12 Monitoring the business: Analysing accounts

Learning objectives

In this chapter you will learn about:

1. The usefulness of accounting information to stakeholders
2. Calculating financial ratios and interpreting them

Financial information

The **trading, profit and loss account** calculates the profit or loss made by the business in the trading period. The **balance sheet** shows the financial position of the business at the end of the trading period. These financial statements can be analysed by users to learn about the firm's past performance and present financial position.

Users of financial information (stakeholders)

- **Employees** use the accounts to assess if the firm can afford to increase their pay. They can also judge if their jobs are secure.
- **Lenders (banks)** can judge if the firm can pay back their loans and also the interest on the loans.
- **Shareholders (owners)** can assess if they will get a good return on their investment.
- **Managers** can evaluate their own work performance by the amount of profits earned. Information will also help them in making decisions for the future.
- **Suppliers** can assess the ability of the firm to pay for goods and services supplied on credit.
- **Government agencies** can calculate the amount of tax the firm should pay to them. The financial accounts can also help them make decisions about giving grants to the firm.
- **New investors** can decide whether they should invest/buy shares in the company based on past performance.

Trading, profit and loss account

The trading, profit and loss account shows how much income the business earned during the last trading period (year), i.e. the performance of the business. Figures will usually be shown for the last two trading periods to allow comparisons to be made.

The **trading account** shows the profit earned from buying and selling goods, called **gross profit**. The **profit and loss account** shows the **expenses** of the firm and calculates the **net profit**.

Balance sheet

The balance sheet shows the financial position of the firm at the end of a trading period. It shows all that the business owns **(the assets)** and all that the business owes **(the liabilities)**.

Assets are shown in two groups:

- **Fixed assets:** Items owned and retained for a number of years, e.g. buildings, machinery, vehicles.
- **Current assets:** Items held for less than one year, whose value fluctuates day to day, e.g. stock, debtors, bank.

Liabilities are shown in two groups:

- **Current liabilities:** These are amounts that are owed and must be paid within one year, e.g. creditors, bank overdraft, expenses or taxes due.
- **Long-term liabilities:** These are amounts that are owed but which can be repaid over a longer time period (years).

Example of long-term liabilities:

- **Long-term loans** from banks, which must be repaid.
- **Capital/share capital:** This is money invested in the firm by the owners/shareholders and is owed back to the owners in the long term.
- **Retained profits/reserves/earnings:** This is the profit earned by the firm and kept in the business. These profits belong to the owners and so are owed to them.

Point to note

- **Working capital** = Current assets – Current liabilities
- **Capital employed** = Loans + Capital + Reserves of profit.

Top Tip!

You should be able to discuss the importance of the **profit and loss account** and the **balance sheet** to different users of the accounts (stakeholders).

Analysing financial statements: Ratio analysis

A ratio is produced when we compare one figure with another to measure the relationship between them.

Summary of ratios to be learned

Profitability ratios

Gross profit margin: $\frac{\text{gross profit}}{\text{sales}} \times \frac{100}{1} = \%$

Net profit margin: $\frac{\text{net profit}}{\text{sales}} \times \frac{100}{1} = \%$

Return on investment: $\frac{\text{net profit}}{\text{capital employed}} \times \frac{100}{1} = \%$

Liquidity ratios

Current ratio: $\frac{\text{current assets}}{\text{current liabilities}}$

Acid test ratio: $\frac{\text{current assets}}{\text{current liabilities}} - \text{closing stock}$

Debt/equity ratio: $\frac{\text{debt capital}}{\text{equity capital}} \times \frac{100}{1} = \%$

Points to note

- Current ratio = working capital ratio
- Acid ratio = liquid ratio = quick ratio

Top Tip!

For formulae, you need to be able to calculate from any given figures for two years. Ensure you can comment on the answers and on any trend you observe over the years.

Exam question

1 Financial information published in financial statements such as profit and loss accounts and balance sheets is useful for decision making. Consider the following figures and answer the questions that follow.

	2005	2004
	€	€
Sales	500,000	400,000
Expenses	50,000	40,000
Net Profit	70,000	60,000
Capital Employer	650,000	600,000

(i) For 2004 and 2005, calculate the gross profit margin, the net profit margin and the return on investment.

(ii) Analyse these profitability trends and discuss how shareholders might use them in making decisions. *(2006, 40 marks)*

Sample answer

(i)

Gross Profit Margin = $\frac{\text{gross profit} \times 100}{\text{sales}} = \frac{100{,}000 \times 100}{400{,}000} = 25\%$ (2004)

$\frac{120{,}000 \times 100}{500{,}000} = 24\%$ (2005)

Net Profit Margin = $\frac{\text{net profit} \times 100}{\text{sales}} = \frac{60{,}000 \times 100}{400{,}000} = 15\%$ (2004)

$\frac{70{,}000 \times 100}{500{,}000} = 14\%$ (2005)

Return on Investment = $\frac{\text{net profit} \times 100}{\text{capital employed}} = \frac{60{,}000 \times 100}{600{,}000} = 10\%$ (2004)

$\frac{70{,}000 \times 100}{650{,}000} = 10.76\%$ (2005)

Note:	Net Profit	+	Expenses	=	Gross Profit
2004	40,000	+	60,000	=	100,000
2005	70,000	+	50,000	=	120,000

(ii)

The gross profit margin has decreased from 25% in 2004 to 24% in 2005, which is a negative trend. This may be due to lower selling prices caused by competition or it may be due to paying higher prices for purchases.

The net profit margin has decreased from 15% in 2004 to 14% in 2005, which is a concern. This indicates that the expenses of the business have risen and need to be reduced in the future.

The return on investment has increased marginally from 10% in 2004 to 10.76% in 2005, which is good. The profitability for shareholders is good at 10.76% compared to earnings on other risk-free investments, e.g. bank interest rates.

How shareholders might use these figures in making decisions

- The falls in the gross and net profit ratios would prompt them to question the managers of the firm about keeping up the profit margins and controlling costs.
- Shareholders will decide on keeping their shares in the business based on the return on investment, which is good.
- Shareholders might also decide to buy more shares in the firm based on the good return on investment.

Measuring liquidity

Liquidity is a measure of the ability of the firm to pay its short-term debts (current liabilities) as they fall due, from their current assets.

Question

1. The average performance of companies in the same industry as Bianua Ltd for 2011 is as follows:

   Industry average results 2011

   - Current ratio 2:1
   - Acid test ratio 1.2:1

   The following figures are taken from the final accounts of Bianua Ltd for 2011:

   - Current assets (including closing stock) €155,000
   - Current liabilities €85,000
   - Closing stock €80,000

   (i) Calculate the following for 2011 for Bianua Ltd:

   - Current ratio
   - Acid test ratio

   (20 marks)

   (ii) Analyse the liquidity of Bianua Ltd for 2011, with reference to the industry average and results shown above, and make recommendations for Bianua Ltd.

   (2012 (adapted))

Sample answer

(i)

Current ratio = Current assets: Current liabilities

155,000: 85,000

1.82:1

Acid test ratio = Current assets – Closing stock: Current liabilities

(155,000 – 80,000): 85,000

75,000:85,000

0.88:1

(ii)

Current ratio

The average industry result in 2011 had a very healthy level of working capital. It had €2 available to pay for every €1 of liabilities. Maintaining this healthy working capital is essential for the cash flow of a business.

Bianua Ltd has €1.82 available to pay for every €1 owed, a little below the ideal of 2:1. It should make every effort to maintain its current ratio so that it can pay its short-term debts as they fall due. If the liquidity position of a new business is poor and it cannot pay its current liabilities, it may have to go into liquidation.

Acid test ratio

In 2011 the average industry result was 1.2:1 indicating that on average €1.20 was available immediately to pay for every €1 owed. The situation for Bianua Ltd in 2011 was 0.88:1 with the business only having 88c available to pay for every €1 it owes.

The average in the industry at 1.2:1 shows that firms would be able to pay their short-term debts as they fall due as it is above the norm of 1:1. However, Bianua Ltd may have difficulty paying its debts as they fall due: at 0.88:1, the acid ratio is below the norm of 1:1.

Recommendations for Bianua Ltd

- Sell slow-moving stock at a discount.
- Implement effective cash flow forecasting in order to avoid liquidity problems.
- Effective credit control will reduce the risk of bad debts.
- Effective stock control will reduce the amount of money tied up in stock.
- Increase cash sales.

Measuring the debt/equity ratio or gearing ratio

This measure analyses the breakdown of the long-term capital (finance) being used by the business:

Equity capital = Ordinary share capital + Retained earnings

Debt capital = Preference share capital + Long-term loans

Debt/equity ratio or Gearing ratio

$$\text{Formula: } \frac{\text{debt capital}}{\text{equity capital}}$$

Lower debt/equity ratio is better for the business

- There will be less interest to be paid on loans each year.
- More of the profits of the firm will be available to ordinary shareholders, which will make them happy with their investment.
- Getting new loans will be easier in the future.
- Higher dividends can be paid to the ordinary shareholders.

Higher debt/equity ratio is worse for the business

- Higher fixed interest payments have to be made.
- It will be harder to find new investors because of the debt.
- Banks will be slower to lend more money to the firm.
- Ordinary shareholders will not be happy if profits are used up paying fixed interest on debt capital.

Question

1 The following figures are taken from the final accounts of Bianua Ltd for 2011

Bianua Ltd	€
Long-term loan	300,000
Ordinary share capital	500,000
Retained earnings	100,000

(i) Calculate the debt/equity ratio for 2011.

(ii) If the debt/equity ratio for 2010 was 3:1, comment on the trend that you observe.

(iii) What recommendations would you make to Bianua Ltd?

Sample answer

(i)

$$\text{Formula: } \frac{\text{debt capital}}{\text{equity capital}} = \frac{300{,}000}{500{,}000 + 100{,}000} = 0.5{:}1$$

(ii)

The debt/equity ratio has risen from 0.3 in 2010 to 0.5 in 2011, which indicates a big increase in debt capital being used by the firm. This is a negative trend and will result in higher fixed-interest payments in the coming years.

(iii)

I would recommend the firm to ensure that they have enough profits to cover the increased payment of interest. If profits allow, they should reduce their level of debt by paying back some of the loans.

Exam question

1 **(i)** Using the figures given below, calculate the debt/equity ratio of SES Ltd for the years 2006 and 2007. (Show your workings.)

	2006	2007
Long-term loan	300,000	364,000
Ordinary share capital	450,000	450,000
Retained earnings	50,000	70,000

(ii)

Comment on the significance of the trend in the debt/equity ratio over the two years for the existing shareholders. *(2009, 20 marks)*

Sample answer

(i)

The debt/equity ratio provides an indication of the financial structure/gearing of the business. The debt/equity ratio is calculated as follows:

Formula: debt capital ÷ equity capital

	2006	2007
Debt/equity ratio	**300,000: 500,000 0.6:1**	**364,000:520,000 0.7:1**

(ii)

The debt/equity ratio in 2006 was 0.6:1, while the debt/equity ratio for 2007 has increased to 0.7:1. This may be a worrying trend for the existing shareholders.

Significance of the trend for existing shareholders

- Higher interest repayments may reduce profits.
- Where profit levels are falling, the payment of dividends to ordinary shareholders will be adversely affected.
- Reduction in dividends may lead ordinary shareholders to sell shares – the increased supply of shares on the market will reduce the market price of shares.
- In a period of high profitability, a deterioration in the debt/equity ratio may result in a higher return to shareholders, if interest charges are lower than the return on investment.

Marking scheme

(i)

- Debt/equity formula: 2 marks
- Two calculations: 2 x 5 marks *(5 = 1 + 2 + 2)*

(ii)

- Two comments: 2 x 4 marks *(4 = 2 + 2)*

Questions

Higher Level long questions

1 (a)

From the figures given below for 2009, calculate the following for CES Ltd.

(i) Net profit margin

(ii) Current ratio

(iii) Acid test ratio

(iv) Debt/equity ratio

Information for 2009	
Sales	€135,000
Net profit	€33,750
Current assets (including closing stock)	€84,500
Current liabilities	€65,000
Closing stock	€39,000
Ordinary share capital	€300,000
Long-term debt	€192,000
Retained earnings	€20,000

Results 2008	
Net profit margin	32%
Current ratio	2:1
Acid test ratio	1.1:1
Debt/equity ratio	0.4:1

(b)

Analyse the significance of the trends over the two years (2008/2009) for the following stakeholders:

(i) Investors/shareholders

(ii) Suppliers

(iii) Employees

Note: Results for 2008 are already calculated above.

(2009, 20 marks)

2

The following figures were extracted from the accounts of Lee Systems Ltd.

Analyse the liquidity position of the firm using the working capital and acid test ratios. Refer to the trend from 2006 to 2007 in your answer.

	2007	2006
	€	€
Opening stock	10,000	7,000
Current liabilities	34,000	22,000
Closing stock	13,000	8,000
Fixed assets	110,000	88,000
Current assets	50,000	41,000

3

The following is a balance sheet extract for Jackaree Ltd.

(a) Calculate the debt/equity ratio for Jackaree Ltd.

(b) Analyse the difficulties the debt position of Jackaree Ltd may cause for the firm.

Financed by	€
Long-term loans	640,000
Capital and reserves	
Authorised capital	800,000
Issued capital	600,000
Retained profits	160,000

Key-points!

- Importance of the profit and loss account and the balance sheet
- Profitability, liquidity and debt ratios

Key-definitions!

current assets: Things that are of value to a firm which change in value on a daily basis, e.g. stock, debtors, cash.

current liabilities: Things that are owed by a firm and which must be paid within one year.

current ratio: A measure of the liquidity of a business. Formula = current assets ÷ current liabilities.

debt capital: Sources of finance used by a firm which have an annual cost; includes long-term loans and preference share capital.

debt/equity ratio: A calculation of the level of indebtedness of a business. It compares the amount of debt capital with the interest-free (equity) capital of the firm.

fixed assets: Things owned and used by business over a long period of time, e.g. buildings, vehicles, machinery.

gross (profit) margin: The gross profit for the year expressed as a percentage of the value of sales for the year. Formula: gross profit/sales × 100 = X %

gross profit: The profit earned by a firm in one year from buying and selling goods.

issued share capital: The value of shares that have actually been sold by a company to shareholders.

liquidity: This refers to the cash position of a business or the ability of the firm to pay its short-term debts when they fall due.

long-term liabilities: Monies owed by a business that are due for repayment in more than one year, including ordinary share capital, reserves of profit and long-term loans.

net (profit) margin: A profit calculation which expresses the net profit as a percentage of the value of the sales of the firm. Formula: net profit ÷ sales × 100 = X %

net profit: The profit made by a firm in a year after it has paid all the expenses of running the business.

ratio analysis: The assessment of the financial performance of a firm by preparing and interpreting financial calculations (ratios) based on the firm's accounts.

retained earnings: The profit earned this year that still remains after tax has been paid to the government and dividends have been paid to the shareholders.

return on capital employed (ROCE): A measure of profitability for a firm which expresses the net profit of the firm as a percentage of the total capital used by the firm. Formula: net profit ÷ capital employed × 100 = X %

return on investment (ROI): see return on capital employed.

share capital: The money raised by a limited company by selling shares to investors.