

18.1		Amero plc	Britz plc
	• gross profit margin	11.85%	37.46%
	• gross profit mark-up	13.44%	59.90%
	• overheads in relation to revenue	8.98%	22.91%
	• net profit margin (profit in relation to revenue)	2.87%	14.55%
	• return on capital employed	18.18%	13.70%

18.2 (a)		Cawston plc	Dunley plc
	• net current asset ratio	1.51:1	1.04:1
	• liquid capital ratio	0.82:1	0.65:1
	• trade receivable days	37 days	3 days
	• trade payable days	57 days	46 days
	• rate of inventory turnover	41 days	18 days
	• gearing ratio	0.54:1	0.16:1

(b) Cawston plc is the chemical manufacturer, while Dunley plc runs department stores.

All of the ratios for Cawston are close to the benchmarks for a manufacturing business: eg net current asset and liquid capital ratios, although a little low, are near the 'accepted' figures of 2:1 and 1:1, respectively. The rate of inventory turnover shows quite a high level of inventory being held; trade receivable days indicate that most sales are on credit; trade payable days are rather high. The gearing ratio is acceptable – medium geared.

For Dunley plc, the ratios indicate a business that sells most of its goods on cash terms: low net current asset and liquid capital ratios, with minimal trade receivable days. The rate of inventory turnover is speedy, whilst trade payables are paid after 46 days (approximately one-and-a-half months). The gearing ratio is low, indicating that there is scope for future borrowing should it be required.

18.5 (a) *Net current assets*

Current assets – Current liabilities

Net current assets, or working capital, are needed by all businesses in order to finance day-to-day trading activities. Sufficient net current assets enable a business to hold adequate inventories, allow a measure of credit to its customers (trade receivables), and to pay its suppliers (trade payables) as payments fall due.

*Liquid capital*

(Current assets – inventories) – Current liabilities

Liquid capital is calculated in the same way as net current assets, except that inventories are omitted. This is because inventory is the most illiquid current asset. Liquid capital provides a direct comparison between the short-term assets of trade receivables and cash and short-term liabilities.

(b) • Net current asset ratio = Current assets : Current liabilities

• Liquid capital ratio =  $\frac{\text{Current assets} - \text{inventories}}{\text{Current liabilities}}$

• Trade receivable days =  $\frac{\text{Trade receivables}}{\text{Revenue}} \times 365 \text{ days}$

• Trade payable days =  $\frac{\text{Trade payables}}{\text{Purchases}} \times 365 \text{ days}$

(c) • Net current asset (current) ratio £13,450\* : £7,865\*\* = 1.71:1

\* (10,250 – 2,450) + 450 + 5,200

\*\* 6,000 + 1,865

• Liquid capital (acid test) ratio =  $\frac{£13,450 - £5,200 \text{ (inventories)}}{£7,865} = 1.05:1$

• Trade receivable days =  $\frac{£7,800^*}{£96,000} \times 365 \text{ days} = 29.66 \text{ days}$

\* 10,250 – 2,450 (bad debt written off)

• Trade payable days =  $\frac{£6,000}{£56,000} \times 365 \text{ days} = 39.11 \text{ days}$

(d) *Writing off the debt for £2,450*

- Writing off the debt as bad has reduced trade receivables to £7,800, and current assets from £15,900 to £13,450.
- The effect of this is that the net current assets ratio has been reduced from 2.02:1 to 1.71:1.
- The effect on the liquid capital ratio has been a reduction from 1.36:1 to 1.05:1.
- By writing off the bad debt, liquidity ratios have reduced quite significantly.

*Reducing the value of inventories over the year*

- Inventories have reduced from £8,400 to £5,200.
- Had the higher level of inventories been maintained, the net current asset ratio at the year's end would have been £16,650:£7,865 = 2.12:1.  
\* (10,250 – 2,450) + 450 + 8,400
- The liquid capital ratio would be unchanged – because inventories are excluded.
- A change in the level of inventories affects the net current asset ratio but has no effect on the liquid capital ratio.

18.8 (a) *Formula*

Net current asset (current) ratio = Current assets : Current liabilities

*Ratio calculations*

2004 £420,000 : £140,000 = 3 : 1

2005 £360,000 : £180,000 = 2 : 1

(b) *Formula* (Note: the question asks for *one* relevant ratio)

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Revenue}} \times \frac{100}{1}$$

$$\text{Net profit margin (profit in relation to revenue)} = \frac{\text{Net profit}}{\text{Revenue}} \times \frac{100}{1}$$

*Ratio calculations*

2004

$$\text{Gross profit margin} = \frac{\pounds 160,000}{\pounds 320,000} \times \frac{100}{1} = 50\%$$

$$\text{Net profit margin (profit in relation to revenue)} = \frac{\pounds 20,000}{\pounds 320,000} \times \frac{100}{1} = 6.25\%$$

2005

$$\text{Gross profit margin} = \frac{\pounds 120,000}{\pounds 280,000} \times \frac{100}{1} = 42.86\%$$

$$\text{Net profit margin (profit in relation to revenue)} = \frac{\pounds 30,000}{\pounds 280,000} \times \frac{100}{1} = 10.71\%$$

(c)

### REPORT

**To:** Susie

**From:** Student Accountant

**Date:** Today

**Subject:** Explanation of the significance of the ratios calculated

Net current asset (current) ratio has deteriorated between 2004 and 2005. In 2004 there were £3 of current assets to each £1 of current liabilities; in 2005 the figure has fallen to £2 of current assets to each £1 of current liabilities. Whilst a 2:1 ratio is still satisfactory, if the downward trend continues, there will be liquidity problems in the future.

Gross profit margin has fallen from 50% in 2004 to 42.86% in 2005. This fall has been caused by either lower selling prices or higher buying prices from suppliers. The percentage is still high but the fall needs to be investigated.

Net profit margin has improved from 6.25% in 2004 to 10.71% in 2005 – this is a good sign. The most likely reason is that the overheads have fallen – from 43.75% of sales in 2004 to 32.14% in 2005.

18.9 (a)

*Formula*

$$\text{Rate of inventory turnover} = \frac{\text{Average inventories}}{\text{Cost of sales}} \times 365 \text{ days or } \frac{\text{Cost of sales}}{\text{Average inventories}}$$

*Ratio calculations*

20-3

$$\frac{\pounds 45,000^*}{\pounds 240,000} \times 365 \text{ days} = 68.44 \text{ days or } \frac{\pounds 240,000}{\pounds 45,000} = 5.33 \text{ times per year}$$

$$^* (\pounds 40,000 + \pounds 50,000) \div 2$$

20-4

$$\frac{\pounds 55,000^*}{\pounds 330,000} \times 365 \text{ days} = 60.83 \text{ days or } \frac{\pounds 330,000}{\pounds 55,000} = 6 \text{ times per year}$$

$$^* (\pounds 50,000 + \pounds 60,000) \div 2$$

(b) *Formula*

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Revenue}} \times \frac{100}{1}$$

*Ratio calculations*

20-3

$$\frac{\pounds 60,000}{\pounds 300,000} \times \frac{100}{1} = 20\%$$

20-4

$$\frac{\pounds 70,000}{\pounds 400,000} \times \frac{100}{1} = 17.5\%$$

(c) Gross profit margin has fallen from 20% in 20-3 to 17.5% in 20-4. Despite this fall, gross profit has increased from £60,000 in 20-3 to £70,000 in 20-4. The explanation for this apparent contradiction is that revenue has increased from £300,000 to £400,000 – an increase of a third – perhaps as a result of reducing the selling prices. As gross profit margin has fallen, so cost of sales as a percentage of revenue has increased from 80% to 82.5%.

Rate of inventories turnover has improved – from 68.44 days in 20-3 to 60.83 days in 20-4. This indicates that, despite an increase of £10,000 in average inventories, inventory is moving more quickly – a good sign, which links in with the increase of one-third in revenue.

Overall, the business is increasing its revenue and gross profit – at the same time inventory turnover is improving.