

# Institute of Chartered Secretaries and Administrators

## Canadian Division Financial Decision Making

### Sample Paper – Suggested Answers

**Important notice**

When reading these answers, please note that they are not intended to be viewed as a definitive 'model' answer, as in many instances there are several possible answers/approaches to a question. These answers indicate a range of appropriate content that could have been provided in answer to the questions. They may be a different length or format to the answers expected from candidates in the examination.

# Questions

Answer **four** questions from this paper.

1. Ash Ltd. ('Ash') has recently developed a portable, lightweight image scanner that can be used by business executives when travelling. The scanner cost \$850,000 to develop and has recently been subject to market research and testing at a cost of \$250,000. The scanner has an estimated product life cycle of four years. Annual demand and selling prices for the scanner over its life cycle are estimated as follows:

Year to 31 May	2012	2013	2014	2015
Demand (units)	28,000	40,000	35,000	20,000
Selling price	\$450	\$400	\$320	\$275

The following points relate to production of the scanner:

- (i) Production of the new scanner will take place in a factory building that is owned by Ash but is currently being rented to a biomedical business for an annual rent of \$120,000 per year.
- (ii) To produce the scanner, new equipment costing \$8,000,000 must be purchased immediately. In addition, existing equipment, which is not currently being used, must be employed in the production process. This equipment cost \$4,000,000, has a written down value of \$2,000,000 and has a current resale value of \$1,500,000. All of the equipment used in producing the new scanner will be sold for an estimated \$1,000,000 when production ceases. The company uses the straight-line method of depreciation for all its equipment.
- (iii) New employees will be recruited to produce the new scanner at a cost of \$2,460,000 per year. At the end of the four-year product life cycle, the employees will be released and severance payments of \$900,000 are expected to be incurred.
- (iv) As a result of a recently cancelled order from an overseas government, sufficient material to produce 20,000 scanners is already held by Ash. This material cost \$240,000 and has a resale value of \$180,000. The material cannot be used for any other purpose by Ash. The cost of new material purchased is expected to be \$125 per scanner.
- (v) Working capital of \$5,000,000 will be required immediately and will be released when production of the new scanner ceases.
- (vi) Fixed overheads of \$4,425,000 per year relate specifically to the scanner. This includes a depreciation charge for equipment. In addition, there are head office overheads of \$8,000,000 per year. These overheads do not relate specifically to the scanner but \$380,000 will be apportioned to the scanner to represent a 'fair share' of the overhead burden.
- (vii) The company is entirely financed by equity. The company's shares have a beta of 1.4. The risk-free rate of return is 3% and returns to the market are 8%.

The current economic climate has made forecasting increasingly difficult for the company. As a result, scenario analysis is being considered as a means of achieving a better understanding of the risk and uncertainty involved in launching the new product. This form of analysis has not been used by the company in the past and its potential usefulness is not well understood. The company secretary has, therefore, been asked to provide advice to senior managers on the usefulness of scenario analysis in investment decisions.

Note: Ignore tax and inflation and assume that it is now 31 May 2011.

### Required

- (a) Calculate the net present value of producing the new image scanner and discuss your results. (17 marks)
- (b) Assume the role of company secretary and provide a briefing paper to senior managers which explains:
- (i) Why risk should be taken into account when making investment decisions.
  - (ii) The strengths and weaknesses of scenario analysis in dealing with risk.
- (8 marks)

(Total: 25 marks)

## SOLUTION

- (a) The relevant discount rate can be calculated using the capital asset pricing model:

$$K_0 = K_{RF} + b(K_m - K_{RF})$$

where:  $K_0$  = the required return for investors

$K_{RF}$  = the risk-free rate

$b$  = beta of the share

$K_m$  = the expected returns to the market

$$\begin{aligned} K_0 &= 3\% + 1.4(8\% - 3\%) \\ &= \underline{10\%} \end{aligned}$$

The net present value of the image scanner is calculated as follows:

	Year to 31 May				
	2011	2012	2013	2014	2015
	\$000	\$000	\$000	\$000	\$000
Sales		12,600	16,000	11,200	5,500
Rent foregone		(120)	(120)	(120)	(120)
Equipment	(9,500)				1,000
Wages		(2,460)	(2,460)	(2,460)	(2,460)
Severance					(900)
Materials		(1,180)	(5,000)	(4,375)	(2,500)
Working capital	(5,000)				5,000
Overheads	_____	<u>(2,175)</u>	<u>(2,175)</u>	<u>(2,175)</u>	<u>(2,175)</u>
Net cash flows	(14,500)	6,665	6,245	2,070	3,345
Discount rate					
(10%)	1.00	0.909	0.826	0.751	0.683
Present values	(14,500)	6,058	5,158	1,555	2,285
Net present value	556				

Notes:

(1) Overheads relate specifically to the project and ignore any depreciation charge for equipment. (That is,  $\$4,425,000 - \$2,250,000 = \$2,175,000$ ) where  $\$9M/4 = 2,250,000$

(2) Rent foregone represents an opportunity cost and so is included in the calculations.

(3) The materials in Year 1 will be the realisable value of the materials already available for 20,000 scanners (\$180,000) plus the cost of new materials required for the remaining 8,000 scanners to be produced in that year. (That is,  $8,000 \times \$125 = \$10,000$ ).

(4) Working capital will involve an immediate outlay but the amount invested will be released at the end of the project's life.

(5) Development and marketing costs have been ignored as they represent sunk costs.

The calculations reveal that the net present value of the scanner project is positive. Thus, a decision to go ahead would enhance shareholder wealth. We should note however that the net present value is not large in relation to the size of the project and its viability may therefore be sensitive to any forecast inaccuracies. A careful checking of underlying assumptions and estimates should be carried out before a final decision is made. We should also note that, if the net present value calculations had been carried out before the product development and market research had been carried out, the result would have been a negative NPV.

**(b) *Briefing paper on risk and the role of scenario analysis in investment decisions.***

**To: The senior managers of Ash Ltd.  
From: Company Secretary**

Risk has particular importance for investment decisions because large sums of money are often involved. If things do not turn out as expected, the effect on shareholder wealth and the fortunes of the business can be profound. In addition, investment projects often involve long timescales. This means that there is plenty of time for unexpected changes to occur.

Scenario analysis involves preparing net present value calculations according to different possible 'states of the world'. Unlike sensitivity analysis, it involves changing a number of key variables simultaneously in order to provide each particular state of the world. A common form of scenario analysis is to present three possible states of the world that provide a most likely view, an optimistic view and a pessimistic view. By examining each possible outcome, decision makers may gain a better feel for the 'downside' risk and 'upside' potential of a project, as well as the most likely outcome. A weakness of this approach is that it does not indicate the probability of each state of the world occurring, which is important when evaluating each possible outcome. Furthermore, it does not identify other possible scenarios that may occur.

2. Relax Hotels Ltd. ('Relax') operates a chain of hotels throughout Canada. For some years, trading conditions have been poor and the board of directors has concluded that future growth can only be achieved through diversification into other business sectors. To this end, the board is considering the acquisition of Maple Restaurants Ltd. ('Maple'), which owns a chain of fast-food restaurants. Both companies have their shares listed on the TSX exchange.

The board of directors of Relax is currently putting together a formal bid for the board of directors of Maple to consider. Two key issues still to be resolved are the premium that should be offered to acquire the shares in Maple and the particular form of bid consideration.

### **Required**

- (a) Discuss whether diversification provides a valid reason for acquiring another company. *(6 marks)*
- (b) Explain why a bidding company may pay a premium above the market value of the shares to acquire another company. *(4 marks)*
- (c) Identify the main forms of bid consideration that may be used to acquire Maple and discuss the advantages and disadvantages of each. *(15 marks)*

*(Total: 25 marks)*

## **SOLUTION**

- (a) Diversification into different business sectors may help to spread the risk borne by shareholders and so may be in their long-term interests. By diversifying through acquisition rather than through creating an entirely new business, it is possible to achieve the benefits of diversification more quickly. There are, however, potential problems that may arise from adopting a strategy of diversification.

First, senior management of the bidding company may not have the talent and expertise required to manage a company operating in a different business sector. Second, there may be few opportunities to generate synergies, such as cost savings and increased sales, by combining quite different businesses. It may not, therefore, be possible to increase shareholder wealth in this way. Finally, it is questionable whether the board of directors of the bidding company can provide benefits that shareholders could not provide for themselves more cheaply and more directly. Shareholders can reap the benefits of diversification by simply holding a diversified portfolio of investments. Where a bidding company acquires another company, a premium for the shares will normally have to be paid and advisers appointed to help in the acquisition process, which can prove very expensive.

- (b) A bidding company may be prepared to pay a premium to acquire the shares of another company for the following reasons:
- The potential synergies arising from combining the two businesses mean that the shares are worth more than their current market value to the bidding company.
  - The bidding company has information about the target company that the market does not have.
  - The bidding company may misjudge the value of the target company.
  - Where the bidding company is in competition to acquire the target company, or where the target company is resisting the acquisition, the offer price may be driven higher – not by economic considerations but rather by a need to ensure a successful outcome and thereby salvage management pride.
- (c) There are three main forms of bid consideration: a share-for-share exchange, a debt-for-share capital exchange and cash-for-share capital exchange. Each of these is considered below.

*Shares* From the viewpoint of the bidding company's shareholders, a share-for-share exchange has the advantage that it will not involve an outlay of cash and will not therefore impose a strain on liquidity. It will also lead to a reduction in the level of leverage and should thereby increase the debt capacity of the company. However, existing shareholders will suffer a dilution in control and there may also be a dilution in earnings per share.

From the viewpoint of the target company's shareholders, there will be no tax liability on capital gains as they will have simply exchanged their existing shares for shares in the bidding company (a tax-free roll-over). This means that they will have a continuing interest in the business. However, the value of a share bid is uncertain and may fluctuate.

*Debt* From the viewpoint of the bidding company's shareholders, debt-for-share capital has the advantage that it does not impose a strain on liquidity. Furthermore, it does not involve any dilution of control over the company. The cost of servicing the debt capital is much lower than servicing equity capital, partly because of the tax shield benefits that accrue to the payment of loan interest. Issuing new debt will, however, increase the level of leverage and, therefore, the level of financial risk. It will also reduce the debt capacity of the bidding company.

From the viewpoint of the target company's shareholders, the receipt of debt may not mean that there is no tax liability on any capital gains. Furthermore, where the shareholders are uncertain about the future prospects of the combined business, the debt may offer a suitable alternative to shares as they will receive a fixed return and greater security for their investment. In many cases, however, shareholders may wish to continue to hold equity rather than loan capital in their investment portfolio.

*Cash* From the viewpoint of the bidding company's shareholders, a cash-for-share capital exchange may impose a strain on liquidity. This may, in turn, make it necessary to issue more shares or debt. The use of cash, however, will mean that the offer price for the shares in the target company is more certain and this may increase the prospects of acceptance.

From the viewpoint of shareholders' in the bidding company, the greater certainty is likely to be welcome but it will come at a price. There may be a tax liability on capital gains and, if the shareholders wish to re-invest the amounts received, they will incur transaction costs.

3. The most recent financial statements of Birch (Engineering) Ltd. ('the company') are as follows:

<b>Income Statement for the year ended 31 May 2011</b>	
	<b>\$m</b>
Sales revenue	55.8
Profit before interest and taxation	4.5
Interest payable	0.5
Profit before taxation	4.0
Tax (20%)	0.8
Profit for the year	3.2

<b>Statement of Financial Position as at 31 May 2011 (IFRS selected format)</b>	
	<b>\$m</b>
<b>ASSETS</b>	
<b>Non-current assets</b>	
Property, plant and equipment	31.4
<b>Current assets</b>	
Inventories	10.4
Trade receivables	6.4
Cash	2.0
	18.8
<b>Total assets</b>	<b>50.2</b>
<b>EQUITY AND LIABILITIES</b>	
<b>Equity</b>	
Ordinary \$1 shares	14.0
Retained earnings	16.3
	30.3
<b>Non-current liabilities</b>	
5% loan notes	10.0
<b>Current liabilities</b>	
Trade payables	6.2
Accrued expenses	3.7
	9.9
<b>Total equity and liabilities</b>	<b>50.2</b>

The company has recently been awarded a large government contract that is expected to boost future profits before interest and taxation by \$2.5 million per year. To perform the contract, additional investment in equipment costing \$20 million will be required immediately. To acquire the equipment, the directors of the company are considering two possible financing methods:

- (i) The issue of \$1 ordinary shares at a premium of \$0.25 per share (\$1.25 each).
- (ii) The issue of \$20 million 5% loan notes at nominal value.

The company currently pays a dividend of \$0.10 per share each year and will maintain this rate of dividend whichever method of financing is selected. The company is listed on the TSX venture exchange.

## Required

- (a) For each financing method:
- (i) Prepare a forecast income statement for the year to 31 May 2012.
  - (ii) Calculate the forecast level of leverage as at 31 May 2012.
  - (iii) Calculate the forecast earnings per share for the year to 31 May 2012.  
(10 marks)
- (b) Calculate the level of profit, before interest and taxation, at which the earnings per share under each financing option will be the same.  
(5 marks)
- (c) Discuss the effect of each financing scheme from the perspective of existing shareholders and suggest how they may interpret the choice of financing method as a signal concerning future prospects.  
(10 marks)
- (Total: 25 marks)

## SOLUTION

- (a) (i) The forecast income statements for the year ended 31 May 2012 are as follows:

	Shares	Loan notes
	\$m	\$m
Profit before interest and taxation	7.0	7.0
Interest payable	<u>0.5</u>	<u>1.5</u>
Profit before taxation	6.5	5.5
Tax (20%)	<u>1.3</u>	<u>1.1</u>
Profit for the year	<u>5.2</u>	<u>4.4</u>

- (ii) The forecast level of leverage will be:

$$\text{Leverage ratio} = \text{Loan notes}/(\text{Equity} + \text{Loan notes}) \times 100\%$$

$$\begin{aligned} \text{Share issue} &= 10.0/[(30.3 + 20 + 5.2 - 3.0) + 10.0] \times 100\% \\ &= \underline{16.0\%} \end{aligned}$$

$$\begin{aligned} \text{Loan notes issue} &= (10 + 20)/(30.3 + 4.4 - 1.4) + (10 + 20)] \times 100\% \\ &= \underline{47.4\%} \end{aligned}$$

(Note: Other methods of calculating the level of leverage would have been acceptable in answering this part of the question.)

(iii) The forecast earnings per share will be:

Earnings per share = Profit available to ordinary shareholders/No. of ordinary shares in issue

$$\begin{aligned} \text{Share issue} &= \$5.2\text{m} / 30.0\text{m} \\ &= \underline{.1730} \end{aligned}$$

$$\begin{aligned} \text{Loan notes issue} &= \$4.4 \text{ m} / 14.0\text{m} \\ &= \underline{.3143} \end{aligned}$$

(b) The level of profit before interest and taxation at which both financing options provide the same earnings per share (EPS) can be calculated as follows:

<b>Shares</b>		<b>Loan notes</b>
$(x - \text{BE}/\text{PBIT})(1 - t)$	=	$(x - \text{BE}/\text{PBIT})(1 - t)$
No. of ordinary shares		No. of ordinary shares

Where:

BE/PBIT = Profit before interest and tax necessary to cover interest charges

t = tax rate

x = the level of EPS at which earnings per share under each financing option is equal

$$\frac{(x - \$0.5\text{m})(1 - 0.2)}{30.0\text{m}} = \frac{(x - \$1.5\text{m})(1 - 0.2)}{14.0\text{m}}$$

$$\frac{(0.8x - \$0.4\text{m})}{30.0\text{m}} = \frac{(0.8x - \$1.2\text{m})}{14.0\text{m}}$$

$$11.2x - \$5.6\text{m} = 24.0x - \$36.0\text{m}$$

$$13.8x = \$30.4\text{m}$$

$$x = \underline{\$2.2\text{m}}$$

- (c) The answer to (a) above reveals that total profit for the year will be higher under the share option. Earnings per share, however, will be almost double under the loan notes option than under the share option. It is also forecast to be much higher than the existing earnings per share of \$0.226.

The effect of issuing loan notes would be to more than double the level of financial leverage than would occur under the share option. The level of leverage under the loan notes option would also be much higher than the existing level of leverage of 24.8%. Thus, the price to be paid for a significant increase in returns is a significant increase in the level of financial risk. Nevertheless, if the forecast level of profit before interest and tax for next year is achieved, interest charges will easily be covered. The forecast interest cover ratio will be 4.7 times (that is \$7.0m/\$1.5m).

The share option will lead to a significant rise of the number of shares in issue: from 14 million to 30 million. Existing shareholders may well lack the resources to take up the new shares issued and, if this is the case, this will lead to a significant dilution of control. There is a good chance that existing shareholders will not be prepared to accept such a significant dilution of control and will veto attempts to raise finance in this way.

The loan notes option will lead to a significant rise in borrowing and so will significantly reduce the debt capacity of the company. This means that it will restrict the opportunity for future loan note issues. The view of Modigliani and Miller (with taxes), however, is that taking on additional borrowing will enhance shareholder wealth because of the tax shield effect.

When a financing decision is made, the directors should be aware that investors may seek to interpret the particular option selected as a sign of future prospects. Thus, the decision to take on additional financial leverage through borrowing may be interpreted as a sign that the directors are confident about future profitability. This, in turn, may lead to a rise in share prices. A decision to avoid additional leverage, on the other hand, may be interpreted as a sign of a lack of confidence. Thus, directors should be sensitive to the signals that are being sent to investors by the financing decision and, if needed, should provide clear explanations.

4. Larch Ltd. ('Larch') and Hazel Ltd. ('Hazel') are both listed Canadian companies wishing to derive their cost of capital. Larch operates a chain of fast-food restaurants and Hazel operates a chain of jewellery stores. The following information concerning the two companies is available for the year to 31 May 2011:

	<b>Larch</b>	<b>Hazel</b>
Market value per ordinary share	\$8.00	\$3.80
Number of ordinary shares	15 million	20 million
Market value of debt	\$40 million	\$38 million
Nominal value of debt	\$50 million	\$40 million
Nominal interest rate	4%	6%
Profit for the year (after taxation)	\$20 million	\$25 million
Total dividends	\$3 million	\$5 million
Annual growth rate in dividends	5%	4%
Tax rate	25%	25%

### Required

- (a) Explain the term 'cost of capital' and discuss the possible implications for a company that fails to calculate its cost of capital accurately. (4 marks)
- (b) Calculate the weighted average cost of capital for Larch and for Hazel and suggest possible reasons why the two figures are different. (15 marks)
- (c) Briefly discuss three assumptions underpinning the use of the weighted average cost of capital when making investment decisions. (6 marks)

(Total: 25 marks)

## SOLUTION

- (a) The cost of capital of a business represents the minimum required return from investors given the risks that are involved. It is used as the discount rate when using the net present value method of investment appraisal and the hurdle rate when using the internal rate of return. Inaccuracies in calculation will lead to the cost of capital being either overstated or understated. In the former case, it may lead to the rejection of investment projects that should be accepted. In the latter case, it may lead to the acceptance of investment projects that should be rejected. Both possible outcomes will adversely affect shareholder wealth.

(b) The cost of equity and debt for each company can be calculated as follows:

	<b>Larch Ltd.</b>	<b>Hazel Ltd.</b>
Market value of ordinary shares		
- 15m x \$8	\$120m	
-20 x \$3.80		\$76m
Dividend per share		
- \$3m/15m	\$0.20	
- \$5m/20m		\$0.25
Cost of ordinary shares		
$K_o = (D_1/V_o) + g$	( $\$0.21/\$8.0$ ) + 0.05	( $\$0.26/\$3.80$ ) + 0.04
	7.63%	10.84%
Cost of loan capital		
$K_d = I(1-t)/V_d$	4(1-0.25)/80	6(1-0.25)/95
	3.75%	4.74%

The weighted average cost of capital for each company is as follows:

**Larch plc**

	<i>Cost (%)</i>	<i>Weight (%)</i>	<i>Weighted cost (%)</i>
Ordinary shares	7.63	0.75	5.72
Loan notes	3.75	0.25	<u>0.94</u>
			<u>6.66</u>

**Hazel plc**

	<i>Cost (%)</i>	<i>Weight (%)</i>	<i>Weighted cost (%)</i>
Ordinary shares	10.84	0.67	7.26
Loan notes	4.74	0.33	<u>1.56</u>
			<u>8.82</u>

There are two main reasons why differences exist between the cost of capital of the two companies. First, they are exposed to different forms of business risk. They operate in different industrial sectors and are, therefore, subject to different economic conditions and threats. Second, they have different levels of financial risk. Hazel Ltd. has a higher level of gearing than Larch Ltd., which will increase the risks to ordinary shareholders.

- (c) Three limiting assumptions associated with using the costs of capital when making investment decisions are as follows:
1. The level of business risk relating to the investment project being evaluated reflects that of other investment projects undertaken by the company.
  2. The capital structure of the company does not change significantly during the period of the investment project.
  3. The weighted average cost of capital reflects the company's long-term capital structure.

*(Note: Other answers to this part of the question would have been acceptable.)*

5. Beech Ltd ('Beech') imports and distributes a battery-operated lawn mower that is manufactured in Germany. The most recent draft Statement of Financial Position of the company is set out below.

<b>Statement of Financial Position as at 31 May 2011 (IFRS selected format)</b>	
<b>ASSETS</b>	<b>\$000</b>
<b>Non-current assets</b>	
Property, plant and equipment	3,500
<b>Current assets</b>	
Inventories	1,800
Trade receivables	2,940
Cash	20
	4,760
<b>Total assets</b>	8,260
<b>EQUITY AND LIABILITIES</b>	
<b>Equity</b>	
Ordinary \$0.50 shares	4,000
Retained earnings	1,374
	5,374
<b>Non-current liabilities</b>	
8% loan notes	1,000
<b>Current liabilities</b>	
Trade payables	1,800
Accrued expenses	86
	1,886
<b>Total equity and liabilities</b>	8,260

It is estimated that sales of the lawn mower for the next six months will be:

	<b>Sales (units)</b>
June	7,200
July	8,400
August	9,200
September	4,200
October	3,800
November	2,500

The following additional information is available:

- (i) The lawn mowers cost \$250 each and are sold to garden centres and do-it-yourself stores for \$280 each.
- (ii) All sales are made on two months' credit, although a cash discount of 2.5% is offered for payments received within one month of sale. Based on past experience, 40% of amounts owed will be paid after exactly one month in order to qualify for this discount and the remainder will not qualify for the discount. Most of the remaining customers will pay between one and two months after sale but it is estimated that 5% of these will not pay at all.

- (iii) Sales remained constant at 7,000 units per month during April and May. (The trade receivables figure in the most recent draft Statement of Financial Position does not make any allowance for future discounts or possible bad debts.)
- (iv) Sufficient inventories are held at the end of each month to meet sales demand for the following month. However, from July onwards, Beech also intends to hold buffer inventories of 800 lawn mowers.
- (v) The German company supplying the lawn mowers allows one months' credit. Demand for the lawn mower is extremely buoyant and late payment will lead to a cessation of future supplies.
- (vi) Operating expenses are currently \$95,000 per month and are paid one month after being incurred. These expenses include a depreciation charge of \$9,000 per month.
- (vii) Beech wishes to own its own distribution facilities and, to this end, will buy 5 transport vehicles at a total cost of \$340,000 in early July. This will lead to an increase in operating expenses of \$15,000 per month, which includes an additional depreciation charge of \$7,000 per month.
- (viii) A dividend of \$180,000 will be announced in June 2011 and will be paid two months following the announcement.
- (ix) A quarterly tax payment of \$22,000 is due at the end of each quarter, commencing in June 2011.
- (x) Loan interest is paid half-yearly in September and March.

Beech has agreed a bank overdraft facility of \$400,000, if needed. However, the bank has made it clear that the overdraft limit should not be exceeded.

### **Required**

- (a) Prepare a monthly cash flow forecast for the six-month period to 30 November 2011. (Note: All workings should be shown to the nearest \$000.)  
*(13 marks)*
- (b) Comment on the significant features revealed by the cash flow forecast you produced in answer to 5(a). Make any recommendations that you consider appropriate to ensure that the bank overdraft limit is not exceeded.  
*(4 marks)*
- (c) Discuss the main factors that will influence the level of cash that a business should hold and, where possible, refer to Beech.  
*(8 marks)*

*(Total: 25 marks)*

## SOLUTION

- (a) Forecast cash flow statement for the six-month period to 30 November 2011

	June	July	August	September	October	November
	\$000	\$000	\$000	\$000	\$000	\$000
<i>Receipts</i>						
Sales						
1 month	764	786	917	1,005	459	415
2 months	<u>1,117</u>	<u>1,117</u>	<u>1,149</u>	<u>1,341</u>	<u>1,468</u>	<u>670</u>
	<u>1,881</u>	<u>1,903</u>	<u>2,066</u>	<u>2,346</u>	<u>1,927</u>	<u>1,085</u>
<i>Payments</i>						
Purchases	1,800	2,300	2,300	1,050	950	625
Op. exp	86	86	94	94	94	94
Vehicles		340				
Dividend			180			
Tax	22			22		
Interest	—	—	—	40	—	—
	<u>1,908</u>	<u>2,726</u>	<u>2,574</u>	<u>1,206</u>	<u>1,044</u>	<u>719</u>
Cash flow	(27)	(823)	(508)	1,140	883	366
Op. bal.	<u>20</u>	<u>(7)</u>	<u>(830)</u>	<u>(1,338)</u>	<u>(198)</u>	<u>685</u>
Cl. bal.	<u>(7)</u>	<u>(830)</u>	<u>(1,338)</u>	<u>(198)</u>	<u>685</u>	<u>1,051</u>

- (b) The cash flow forecast reveals that at the end of the period, the company will have a large cash surplus. However, in the first three months, there is a cash deficit and the overdraft limit will be exceeded unless corrective action is taken. A key problem is that the company pays for its supplies within one month but allows its customers up to two months credit. It may be possible to change the terms of credit (at least for customers) to improve cash flows. Further steps that might be taken include delaying the purchase of the transport vehicles, delaying the dividend payment and raising further long-term capital from shareholders or lenders. This last course of action, however, requires careful consideration particularly if the cash flow problem is only temporary.

- (c) The key factors to consider when deciding on the level of cash to be held are:

*The nature of the business* A business with predictable and substantial cash flows over time may hold low cash balances. A business that is seasonal in nature, however, may need to accumulate cash during the high season in order to meet its commitments during the low season.

*The availability of liquid assets* If a business holds marketable securities and similarly liquid assets, a large cash balance may be unnecessary.

*The availability of borrowing* Where a business has ready access to borrowing, a large cash balance may not be required. Access will have to be kept under review, as this is subject to market and economic conditions.

*The cost of borrowing* During periods when the cost of borrowing is high, it may be better to hold larger cash balances.

*The rate of inflation* During a period of inflation, monetary assets, such as cash, lose their purchasing power. It may, therefore be a good idea to hold low cash balances when inflation rates are high.

*Opportunity costs* There may be profitable opportunities that can be exploited with the cash that is available.

*Meeting commitments* In order to survive, a business must retain an uninterrupted capacity to pay its debts when they fall due and sufficient cash must be held for this purpose.

*Economic conditions* During a period of economic recession, it may prove difficult to get customers to pay on time. Nevertheless, it may still be necessary to pay suppliers on time in order to ensure future supplies. Access to borrowing may also be restricted. In such conditions, a large cash balance may be needed.

6. Spruce Manufacturing Ltd ('Spruce') makes ball bearings for various types of machinery. It is a small company and has recently received an order from a large machine manufacturer. The order, which will be spread over three years, will increase annual sales revenue by 10% over the three-year period. The directors of Spruce were surprised to receive such a large order and are due to meet to discuss its implications. In particular, they have to determine how much credit should be allowed and how to ensure that the new customer pays on time.

To help in their forthcoming deliberations, the directors have asked the company secretary to prepare a briefing paper.

### **Required**

Assume the role of company secretary and produce a briefing paper that:

- (a) Discusses the factors to be taken into account when deciding on the amount of credit that a customer should be allowed. (10 marks)
- (b) Discusses the methods that may be used to ensure that the new customer pays the amounts owed to Spruce on time. (10 marks)
- (c) Explains why credit management can be a particular problem for small companies such as Spruce. (5 marks)

(Total: 25 marks)

## **SOLUTION**

6. Briefing paper on credit management issues surrounding the recent large order

**To: The board of directors of Spruce Manufacturing Ltd**

**From: Company Secretary**

- (a) The following five C's of credit may be used to help determine the amount of credit to extend to a customer:

*Capital* The customer must have sufficient capital to meet its obligations. An examination of the financial statements of the manufacturing company should be carried out to see whether it is well capitalised. Any large commitments must be taken into account when making this assessment.

*Capacity* The track record of the company in paying trade receivables should be considered. In addition, an assessment should be made of the value of the amount of credit that is being sought in relation to the profits and cash generated.

*Character* The willingness to pay as well as the ability to pay is important. An assessment of the character of the senior management team should be undertaken to see whether they have the necessary integrity and honesty to meet their obligations. Their reputation among suppliers and lenders should also be assessed.

*Collateral* In some cases, it may be necessary to ask for some form of security for amounts owed, such as a third party guarantee or retention of legal title over the goods until the amount owed is paid.

*Conditions* Current economic conditions and the sensitivity of the company to changes in economic conditions must be taken into account.

The new order is large in relation to the total annual sales revenue of Spruce Manufacturing Ltd. The directors must therefore consider whether the company has the necessary financial resources to accommodate such a large order and whether the credit risk is outweighed by the likely benefits.

- (b)** In order to ensure prompt payment, the following steps may be taken:

*Credit control policies* It is important that Spruce Manufacturing Ltd has efficient accounting and debt collection procedures in place. Customers should be made aware of the credit terms from the start and should be invoiced promptly. Monthly statements and reminders should also be issued promptly. Outstanding trade receivables should be monitored using an ageing schedule of receivables and queries should be answered quickly in order to prevent delays in payment. Developing a relationship with the manufacturer's employees that are responsible for authorising and paying suppliers may also help increase the chances of prompt payment.

*Financial incentives* A cash discount may be offered for prompt payment, however, the costs of such discounts can be high and must be weighed against the likely benefits. Offering a cash discount runs the risk that a customer will deduct the discount when paying but will not pay within the specified period. An alternative is to issue credit notes to the customer when there has been prompt payment. A further financial incentive to encourage prompt payment is to charge interest on overdue accounts.

*Outsourcing* It may be worthwhile outsourcing the credit management function by employing the services of a factor. Factors have considerable expertise in managing the sales ledger of client companies and so may obtain better results than the company's credit control department in collecting amounts owed. The factor will make an advance to the company against outstanding debts and may be prepared to assume responsibility for bad debts.

(Note: Other answers to this part of the question would have been acceptable.)

- (c)** The management of credit risk can be a particular problem for small companies for a number of reasons. They often lack the expertise to operate effective credit control procedures and may not even have a separate credit control department. As a result, key elements of effective

credit control such as the initial assessment of creditworthiness and proper invoicing and debt collection procedures may not be in place. In addition, small companies often depend on proportionately fewer customers than their larger counterparts, which can lead to a greater concentration of risk.

Small companies are in a weak bargaining position when dealing with large companies, particularly when they are dependent on the large companies for continuing orders. In some cases, the larger companies will dictate the terms of trade and will impose payment terms on their small suppliers. Finally, in an effort to survive, small companies may take risks in accepting credit sales orders that larger, more established, companies would not be prepared to take.