

Case study 8: Mark scheme

Chapter 22: Financial accounts

Chapter 23: Ratio analysis

Mowmaster Ltd

Denzel Jackson is considering buying a company called Mowmaster Ltd that makes lawnmowers. He has been given the financial statements for the last two years and he needs to make a decision about whether to buy. He knows that the recession means that home owners are not buying as much garden equipment as before. Nevertheless, he feels that grass always grows and so there will always be a need for a mower to cut it.

Mowmaster Ltd. was established in 1998. The current owner, Rodney Bernard, says that he wants to sell in order to sail around the world. Denzel has heard that Mowmaster has been experiencing some liquidity and gearing problems over the last year. Rodney says this is only because he bought new machinery and that all that is needed is for short-term bank loans to be converted into long-term loans. Denzel is not sure about this, but he has noticed that there seems to be a good stock of impressive lawnmowers in the warehouse.

Profit and loss account for Mowmaster Ltd January to December 2009 and 2010

(\$000)

	2009	2010
Sales revenue	432	476
Cost of goods sold	144	216
Gross profit	288	260
Overheads	108	140
Net profit before interest and tax	180	120
Interest	36	52
Tax	29	14
Net profit after interest and tax	115	38
Dividends	100	36
Retained profit	15	2

Balance sheet for Mowmaster Ltd at 31 December 2009 and 2010

(\$000)

	2009	2010
FIXED ASSETS		
Buildings	950	920
Machinery	<u>80</u>	<u>290</u>
	1030	1210
CURRENT ASSETS		
Stocks	108	145
Debtors	196	292
Cash	<u>36</u>	<u>8</u>
	340	445
CURRENT LIABILITIES		
Trade creditors	150	290
Short-term loans	100	120
Overdraft	<u>45</u>	<u>25</u>
	295	435
NET CURRENT ASSETS	45	10
NET ASSETS	1075	1220
Financed by:		
LONG-TERM LIABILITIES		
Mortgage	300	290
Bank loan	135	288
CAPITAL & RESERVES		
Share capital	400	400
Retained profits	240	242
CAPITAL EMPLOYED	1075	1075

SL questions: 20 marks, 35 minutes

1 Define the following terms:

a overdraft (2)

This is a form of short-term debt in which the bank allows a business (or an individual) to draw more money from its bank account than is actually in the account, and so the balance becomes negative.

b debtors. (2)

These are companies or individuals who owe money to a business.

Apply **Resources table 3a** mark band descriptors.

2 Calculate Mowmaster's current ratio in 2009 and 2010. What could Denzel conclude from these figures? (7)

CR 2009 = 1.15

Award 1 mark for full and clear working plus 1 mark for a correct answer.

CR 2010 = 1.02

Award 1 mark for full and clear working plus 1 mark for a correct answer.

Analysis:

- Mowmaster's liquidity, which is the company's ability to repay its short-term financial obligations using its short-term assets, has decreased.
- Both current assets and current liabilities have risen considerably, but amounts owed to creditors have almost doubled and this may be a significant factor in the decline in liquidity.

Award 2 marks for an adequate understanding of the current ratio as expressed in a solid definition/explanation.

Award 1 mark for recognising the big change in creditors as a significant factor in the deterioration of liquidity.

3 Use an appropriate efficiency ratio to analyse changes in creditors and stock. (7)

Stock days 2009 = 274 days

Stock days 2010 = 245 days

Creditor days 2009 = 127 days

Creditor days 2010 = 223 days

Award 1 mark for full and clear working with a correct answer for each of the above.

Analysis:

- Stock days have improved by 29 days, but it must still be noted that Mowmaster has eight months' worth of stock. This may be because the business is seasonal and therefore large stocks would have to be built up in preparation for the selling season. Accounts are prepared in December and so this is about three months before the spring selling season would start.
- In 2009, Mowmaster had an average of four months' credit from its suppliers. In 2010, the company is taking an additional three months to pay. This is a significant difference and such a long credit period is unusual. It may mean that Mowmaster is unable to pay on time, or it could be that in the recession suppliers are willing to offer longer credit terms in order to make sales.

Students should therefore recognise that:

- there is a lot of stock and this may be because the lawnmower business is seasonal
- Mowmaster only pays its suppliers after a long time and this may be either because it cannot pay, or because it is offered cheap credit by suppliers if it will buy in a recession.

SL: apply **Resources table 1** mark band descriptors.

A justified conclusion is required.

4 Mowmaster's gross profit ratio has dropped. State **two** reasons why this may have happened. **(2)**

- Wage rates may have risen.
- Prices for supplies may have gone up.

1 mark per valid point.

HL questions: 25 marks, 45 minutes

1 Define the term 'liquidity'. **(2)**

This refers to the ability of a business to convert short-term assets into cash, in order to service (pay) bills as they become due.

Apply **Resources table 3a** mark band descriptors.

- 2 Calculate **two** efficiency ratios for Mowmaster Ltd for 2009 and 2010. What could Denzel conclude from these calculations? (7)

Stock days 2009 = 274 days

Stock days 2010 = 245 days

Creditor days 2009 = 127 days

Creditor days 2010 = 223 days

Award 1 mark for full and clear working with a correct answer for each of the above.

Analysis:

- Stock days have improved by 29 days, but it must still be noted that Mowmaster has eight months' worth of stock. This may be because the business is seasonal and therefore large stocks would have to be built up in preparation for the selling season. Accounts are prepared in December and so this is about three months before the spring selling season would start.
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Students should therefore recognise that:

- there is a lot of stock and this may be because the lawnmower business is seasonal
- Mowmaster only pays its suppliers after a long time and this may be either because it cannot pay, or because it is offered cheap credit by suppliers if it will buy in a recession.

SL: apply **Resources table 2** mark band descriptors.

A justified conclusion is required.

- 3 Use calculation of gearing for 2010 to advise Denzel whether it would be possible to convert bank short-term debt to a term loan. (6)

$$\begin{aligned} \text{Gearing} &= \frac{478}{478 + 642} \times 100\% \\ &= 42.7\% \end{aligned}$$

Gearing if short-term bank debt were added to term loans:

$$\begin{aligned} &= \frac{478 + 120 + 25}{478 + 642 + 120 + 25} \times 100\% \\ &= 49.2\% \end{aligned}$$

It would theoretically be possible to convert bank short-term debt to a term loan, as gearing would not go beyond the 50% level at which banks are reluctant to lend further.

On the other hand, long-term bank debt would then be very close to the 50% mark. The bank might try to take additional security in order to give extra support for such a high level of borrowing. As the bank already has a mortgage over the property, it may be reluctant to commit any more money.

1 mark is available for the straight gearing calculation.

An additional 2 marks are available for the adjusted gearing calculation.

Award up to 3 marks to reflect the depth of the analysis of the numbers and use of business terminology.

Other issues for further discussion in class:

The only other long-term assets available for such support are the machines, which have doubtful second-hand value. It could be because of this that the \$210,000 increase in machinery seemed to result in only a \$153,000 increase in term loans. The difference must have been financed by short-term sources, e.g. trade creditors increased by \$140,000. Funding long-term assets by short-term sources is usually a recipe for liquidity problems. If trade creditors start pressing for payment, Mowmaster may have a liquidity crisis.

The bank would therefore probably turn down the request to convert short-term debt to term debt in this way and may well advise the owners to put in more share capital. Denzel should be fully aware of these potential problems. He should not accept Rodney's implication that this conversion would be easy to do. If Rodney is thinking of setting out in a boat it could be that he is hoping to escape his financial difficulties by going as far away as possible.

- 4** Analyse changes in Mowmaster's profitability. **(5)**
- | | |
|------------------|------------------|
| GPM 2009 = 66.7% | NPM 2009 = 26.6% |
| GPM 2010 = 54.6% | NPM 2010 = 8% |

A maximum of 2 marks is available for all four full and clear calculations. (These are simple calculations which do not require advanced skills to do.)

Mowmaster has suffered a sharp fall in gross profit. This may be due to higher prices paid for raw materials or higher production costs (e.g. wages), or even selling at lower prices in order to attract customers during the recession.

Net profit shows an even bigger fall, however. Overheads and interest payments have risen 30% and 44% respectively. This may be related to the running or finance of the new machinery, but may also reflect an increase on other overheads, e.g. salaries.

HL: apply **Resources table 2** mark band descriptors.

5 Evaluate whether Denzel should buy Mowmaster Ltd.

(5)

Sales rose 10.2% from 2009 to 2010. Nevertheless, Mowmaster's profitability fell significantly. This appears to be linked to a lowering of sales prices or an increase in direct costs. This situation would need to be further investigated in order to establish the root cause. This needs to be discussed with Rodney before making a decision.

There are potential liquidity problems that could become worse if creditors were to ask for repayment of long-outstanding bills. Denzel needs to meet with trade creditors and also with the bank(s) to ensure that the former do not ask for their money back suddenly and that the latter continue(s) to support the company.

HL: apply Resources table 2 mark band descriptors.

A justified conclusion is required.