# CHAPTER 5
# TECHNIQUES FOR THE INTERPRETATION OF FINANCIAL STATEMENTS

## Quick test

## Question 1 – Snappy Ltd

(a) **Horizontal analysis**

**Statements of profit or loss for the years ended 31 December**

| | 20X7 | 20X6 | % change |
|---|---|---|---|
| | £000 | £000 | |
| Revenue | 3,900 | 4,300 | -9.3% |
| Cost of sales | (2,652) | (2,795) | -5.1% |
| Gross profit | 1,248 | 1,505 | -17.1% |
| Distribution costs | (302) | (430) | -29.8% |
| Administrative expenses | (91) | (210) | -56.7% |
| Profit from operations | 855 | 865 | -1.2% |
| Finance cost | (4) | (15) | -73.3% |
| Profit before tax | 851 | 850 | 0.0% |
| Tax | (290) | (285) | +1.2% |
| Profit for the year | 561 | 565 | -0.7% |

**Statements of financial position at 31 December**

| | 20X7 | 20X6 | % change |
|---|---|---|---|
| | £000 | £000 | |
| ASSETS | | | |
| Non-current assets | 770 | 810 | -4.9% |
| Current assets | | | |
| Inventories | 470 | 340 | +38.2% |
| Trade and other receivables | 470 | 360 | +30.6% |
| Cash and cash equivalents | 20 | 40 | -50.0% |
| | 960 | 740 | +29.7% |
| Total assets | 1,730 | 1,550 | +11.6% |
| | | | |
| EQUITY AND LIABILITIES | | | |
| Equity | | | |
| Equity share capital | 350 | 350 | 0.0% |
| Retained earnings | 790 | 325 | +143.1% |
| Total equity | 1,140 | 675 | +168.9% |
| Non-current liabilities | | | |
| Borrowings | 50 | 150 | -66.7% |

| | | | |
|---|---|---|---|
| Current liabilities | | | |
| Trade and other payables | 270 | 455 | -40.1% |
| Taxation | 240 | 270 | -11.1% |
| Borrowings | 30 | – | - |
| | 540 | 725 | -25.5% |
| Total equity and liabilities | 1,730 | 1,550 | +11.6% |

**Vertical analysis**

**Statements of profit or loss for the years ended 31 December**

| | **20X7** | **20X6** |
|---|---|---|
| Revenue | 100.0% | 100.0% |
| Cost of sales | ( 68.0%) | ( 65.0%) |
| Gross profit | 32.0% | 35.0% |
| Distribution costs | ( 7.7%) | (10.0%) |
| Administrative expenses | ( 2.3%) | ( 4.9%) |
| Profit from operations | 21.9% | 20.1% |
| Finance cost | (0.1%) | (0.3%) |
| Profit before tax | 21.8% | 19.8% |
| Tax | ( 7.4%) | ( 6.6%) |
| Profit for the year | 14.4% | 13.1% |

**Statements of financial position at 31 December**

| | **20X7** | **20X6** |
|---|---|---|
| ASSETS | | |
| Non-current assets | 44.5% | 52.3% |
| Current assets | | |
| Inventories | 27.2% | 21.9% |
| Trade and other receivables | 27.2% | 23.2% |
| Cash and cash equivalents | 1.2% | 2.6% |
| | 55.5% | 47.7% |
| Total assets | 100.0% | 100.0% |
| | | |
| EQUITY AND LIABILITIES | | |
| Equity | | |
| Equity share capital | 20.2% | 22.6% |
| Retained earnings | 45.7% | 21.0% |
| Total equity | 65.9% | 43.5% |
| Non-current liabilities | | |
| Borrowings | 2.9% | 9.7% |
| Current liabilities | | |

| | | |
|---|---|---|
| Trade and other payables | 15.6% | 29.4% |
| Taxation | 13.9% | 17.4% |
| Borrowings | 1.7% | – |
| | 31.2% | 46.8% |
| Total equity and liabilities | 100.0% | 100.0% |

(b) The horizontal analysis reveals that although the company's revenue has reduced by nearly 10% in 20X7, it has managed to maintain very similar operating profit and profit after tax. This was mainly from a large reduction in operating overheads – the company has clearly controlled these in 20X7 or possibly deferred some expenses to future years. The same cannot be said of costs of sales, which have not decreased to the same extent as revenue, thus leading to a 17.1% reduction in gross profit. This is supported by the vertical analysis which shows the gross profit as a percentage of revenue (i.e. the GP%) falling from 35% to 32%. Finance costs and the change in the tax charge are immaterial.

Despite the decrease in sales, the company's total assets have increased by a little over 10%. This is from large increases in inventories and trade receivables – possibly the company produced inventories for sales which subsequently did not materialise. However the receivables increase is out of line with the revenue decrease, and indicates the company has not been collecting the cash from its customers as efficiently. There has been a small reduction in non-current assets indicating little or no investment here, with the reduction in carrying amount probably being mainly from depreciation.

The financing of the increase in current assets has been from an increase in the reserves – retained earnings only, as liability balances have all reduced, including the company paying off most of its borrowings. The reduction in liabilities and the increase in inventories and receivables have also resulted in a reduction in cash and cash equivalents balances in 20X7.

The vertical analysis supports much of the above interpretation with the reduction in overhead expenses as a percentage of revenues being clear. Also apparent from this analysis is the proportionate increase of current assets to total assets, and the balance of financing shifting from liabilities to equity in 20X7.

Questions requiring answers would include:

- Why has gross profit fallen disproportionately compared to revenue – details of the costs of production and selling prices are needed?
- How has the company achieved its large reductions in overhead expenses?
- Why have inventories increased at the end of 20X7?
- Why has the company not been collecting cash from its customers as quickly in 20X7?
- Why have the company's trade payables reduced so much at the end of 20X7?
- What is the company's future capital investment programme?
- Does the company have sufficient cash and cash equivalents to meet immediate requirements?

- Does the company have an overdraft facility in place if needed?

**Question 2 – Squirt Ltd**

(a)

| | | | | 20X9 | | 20X8 |
|---|---|---|---|---|---|---|
| | **Profitability** | | | | | |
| (i) | ROCE | PBIT / Equity + LT loans | 300 / (1,653+300) | 15.4% | 150 / (1,592+75) | 9.0% |
| (ii) | Asset turnover | Revenue / Equity + LT loans | 1,200 / (1,653+300) | 0.61 | 900 / (1,592+75) | 0.54 |
| (iii) | NP margin | PBIT / Revenue | 300 / 1,200 | 25% | 150 / 900 | 16.7% |
| (iv) | GP % | GP / Revenue | 600 / 1,200 | 50% | 375 / 900 | 41.7% |
| | **Liquidity** | | | | | |
| (v) | Current | CA / CL | 396 / 243 | 1.6 | 444 / 97 | 4.6 |
| (vi) | Liquid | CA - Inventory / CL | (396 – 300) / 243 | 0.40 | (444 – 360) / 97 | 0.87 |
| | **Efficiency** | | | | | |
| (vii) | Inventory turnover | Inv x 365 / COS | (300 x 365) / 600 | 183 days | (360 x 365) / 525 | 250 days |
| (viii) | Receivables collection | Rec x 365 / Revenue | (96 x 365) / 1,200 | 29 days | (66 x 365) / 900 | 27 days |
| (ix) | Payables payment | Pay x 365 / COS | (180 x 365) / 600 | 110 days | (97 x 365) / 525 | 67 days |

(b) Comments should include:

- Profitability has improved – every profitability ratio has significantly increased
  - The return to capital providers (shareholders and lenders) given by ROCE has increased
  - This has been brought about by increased margins and increased efficiency in the use of capital

  - The asset turnover ratio indicates more revenues are being raised proportionately from the capital invested in the company
  - The net profit margin has increased – the company is earning more profit for every sale is makes
  - This appears to be as a direct result of the increase in gross profit – reasons for the large increase here need to be suggested, e.g. increase in selling prices, new customers, reduced purchasing prices from new suppliers, change in products to higher margin, lower additional purchase costs such as delivery, favourable exchange rates, etc.
  - The difference between the NP margin and GP% in each year is the same, indicating that overhead expenses as a proportion of revenues have remained the same

- Liquidity has reduced dramatically, although the 20X9 current ratio is at a better level than the very high 20X8 ratio (companies do not need too much cash tied up in current assets)
  - The company cannot cover its current liabilities from its liquid assets in 20X9 (but the interpretation of this depends on the nature of the business – e.g. for a retailer this may not be an issue)
  - The company has a large overdraft in 20X9
  - The inventory holding period has reduced – this will improve liquidity and also reduces the costs of holding inventory
  - In 20X9 the company is collecting cash from its credit customers in the same time as in 20X8 and within one month, which is good business practice – this is not the cause of the fall in liquidity
  - The liquidity position has possibly been brought about by expansion – note non-current assets have increased substantially and this has not been fully matched by the increase in the loan funding
  - A statement of cash flows would be useful to examine the fall in liquidity further
  - The lack of cash has possibly resulted in the company delaying payment to its suppliers as the payables payment period has increased substantially – this is nearly at 4 months in 20X9

## Develop your understanding

## Question 3 – Smokey plc

The report should focus on the *liquidity ratios* and include:

- an explanation of ratios' meanings
- grouping ratios dealing with same issues and the relationships between them should be brought out
- possible explanations for movements from one year to the next
- details of further information that would help the explanations and assist the bank in reaching a conclusion

Points to bring out:

- Both liquidity ratios (current and liquid ratios) have increased, and the company is able to meet its current liability commitments from its current assets in 20X5, although the liquid ratio is still less than one. For an engineering company, which will have higher inventory and receivables levels, this liquid ratio may be of concern.
- The receivables collection time has decreased in 20X5 meaning that the company is collecting cash from its customers faster. Suppliers are being paid less quickly in 20X5. Together these mean the company should be improving its cash position.
- In addition inventory is taking less time to turn over (the ratio indicates it is turning over more often) – this will also improve liquidity and result in lower holding costs.
- There is an overall increase in profitability – all 3 profitability ratios have improved – the company is generating proportionately more profits from the capital invested, and generating higher profit margins from its sales after overhead expenses have been met.
- The increase in ROCE is due to an increase in the NP%, as there has actually been a marginal decrease in asset turnover. The company has therefore been less efficient in generating sales revenue from its net assets (or capital), but this has been mitigated by the increase in profit margins.
- The increase in net profit margin is partly due to an increase in GP% (from higher selling prices, lower purchase prices and costs of production, increased sales of higher margin items, or a combination of these). In addition expenses as a percentage of sales has decreased in 20X5 (the difference between GP% and NP%) so the company is demonstrating control over its overheads.

Recommendation – the bank would be encouraged by the improvement in liquidity and profitability, but would want explanations for and improvements in the liquid ratio and asset turnover. Before any recommendation is made the bank would (of course) see the full financial statements, and require at least the following further information:

- whether the company has existing debt commitments – i.e. current gearing
- if so, the ability of the company to meet interest and repayment commitments
- whether the company has a bank overdraft or an overdraft facility
- recent changes in share capital or debt
- a break-down of shareholders' funds into capital and reserves
- existing covenants
- details of overhead expenses

- a break-down of inventories
- credit policies
- cash flow forecasts

**Question 4 – Gold Ltd and Silver Ltd**

(a) Ratio calculations

| | Gold Ltd | | Silver Ltd | |
|---|---|---|---|---|
| ROCE | 12,000 / 150,000 | 8.0% | 6,000 / 50,000 | 12.0% |
| Asset turnover | 240,000 / 150,000 | 1.6 | 120,000 / 50,000 | 2.4 |
| Net profit margin | 12,000 / 240,000 | 5.0% | 6,000 / 120,000 | 5.0% |
| Gross profit margin | 96,000 / 240,000 | 40.0% | 45,000 / 120,000 | 37.5% |
| Current ratio | 135,000 / 45,000 | 3.0 | 60,000 / 30,000 | 2.0 |
| Liquid ratio | 135,000 – 85,500 / 45,000 | 1.1 | 60,000 – 30,000 / 30,000 | 1.0 |
| Inventory turnover | ½ (58,500+85,500) x 365 / 144,000 | 183 days | ½ (20,000+30,000) x 365 / 75,000 | 122 days |
| Receivables collection | 33,000 x 365 / 240,000 | 50 days | 20,000 x 365 / 120,000 | 61 days |
| Payables payment | 45,000 x 365 / 171,000 | 96 days | 30,000 x 365 / 85,000 | 129 days |

(b) Points to bring out in the discussion should include the following:

- The ROCE of Silver is higher than Gold's largely because the asset turnover is higher (indicating a more efficient utilisation of assets to generate revenues)
- Both companies are generating the same level of profits from their sales, as indicated by the same NP%
- Gold's GP% is higher than Silver's meaning its trading profit is better. This could be from higher selling prices, cheaper supplies and other costs of sales, selling proportionately more higher margin goods/services, or a mix of these

- Since both companies have the same NP%, this means that Gold's expenses as a proportion of its sales have to be higher than those of Silver – Silver is exercising better control over its overheads
- The liquid ratios of both companies are similar (and sufficient to cover their current liabilities), but the current ratio of Gold is much higher (it actually looks very high) because a lot of cash is tied up in inventories – this also ties in with Gold's high inventory holding period
- Gold is more efficient at collecting cash from customers
- Gold pays its suppliers quicker than Silver – Silver is taking 4 months, however, which could cause adverse relations with suppliers
- The cash-to-cash cycle of Gold is 137 days (183 + 50 – 96); that of Silver is far better at 54 days indicating Silver's working capital management is more efficient

**Question 5 – Micawber & Sons**

(a)

| | | | 20X6 | 20X5 |
|---|---|---|---|---|
| (i) | ROCE | $\frac{357 - 259}{543 + 280}$ | 11.9% | 17.5% |
| (ii) | Net profit percentage | $\frac{357 - 259}{940}$ | 10.4% | 12.3% |
| (iii) | Gross profit percentage | $\frac{357}{940}$ | 38.0% | 40.0% |
| (iv) | Expenses as a % of sales | $\frac{259}{940}$ | 27.6% | 27.8% |
| (v) | Asset turnover | $\frac{940}{543 + 280}$ | 1.1 | 1.4 |
| (vi) | Current ratio | $\frac{301}{159}$ | 1.9 | 2.4 |
| (vii) | Liquid ratio | $\frac{301 - 240}{159}$ | 0.38 | 1.1 |
| (viii) | Inventory turnover | $\frac{240 \times 365}{583}$ | 150 days | 114 days |
| | OR | $\frac{0.5x(150+240)x365}{583}$ | 122 days | |
| (ix) | Payables payment period | $\frac{159 \times 365}{583}$ | 100 days | 85 days |
| | OR | $\frac{159 \times 365}{583+240-150}$ | 86 days | |

(b) Profitability

Sales have increased by 17.5%, but profit from operations of £98,000 has remained the same as 20X5.

Capital invested in the business has grown, marginally from retained profits, but significantly from a long-term bank loan which has increased from £60,000 to £280,000. It appears this has been used to fund additional non-current assets, which have grown by £420,000 (cost).

The ROCE has therefore decreased substantially (since profit is the same but capital has increased).

The increase in sales does not quite match the increase in capital and net assets; therefore the asset turnover has also fallen. Allied with the fall in net profit margin, this also accounts for the fall in ROCE.

The NP% fall means the profit earned on sales has fallen – this is caused principally by the fall in GP% (the trading margin) since expense as a % of sales has remained similar. Reasons for possible causes of fall in GP% include a reduction in selling prices, an increase in purchase prices, different sales mix, obsolescence / theft of inventory, or a combination of any of these.

Liquidity and working capital management

Both liquidity ratios (current and liquid) have fallen considerably meaning the business is less able to meet its liabilities as they fall due in 20X6. However the current ratio is still comfortably above 1, so there are no immediate worries. Even though the liquid ratio is well below 1, there are no real concerns, since this is a retailer (inventory sells for cash principally). However there is a change in the make-up of current assets.

The fall in liquidity is partly caused by a substantial increase in inventory (has the business acquired new stores?) and an increase in the number of days it takes to sell inventory. Bank and cash balances have fallen as a result. This is partly mitigated by increase in number of days it takes to pay suppliers which has increased (on a like-for-like calculation).

## Take it further

## Question 6 – Deepa & Co.

(a)

| | | 20X1 | | 20X0 | |
|---|---|---|---|---|---|
| (i) | ROCE | 43,410 + 1,875 / 77,760 + 50,000 | 35.4% | 36,710 / 73,350 | 50.0% |
| (ii) | Net profit % | 43,410 + 1,875 / 382,100 | 11.9% | 36,710 / 289,800 | 12.7% |
| (iii) | Gross profit % | 106,950 / 382,100 | 28.0% | 95,630 / 289,800 | 33.0% |
| (iv) | Admin expenses % | 45,235 / 382,100 | 11.8% | 44,240 / 289,800 | 15.3% |
| (v) | Distribution costs % | 16,430 / 382,100 | 4.3% | 14,680 / 289,800 | 5.1% |
| (vi) | Asset turnover | 382,100 / 77,760 + 50,000 | 3.0 | 289,800 / 73,350 | 4.0 |

(b) Key changes from 20X0 to 20X1 which should be identified:

| | |
|---|---|
| Sales | increase of 32% |
| Profit before interest (£45,285 v. £36,710) | increase of 23% |
| Total assets | increase of 54% |
| Non-current assets | increase of 65% - expansion of warehouse, new computer system |
| Inventory | increase of 58% |
| Receivables | have doubled |
| Bank & cash | decrease of 68% |
| New bank loan of £50,000 | |

All the above figures support the fact that this is an expanding and developing business. It expanded its warehousing facilities, presumably taking out the bank loan to help finance this. The business acquired a new contract in 20X1, although it is not clear when this occurred and how much of the increase in sales is accounted for by this. The profit before interest has increased although proportionately not as much as sales, so costs have risen disproportionately. Possibly the new contract with a national customer will yield lower margins.

Analysis of ratios to support and expand above observations:
**ROCE** indicates the return the business has generated from the use of its capital. Despite a large fall in the ratio in 20X1, it is still a healthy return, especially if compared to returns in financial institutions. Both profits and capital increased during the year, but because capital increased proportionately more (74%), from

the new bank loan, this ratio has fallen in 20X1, resulting in a lower return for the owner (the Deepa family).

This is also the reason for the fall in the **asset turnover**, despite the large increase in sales. This ratio shows the value of sales generated per £1 of net assets used in the year, so it can be used to assess the efficiency of the use of assets during the year. The business has invested heavily in assets in 20X1, particularly in new non-current assets – the warehouse expansion, the new computer system – and this increase has not yet been matched by a proportionate increase in sales. This may well result in future years once the new assets are functioning fully.

The **net profit %** has also fallen, although not by a huge amount. This ratio expresses the profit the business has earned on its sales, and so the business is generating a lower margin on its sales in 20X1 compared to 20X0.

The fall in the asset turnover coupled with the fall in the net profit margin will lead to a fall in ROCE, given their relationship:
ROCE = Asset turnover x Net profit %

The reduced net profit margin may be through trading issues or levels of overheads, so the remaining three ratios can be examined to help with this interpretation.

The **gross profit %** measures the profit earned from the trading activities of the business - the buying and selling of goods. In 20X0 for every £100 of sales a profit of £33 was earned. This fell to £28 in 20X1. There are many possible reasons for this for this business, and it may be a combination of these:

- The business reduced its selling prices – possibly linked to the new contract with the national chain, which may exert pressure on its suppliers
- The business's purchase costs increased – is there a change in supplier, have unfavourable exchange rates caused this, have shipping costs or import duties increased?
- The business changed the mix of sales to lower margin goods – perhaps the national chain required fabrics of lower quality
- When the fabrics were moved to the new warehouse they got damaged and had to be written off or sold at lower prices
- There has been theft of goods

A lower gross profit % will result in a lower net profit % depending on the change in overhead expenses, since NP% = GP% - Expenses %.

Both **admin expenses and distribution costs expressed as a % of sales** have fallen in 20X1. Although both types of costs increased in the year, they did not increase proportionately as much as sales. This may be quite usual, since many overhead costs are fixed in nature, and with a growing business economies of scale can take effect. In addition the business automated some of its processes in 20X1, which may have reduced costs such as salaries. Given that depreciation expenses must have risen in 20X1, there may have been considerable savings in other areas.

However, despite these savings in cost levels, they did not counter the fall in gross profit % sufficiently, and so led to the business showing the fall in net profit %.

(c) The following list will provide a further break-down of the profits of the business over the two years:

- How much of the increase in sales is from the new contract with the national chain
- The pricing structure of this new contract
- Whether there have been changes in suppliers or suppliers' prices
- Sales mix over the two years
- Changes in exchange rates over the two years
- A break-down of overhead costs
- A break-down of non-current assets and depreciation charges
- Costs relating to the automation of systems and which costs have changed as a result of this

**Question 7 – Ash plc**

(a)

| | | 20X5 | 20X4 | 20X3 |
|---|---|---|---|---|
| (i) | ***Return on equity*** | | | |
| | Profit after tax and preference dividends / Equity shareholders' funds | (4,230 – 60) / (15,110 – 1,000) = 29.6% | (2,180 – 60) / (9,090 – 1,000) = 26.2% | (2,880 – 60) / (9,470 – 1,000) = 33.3% |
| (ii) | ***Earnings per share*** | | | |
| | Profit after tax and preference dividends / No. of equity shares | (4,230 – 60) / (6,000 x 5) = 13.9p | (2,180 – 60) / (5,000 x 5) = 8.5p | (2,880 – 60) / 25,000 = 11.3p |
| (iii) | ***Price earnings*** | | | |
| | Market price per share / EPS | 72 / 13.9 = 5.2 | 58 / 8.5 = 6.8 | 60 / 11.3 = 5.3 |
| (iv) | ***Dividend per share*** | | | |
| | Equity dividends / No. of equity shares | (3,510 – 60) / 30,000 = 11.5p | (2,560 – 60) / 25,000 = 10.0p | (2,310 – 60) / 25,000 = 9.0p |
| (v) | ***Dividend cover*** | | | |
| | Profit after tax and preference dividends / Equity dividends | (4,230 – 60) / (3,510 – 60) = 1.21 | (2,180 – 60) / (2,560 – 60) = 0.85 | (2,880 – 60) / (2,310 – 60) = 1.25 |
| (vi) | ***Dividend yield*** | | | |
| | Dividend per share / Market price per share | 11.5 / 72 = 16.0% | 10 / 58 = 17.2% | 9.0 / 60 = 15.0% |

(vii) ***Gearing***

| | | | |
|---|---|---|---|
| Debt | 5,000 | 5,000 | 3,000 |
| Equity | 15,110 | 9,090 | 9,470 |
| | = 33.1% | = 55.0% | = 31.7% |

(b) Before commenting on the ratios it should be noted that Ash plc's profit before tax fell by 19% from 20X3 to 20X4 and then almost doubled from 20X4 to 20X5. It is also noted that the company issued the additional debentures on 1 September 20X3 (change from £3 million to £5 million in 20X4), and the new equity shares on 1 April 20X4 (change in share capital from £5 million to £6 million in 20X5, and in share premium from £1.2 million to £5.5 million in 20X5).

The **return on equity**, which measures the profits available to the equity shareholders as a proportion of the equity invested in the company, has been at approximately 30% over the 3 years, which is a healthy return when measured against current returns from other investments. It dipped in 20X4, and has not quite returned to 20X3 levels in 20X5. This is despite profits almost doubling in 20X5; however the equity increased substantially with the issue of shares occurring in this year at a high premium, which would have had the effect of reducing the ratio. It would be useful to know what the purpose of the share issue was – whether it was for investment in PPE or for the acquisition of other businesses or other reasons. What is the company's strategy for growth?

**Earnings per share**, which measures the profits available for the ordinary shareholder on a per share basis, is now at a higher level than 20X3, as the profit increase was proportionately more than the increase in the number of shares. The **PE ratio** in 20X5 is similar to 20X3, although it increased substantially in 20X4 as EPS fell in this year. The market price in 20X4 did not fall significantly from the 20X3 price despite the fall in profits and other ratios in this year indicating confidence in the performance of the company – the markets may have anticipated the increased profits in 20X5.

The company has increased its **dividend per share** year-on-year, which is good news for equity investors, and this despite the fall in profits in 20X4 and the increase in equity shares in 20X5. The company does pay out a very high proportion of its profits as dividends, as indicated by the low dividend cover. This may not be the ideal investment for those looking for a company which sources its capital growth internally from retained profits. Ash plc has increased its capital principally from external sources through the issue of further debt and shares.

Although dividends have increased each year, the real return from these, as measured against share price by the **dividend yield**, has fluctuated since the share price has varied differently. However at 15%-17%, this is an encouraging level of return.

With the issue of additional debentures in 20X4, the **gearing** of the company increased, but it is back at 20X3 levels in 20X5 after the issue of new equity share

capital. The company is not highly geared, with debt at one third of equity. This is therefore not a particularly risky investment for shareholders. Provided the company has sufficient cash to make the payments, the debenture interest is comfortably covered by profits.

*Conclusion*
Overall the company's financial performance from the equity investor's perspective appears very healthy, and investment appears to be relatively risk-free. Ash's performance dipped in 20X4, but 20X5 results have returned to the 20X3 levels. The company has increased its dividend per share year-on-year, and the markets appear to have confidence in Ash plc as indicated by the level of the share price and PE ratio. The ratios for additional years would be useful in order to review longer trends. However an investment in Ash would appear to yield high returns rather than internally-generated capital growth, and is recommended for those seeking this.

## Question 8 – Mono plc

***Changes in key financial figures***

| | |
|---|---|
| Revenue | +5.3% |
| Gross profit | +3.6% |
| Operating profit | -35.1% |
| PAT | -42.0% |
| Non-current assets | +4.7% |
| Total assets | +4.8% |
| Equity | +1.6% |
| Debt | -20% |

| ***Ratios*** | **20X7** | **20X6** |
|---|---|---|
| ***Investor ratios*** | | |
| **Return on equity** | | |
| PAT / Equity | $\frac{315}{7,329}$ = 4.3% | $\frac{543}{7,214}$ = 7.5% |
| **EPS** | $\frac{315}{2,000}$ = 15.8p | $\frac{543}{2,000}$ = 27.2p |
| PAT / No. of shares | | |
| **PE** | $\frac{315}{15.8}$ = 19.9 | $\frac{420}{27.2}$ = 15.4 |
| Share price / EPS | | |
| **Dividend per share** | $\frac{200}{2,000}$ = 10p | $\frac{200}{2,000}$ = 10p |
| Total dividend / No. of shares | | |
| **Dividend cover** | $\frac{315}{200}$ = 1.58 | $\frac{543}{200}$ = 2.72 |
| PAT / Dividends | | |
| **Dividend yield** | $\frac{10}{315}$ = 3.17% | $\frac{10}{420}$ = 2.38% |
| Dividend per share / Share price | | |

| | | |
|---|---|---|
| **Total shareholder returns**<br>($P_1 - P_0$ + dividend per share) / $P_0$ | $\frac{315 - 420 + 10}{420} = -22.6\%$ | |
| **Financial leverage** | | |
| Capital employed / Equity | $\frac{7,329 + 2,000}{7,329} = 1.27$ | $\frac{7,214 + 2,500}{7,214} = 1.35$ |
| **Gearing**<br>Debt / Equity | $\frac{2,000}{7,329} = 27.3\%$ | $\frac{2,500}{7,214} = 34.7\%$ |
| **Interest cover**<br>PBIT / Interest | $\frac{614}{180} = 3.4$ | $\frac{946}{225} = 4.2$ |
| ***Profitability ratios*** | | |
| **Return on capital employed**<br>PBIT / Capital employed | $\frac{614}{7,329 + 2,000} = 6.6\%$ | $\frac{946}{7,214 + 2,500} = 9.7\%$ |
| **Net profit margin**<br>PBIT / Revenue | $\frac{614}{11,450} = 5.4\%$ | $\frac{946}{10,874} = 8.7\%$ |
| **Asset turnover**<br>Revenue / Capital employed | $\frac{11,450}{7,329 + 2,000} = 1.23$ | $\frac{10,874}{7,214 + 2,500} = 1.12$ |
| **Gross profit %**<br>Gross profit / Revenue | $\frac{4,686}{11,450} = 40.9\%$ | $\frac{4,523}{10,874} = 41.6\%$ |
| ***Liquidity ratios*** | | |
| **Current ratio**<br>Current assets / Current liabilities | $\frac{5,348}{2,501} = 2.14$ | $\frac{5,100}{1,578} = 3.23$ |
| **Liquid ratio**<br>(Current assets – inventories) / Current liabilities | $\frac{5,348 - 1,435}{2,501} = 1.56$ | $\frac{5,100 - 2,625}{1,578} = 1.57$ |
| ***Working capital management ratios*** | | |
| **Inventory turnover**<br>(Inventories x 365) / Cost of sales | $\frac{1,435}{6,764} \times 365 = 77.4$ | $\frac{2,625}{6,351} \times 365 = 150.9$ |
| **Receivables collection period**<br>(Receivables x 365) / Revenue | $\frac{3,900}{11,450} \times 365 = 124.3$ | $\frac{2,277}{10,874} \times 365 = 76.4$ |

**Comments on the performance of Mono**

A key point to note from the horizontal review is that the company's revenue has grown by approximately 5%, which is similar to the growth in gross profit and in line with the changes in assets. However the operating profit has fallen by 35%, indicating that there has been a disproportionate increase in administrative expenses. The operating

expenses given only amount to 29% of the total administrative expenses, and none of these particularly explain this large increase, so a further break down of these expenses is required to understand what has caused the increase.

Although the overall increase in current assets does not look unusual, this masks large changes in inventories and receivables balances (which are examined in more detail below). The company has reduced its long-term debt – its debentures – and is therefore lower geared (also examined in more detail below).

***Interpretation of ratios***

*Investor ratios*

The investor ratios give a mixed picture. The fall in the return on equity is as a result in the reduction in the company's profitability, and since the equity share capital has not changed, the EPS has decreased considerably. Despite a corresponding fall in share price, the PE ratio has actually increased as this fall is proportionately lower than the EPS reduction. This indicates the markets may be anticipating better profitability in the future, or they have confidence in a company which has a good performance history – additional years' data would be useful to assess this. What may also affect this is the company maintaining the same level of dividend of 10p per share, despite the reduction in profits, and this has resulted in a lower dividend cover. The company has paid a fairly high proportion of its 20X7 profits in dividend.

However the "real" return measured at current prices by the dividend yield has increased since the dividend has remained the same, but the share price has fallen. But the overall shareholder return has fallen as the capital reduction (share price fall) has outweighed the dividend payment.

*Gearing*

As observed above the company has repaid some of its debentures, and thus with an additional small increase in equity, the gearing (and financial leverage) of the company has reduced. The company was not very highly geared in 20X6, but this means there is even less risk for the equity investor in the company in 20X7 that the company's profits will be used to service the debentures. Although interest cover has fallen, this is as a result of lower operating profits as the interest has also decreased. The company can comfortably meet the interest payments out of these profits.

*Profitability*

All profitability ratios have fallen as a result of the fall in operating profit. The ROCE has fallen as the overall reduction in capital (from the repayment of part of the debentures) has not outweighed the fall in operating profit. Although the company marginally increased its asset turnover as revenues increased and net assets reduced, this was insufficient to outweigh the reduction in operating profit margin. This is partly from a reduction in gross profit margin – the company may have reduced selling prices or been unable to pass on increases in costs of sale to its customers – but, as commented on above, it is the large increase in administrative expenses which has caused this, and this needs to be investigated.

*Liquidity and working capital management*

Although there has been a reduction in cash balances and the current ratio, the company does not have immediate liquidity issues and is well able to meet its current liabilities from its liquid current assets. However the nature of Mono's business is required in order to fully evaluate this. The mix of current assets has changed considerably though, and these reveal that the company sold its goods faster in 20X7, yet took a lot longer to collect the cash from its customers. This may well be the reason for the fall in cash balances, and is something management should keep on top of – 124 days (i.e. 4 months) for receivables collection period appears excessively long. If the company needed immediate cash, perhaps to pay debenture interest, it would possibly have to negotiate an overdraft.

*Conclusion*
The full reasons for the fall in profitability (the increase in administrative expenses) need to be investigated. If these are one-off and the company shows a return to the profitability levels of 20X6, then Mono appears a sound investment prospect for an equity shareholder, particularly with falling gearing and a share price which, although lower, has proportionately held up. The company also needs to improve collection of its receivables balances, so that liquidity does not become an issue in the future.

**Question 9 – Jewelax Ltd**

| **Cash flow ratios** | **20X2** | **20X1** |
|---|---|---|
| Cash return on capital employed<br>Cash return x100<br>Capital employed | 869<br>7,152 + 1,500 - 3,742<br>= 869 / 4,910 = 17.7% | 882 + 55<br>4,872 + 1,000 - 910<br>= 937 / 4,962 = 18.9% |
| Cash from operations x 100<br>Profit from operations | 869<br>2,293 + 165<br>= 35.4% | 882<br>162 + 102 - 55<br>= 422% |
| Cash interest cover<br>Cash return<br>Interest paid | 869<br>165<br>= 5.3 times | 882 + 55<br>102<br>= 9.2 times |

**Comments**

- The slight fall in the cash return on capital employed from 18.9% to 17.7% shows that the company's efficiency is falling. This is confirmed by a more dramatic fall in the net asset turnover from 0.63 (3,102/(4,872 + 1,000 – 910)) to 0.45 (2,201/(7,152 + 1,500 – 3,742)).
- Although on the face of it the company has made a much higher profit before tax in 20X2 (£2,293,000) compared to 20X1 (£162,000), this 20X2 profit before tax includes a one-off £1,502,000 profit on disposal of PPE.

- This is further illustrated by the decline in the ratio of cash from operations to profit from operations which has fallen from 422% to 35.4%. The quality of Jewelax Ltd's profits is clearly falling.
- Cash interest cover has fallen from 9.2 to 5.3. This is partly because the cash return has fallen slightly (from £937,000 to £869,000) but mainly because of the increase in interest paid from £102,000 in 20X1 to £165,000 in 20X2.
- Interest paid has increased by 62% over the year, yet borrowings have increased by only 50%. It may be that the company is now having to pay higher interest rates to compensate lenders for increased risk, perhaps due to shorter-term or unsecured borrowings.
- The disposal of stores, which has led to a profit of £1,502,000 (presumably because of low carrying amounts and properties held for some years) may indicate the presence of a well thought out restructuring plan which could save the company. However, this seems unlikely as the company's interpretation of fashion trends is likely to be equally well or badly received whatever the location of its stores.
- The sale of the stores therefore looks to be a short-term measure to boost the company's cash resources. Whether this will help the company in 20X3 and beyond depends on how the proceeds of sale are utilised. If the proceeds are used to acquire a more successful chain of stores or more up-to-date expertise, the company's real profitability could improve.

- Other factors indicate similar short-termism.
    - Long-term investments have been sold, boosting cash in 20X2 by £32,000 but at the expense of dividends received of £55,000. This sale also made a loss of £101,000, indicating that the original investments were bought when stock markets were higher.
    - The statement of cash flows shows that trade and other payables have risen very substantially during 20X2 (and by a lesser amount in 20X1). This indicates either an inability to pay suppliers (the cash injection from the sale of stores was close to the year end and opening cash only £122,000) or an unwillingness to do so. Pressing suppliers for extended credit terms could lead to a loss of goodwill and ultimately a refusal to supply.
- No dividends were paid in 20X2, indicating that the company's cash resources were low.
- Inventories have increased significantly over the year. This may indicate the holding of obsolete inventories which should be written down.
- Overall, the company appears to be struggling to survive long term, despite the substantial cash balances, and investors should be looking for a change in leadership of the design department to take the company forward with a smaller number of stores.

**Pressure to improve the figures**

There are several short-term devices which improve short-term performance and/or position, many of which could have been used at Jewelax Ltd.

- A company could 'window-dress' its cash position by taking out borrowings just before the year end, which it then repays early in the next accounting period.

- The sale of assets (as here, with the disposal of stores) just before the year end will improve the cash position in the short term but the impact of selling any profit-generating assets will not have a detrimental effect on profits until the following year.
- Borrowings taken out close to the year end will not impact on interest payable and profit until the following period.
- In areas where management have to make judgments, for example the level of inventory, the recoverability of receivables or the level of impairments in respect of tangible or intangible assets, it is always possible for an unscrupulous manager to justify lower write-offs than are really needed.
- The timing of payments to suppliers can improve the trade payables payment period.
- Sales may be made in the last few weeks of the year, but no provision made for returns (a provision which should be made in Jewelax Ltd if it allows customers to return for refunds, as many fashion stores do).