requirements of the customer concerning the time period, amount etc.
- **Low cost** Transaction costs such as the fees of swap banks and legal fees are usually low, largely due to the degree of competition among swap banks.
- **Arrangement/reversion** Swaps are usually easy to arrange and to reverse. A swap bank may be prepared to act as a counterparty to the swap agreement and so it may not be necessary to find another company to act as a counterparty. Swap agreements may be reversed before the maturity date of the agreement by re-swapping with other counterparties, as mentioned above. However, there will be financial consequences if a swap is reversed.

The main disadvantage of swap agreements is the risk that the counterparty to the agreement will default on its commitments. However, a swap bank will often be prepared to act as a guarantor to both parties to the agreement (as in this problem) for a fee.

5 (a) Strategy 1

If the dividend payout ratio is 10%, the value of the business can be calculated as follows:

$$\begin{aligned}P_0 &= D_1/(K_0 - g) \\ &= £12·96m/(0·12 - 0·08) \\ &= \underline{£324m}\end{aligned}$$

Strategy 2

If the dividend payout ratio is 30%, the value of the business becomes:

$$\begin{aligned}P_0 &= D_1/(K_0 - g) \\ &= £37·8m/(0·10 - 0·05) \\ &= \underline{£756m}\end{aligned}$$

Strategy 3

If the dividend payout ratio is 60%, the value of the business becomes:

$$\begin{aligned}P_0 &= D_1/(K_0 - g) \\ &= £74·16m/(0·09 - 0·03) \\ &= \underline{£1,236m}\end{aligned}$$

Current strategy

If the dividend payout ratio stays at 80%, the value of the business is:

$$\begin{aligned}P_0 &= D_1/(K_0 - g) \\ &= £96m/(0·08 - 0·00) \\ &= \underline{£1,200m}\end{aligned}$$

Strategy 3 will result in a 3% increase in shareholder wealth, compared to the current strategy. This represents a marginal improvement for shareholders and so the proposal is worthy of further consideration. However, the accuracy of the estimates used must be carefully checked before a final decision is made. The other two strategies proposed would significantly decrease the wealth of shareholders.

(b) There are various reasons why shareholders may be concerned over a change in dividend policy. These include:

Clientele effect It has been suggested that businesses with particular dividend policies will attract particular types of shareholders. Some shareholders, for example, may prefer a company to plough back its profits in order to achieve capital growth rather than to distribute the profits in the form of a dividend. It is often argued that higher-rate income tax payers will prefer capital growth because of the tax advantages of capital gains compared to dividend income. Some taxpayers, however,

may be reliant on a high level of dividends in order to meet their living expenses and so may be attracted to a business, such as Dryas plc, because of its high payout ratio. Any reduction in dividend payments is, therefore, unlikely to be welcome. The policy change may force the shareholders to sell their shares and to seek another company in which to invest.

Information signalling Dividends may be used by managers as a means of signalling to shareholders the likely future prospects of the business. Thus, shareholders may view any reduction in the dividend payout ratio as bad news. To prevent this from occurring, the managers would need to explain carefully to shareholders the reasons for the change.

Agency costs These costs arise because of the conflict of interest between shareholders and their agents (the managers). Although managers should act in the interests of the shareholders, there is a risk that they will pursue their own interests by acquiring luxury offices, expensive cars etc for their own enjoyment. These agency costs may be minimised by adopting a high dividend payout. Such a policy would help to reduce the cash available to the business and thereby make it more difficult for managers to pursue their own interests and goals.

Market expectations The expectations of shareholders concerning dividend payouts must be taken into account. Any unexpected reduction in dividends could be interpreted by shareholders as being significant and could adversely affect their perception of the value of the shares. Shareholders' expectations must be carefully managed, which again underlines the importance of preparing shareholders for any change in the payout ratio.

(c) The reasons why retained profits may be preferred to the issue of new equity shares include the following:

Issue costs The issue of new shares may lead to significant costs being incurred by the business. These costs may include legal and accountancy costs and printing costs.

Dilution of control The issue of new shares may result in the dilution of control for existing shareholders. Even where a rights issue is being made, some dilution will occur if shareholders do not exercise their rights.

Convenience Retained profits are already held within the business. This means that funds are already available for use and that shareholders need not be involved in the financing arrangements.

Inside information Managers may have inside information that leads them to believe that the shares of the company are either overvalued or undervalued. In such a situation, their duty to protect shareholders' interests should prevent them from making a new share issue.

Taxation If profit is distributed in the form of dividend, shareholders may be liable for taxation on the amounts received. Where the shareholders are higher-rate tax payers, retaining profits may prove to be a more attractive option (see part (b) above).

6

Report on the roles and responsibilities of an audit committee

To: Non-executive director of Nerium plc

From: A Candidate

The Combined Code regards the audit committee as a key committee of the board of directors and states that listed companies should establish an audit committee consisting entirely of non-executive directors, the majority of whom should be independent. The role and responsibilities of the committee will usually include the following:

Relations with external auditors This will involve matters concerning the appointment, resignation and dismissal of auditors as well as discussions with the external auditors concerning the scope, nature and results of the audit. The audit committee should also consider the planning of the audit in order to avoid possible misstatements in the financial reports. Where non-audit services are provided, the audit committee should assess the likely impact of providing such services on the independence of the auditors.

Financial reporting practices The committee should review the accounting policies and practices of the company to ensure that they are valid and comply with relevant reporting requirements. The draft annual financial reports should be reviewed before submission to the board of directors. Any estimates or judgements used in the preparation of the draft financial reports should be considered and any evidence of 'sharp' accounting practices should be fully investigated

Internal controls This will involve matters concerning the appointment, resignation and dismissal of the head of internal control as well as discussions concerning the scope, nature and findings of the internal audit. Where recommendations for improvement to existing internal controls have been made, the response of management should be considered. The independence, status and resourcing of the internal control department should be reviewed on a regular basis and the effectiveness of co-ordination between the internal auditors and external auditors should be considered. If the company has no internal control function, the audit committee should review the situation annually and make recommendations where appropriate.

Disclosure The audit committee should consider the way in which its work is disclosed within the annual reports. Matters such as the composition and terms of reference of the committee, reporting relationship with internal and external auditors, frequency of meetings and independence of members are often viewed as important matters to disclose.

In order to play an effective part in the working of the committee, a high degree of financial literacy is not always necessary. What is usually more important is for members to be able to draw on their experience of business in order to make sound judgements and decisions. Committee members should be familiar with the business operations of the company and should be able to identify and assess the types of risk that must be faced. They should possess an independent mind and should be capable of asking challenging questions of both managers and auditors.

Diploma in Financial Management – Module B
Paper DB1 incorporating Subject Areas:
Financial Strategy
Risk Management

December 2003 Marking Scheme

Section B

1	(a) 3 marks operating cash flows, 2 marks other items	12
	(b) 1 mark discount rate, 2 marks calculations	3
	(c) 1 mark decision, 1 mark reason, 2 marks assumptions	5
		<u>20</u>
2	(a) (i) 4 marks (ii) 4 marks (iii) 2 marks	10
	(b) 2 marks Olivine calculations, 3 marks Halite calculations	5
	(c) 2 marks wealth effects, 2 marks takeover benefits, 1 mark recommendation	5
		<u>20</u>
(3)	(a) 2 marks too much stock, 2 marks too little stock, 2 marks reporting of costs	6
	(b) 2 marks per point (max. 6 marks)	6
	(c) 2 marks EOQ, 2 marks annual ordering costs for each option	8
		<u>20</u>

Section C

4	(a) 2 marks quality spread differential, 2 marks other points	4
	(b) 3 marks Malva plc, 3 marks Genista plc	6
	(c) 2 marks Malva plc, 2 marks Genista plc	4
	(d) 2 marks per point (max. 6 marks)	6
		<u>20</u>
5	(a) 2 marks per strategy, 1 mark evaluation	9
	(b) 2 marks per point (max. 7 marks)	7
	(c) 1 mark per point	4
		<u>20</u>
6	5 marks external auditors, 4 marks internal auditor, 4 marks accounting practices, 3 marks other points.	16
	4 marks qualities required of committee member	4
		<u>20</u>