Collins

Cambridge IGCSE®

Accounting

TEACHER'S GUIDE

Also for Cambridge O Level

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6 Analysis and interpretation

This chapter explains the basics of ratio analysis. It will provide the ratio formulae required to make an analysis of a business's performance.

Numerical examples and tasks enable students to practise ratio calculations and explain the importance of ratio analysis in business organisations.

Prior knowledge

Students should already be able to:

- use the accounting equation and understand the purpose of accounting
- prepare double entry ledger accounts
- prepare a trial balance
- account for capital and revenue expenditure and receipts, depreciation, irrecoverable debts and provisions for doubtful debts
- value business inventory
- prepare financial statements for:
  - sole traders
  - partnerships
  - limited companies
  - clubs and societies
  - manufacturing accounts
  - incomplete records.

Background for non-subject specialists

Analysis and interpretation of financial and accounting information and data can be completed in a number of ways. Businesses tend to use ratio analysis as one method.

Ratio analysis involves the calculation and interpretation of various ratios to provide key performance indicators. In particular, ratio analysis aids businesses to assess profitability, liquidity and efficiency. Individuals and groups who have an interest in the financial affairs of a business may seek to find out:

1. how well the business is operating
2. how strong the financial position of the business is
3. what the future prospects for the business are.

6.1 Calculation and understanding of ratios

Learning objectives

By the end of this unit, students should be able to:

- calculate and explain the importance of the following ratios:
  - gross margin
  - profit margin
  - return on capital employed (ROCE)
  - current ratio
  - liquid (acid test) ratio
  - rate of inventory turnover (times)
  - trade receivables turnover (days)
  - trade payables turnover (days).

Resources

- Student's Book pages 284–295
- Workbook pages 75–77
- Resource 6.1A

Key terms

Gross margin, Profit margin, Return on capital employed, Rate of inventory turnover, Trade receivables turnover, Trade payables turnover, Liquidity (of a business), Current ratio, Liquid (acid test) ratio

STARTING POINT

The questions identify key components of financial statements. Most students will be able to identify these and understand how they can be used by users of financial records. Business studies students may have covered the topic of ratio analysis in their studies.

When considering the answers to questions 2 and 3, advise students that they may find it helpful to review the financial statements they produced in Chapter 5.

Encourage students to consider why different individuals and groups of people (interested parties) may need to analyse financial data and financial statements. Ask students to identify items in financial statements that may be of interest to readers of the financial records.

If students find the questions difficult, it may be helpful to use prompt questions, for example:

- *What is a sole trader?* (Any business that is owned and controlled by one person)
- *What does a sole trader aim to achieve?* (A profit for the year)
- *What items does an income statement contain?* (Revenue, cost of sales, gross profit, expenses, profit for the year)
- *How may a business try to pay its short-term debts, for example, trade payables?* (They may try to pay cash or within the deadline of their contract. In general, businesses wish to pay their debts after they have received payment from their customers.)

Suggested answers

1. Sole traders analyse their accounts to assess their profitability and consider how many drawings they can take. The accounts will also inform them of whether the business is likely to be able to expand in the future, whether they are able to take out a loan, and assess what remedial action may need to be taken. 'Remedial action' refers to the action a business owner may need to take to ensure their business can continue to operate in the future – for example, obtaining a short-term bank loan or chasing their trade receivables.
2. The income statement of a business calculates both the gross profit and profit for the financial year.
3. Liquidity is a measure of the ability of a business to pay its short-term debts.

EXPLORING

The questions consider how financial statements can be used by users of financial records.

Suggested answers

1 The local bakery should compare itself against other bakeries of a similar size in the local area. They should not compare themselves against large national or international businesses.

2 Business owners will compare their income statement and statement of financial position data over several years, to see whether key indicators have increased or decreased. Examples would include gross profit, profit for the year, non-current assets and bank balance.

3 Current bank balance, other business debts, non-current assets that could be used by the bank as security in the unlikely event that the loan cannot be repaid.

DEVELOPING

This unit reviews and analyses financial statements through ratio analysis. Advise students of the importance of learning the formula for each ratio. To reinforce this, you could start each lesson with a quiz on the ratio formulae.

Students also need to know what the ratios say about a business and how they are used. The in-text questions help students to understand the purpose of the ratios. Ratio analysis is further developed in the subsequent units.

Look at the case study with the class. It provides an example of how important it is to look at numerical data in context.

Students must be able to differentiate between the three categories of ratio that they will study at this level. By considering each set of ratios in turn, they will gain an understanding of their functions and learn to calculate them. Ensure students are confident with one set of ratios before moving on to the next.

Also, ensure that students know that:

- the information used to calculate the profitability ratios is found in the income statement
- the information used to calculate the activity or efficiency ratios comes from both the income statement and the statement of financial position
- the liquidity or solvency ratios use information from the statement of financial position.

Use question 1 to reinforce that not all sales revenue is generated in cash. Many customers will expect to be given a certain number of days to pay for the goods they have received. Discuss why big businesses usually expect to be given longer to pay (big businesses are generally expected to order in large quantities and may be less likely not to pay).

Suggested answer

1 By offering 90 days' credit to customers, a business may attract the custom of large businesses.

Question 2 builds on question 1 and leads into the work on liquidity or solvency ratios. Students need to appreciate that businesses are not able to pay their debts until their customers pay for the goods they have sold. The business requires the cash received to pay its own debts rather than converting other assets to cash, to pay.

Suggested answer

2 Businesses need to collect their debts quickly in order for them to earn interest on the money they receive. They do this by placing it into an interest-bearing bank account. In addition, they need the money collected to be able to pay the debts that they have to pay. If they pay the money they owe as slowly as possible, they have the money available for their own use and to gain interest when the money is in the bank account.

Students often need extensive practice in the calculation of the various ratios to ensure a good understanding of ratio analysis.

If you did not cover the work in Unit 5.6 on using ratios to calculate missing figures, this is a good time for students to study it.

APPLYING

Use this task to ensure students are confident calculating the ratios.

Answers

Where appropriate, ratios are expressed correct to 2 decimal places (2 dp).

Gross margin = $\frac{\text{gross profit}}{\text{revenue}} \times 100 = \frac{235\,862}{407\,256} \times 100 = 57.91\%$ (to 2 dp)

Profit margin = $\frac{\text{profit for the year}}{\text{revenue}} \times 100 = \frac{32\,411}{407\,256} \times 100 = 7.96\%$ (to 2 dp)

Return on capital employed = $\frac{\text{profit for the year}}{\text{capital employed}} \times 100 = \frac{32\,411}{118\,889} \times 100 = 27.26\%$ (to 2 dp)

Rate of inventory turnover = $\frac{\text{cost of sales}}{\text{average inventory}}$

Average inventory = $\frac{\text{opening inventory + closing inventory}}{2} = \frac{21\,442 + 23\,004}{2} = 22\,223$

Rate of inventory turnover = $\frac{171\,394}{22\,223} = 7.71$ times (to 2 dp)

Trade receivables turnover = $\frac{\text{trade receivables}}{\text{credit sales}} \times 365$

$= \frac{33\,398}{414\,640} \times 365 = 29.40$ days (to 2 dp)

Trade payables turnover = $\frac{\text{trade payables}}{\text{credit purchases}} \times 365 = \frac{29\,110}{192\,552} \times 365 = 55.18$ days (to 2 dp)

Current ratio = $\frac{\text{current assets}}{\text{current liabilities}} = \frac{61\,372}{38\,908} = 1.58 : 1$ (to 2 dp)

Liquid (acid test) ratio = $\frac{\text{current assets} - \text{closing inventory}}{\text{current liabilities}} = \frac{61\,372 - 23\,004}{38\,908} = 0.99 : 1$ (to 2 dp)

Knowledge check

- **Answers**: See page 260

Check your progress

Ask students to complete the **Check your progress** section in the Student's Book.

Support

- **Resources:** Resource 6.1A

Students match the ratios with their formulae and with their definitions and purposes.

- **Workbook Unit 6.1 Support**

Consolidation

- Students prepare a poster about the ratios they have studied in this unit. They should include:
  - the formula
  - the definition and purpose

  - the name of the financial statement that will provide the required data for each item in the formulae, for example, the figure for trade receivables is found in the statement of financial position.
- **Workbook Unit 6.1 Practice**

Stretch

- Ask students to use the information in the published accounts of a public limited company (see stretch task for Unit 5.1) to calculate each of the ratios studied in this unit. If you wish to use the stretch activity in Unit 6.3, students will also need a set of financial accounts from a second company that is similar in nature to the first.

Students can keep the ratios they calculate to analyse the business's performance when they have studied Unit 6.2.

- **Workbook Unit 6.1 Stretch**

6.2 Interpretation of accounting ratios

Learning objectives

By the end of this unit, students should be able to:

- prepare and comment on simple statements showing comparison of results for different years
- make recommendations and suggestions for improving profitability and working capital
- understand the significance of the difference between the gross margin and the profit margin as an indicator of a business's efficiency
- explain the relationship of gross profit and profit for the year to the valuation of inventory, rate of inventory turnover, revenue, expenses, and equity.

Resources

- Student's Book pages 296–312
- Workbook pages 78–79
- Resource 6.2A

Key terms

Economy, Competitor, Financial analyst, Trend analysis, Interpretation (of financial ratios), Working capital, Debt factoring

STARTING POINT

Revisit the discussion from earlier units: why different individuals and groups of people (interested parties) may need to analyse financial data and financial statements. The questions recap the use of ratio analysis in a business.

If students find the questions difficult, it may help to use prompt questions, for example:

- *What is liquidity?* (The ability of a business to meet its short-term debts)
- *Why does a business need to pay their debts on time?* (To ensure suppliers will continue to supply them in the future)
- *What is the relationship between current assets and current liabilities?* (Current assets – current liabilities = working capital (a measure of liquidity))
- *What does a business subtract from gross profit to calculate profit for the year?* (Expenses)
- *What are the formulae for the current ratio and the liquid (acid test) ratio?* (Current ratio = current ratio ÷ current liabilities; liquid (acid test) ratio = (current assets – closing inventory) ÷ current liabilities)

Suggested answers

1 Working capital is the capital of a business that is used in its day-to-day trading operations. It is calculated as current assets less current liabilities.

2 Gross profit is the revenue received from sales minus the cost of the goods sold. Profit for the year is calculated as gross profit minus all expenses incurred by the business during the financial year.

3 The current ratio is a measure of the liquidity of a business, which compares current assets to current liabilities. The liquid (acid test) ratio also measures the liquidity of a business. It compares current assets (excluding closing inventory) to current liabilities. This ratio is a more severe test of a business's liquidity and its ability to pay short-term debts. The ratio assumes that inventory may be perishable, go out of date or become obsolete (due to changes in fashion or technology). This would mean that the business will be left with inventory that it cannot sell and therefore would not be able to be use to pay its short-term debts.

EXPLORING

The questions consider how ratio data can be analysed by users.

If students find the questions difficult, it may help to use prompt questions, for example:

- *What happens to profit for the year if the expenses of a business increase?* (It will decrease.)
- *What could a business do to reduce its cost of sales?* (Reduce opening inventory, reduce purchases or increase closing inventory.)
- *What happens to gross profit if a business increases the selling price of its goods but the number of sales remains the same?* (Gross profit will increase.)
- *What does the return on capital employed ratio measure?* (Profitability)
- *Name the liquidity ratios.* (Current ratio, Liquid (acid test) ratio)

Suggested answers

1 It could increase the selling price per unit, reduce the cost of the goods that it purchases for resale, reduce its expenses, for example, staff wages, heat and lighting expenses.

2 The business will be pleased with its performance. The ROCE is 4% higher than the current base rate. Therefore, investors are getting a higher return than they would by keeping their money in an interest-bearing bank account. However, investors must take into account the potential risks when investing in a business.

3 Adi should use ratio analysis. He should calculate and review the current ratio and liquid (acid test) ratio. He could compare his results with those of previous years, with other businesses or against a benchmark.

DEVELOPING

This unit builds on the work of the previous unit. By this point, students should be able to calculate the ratios confidently and understand their purpose. In this unit, students interpret what the ratios they have calculated mean for a business and its stakeholders. Emphasise to students that ratios can only be interpreted fully when compared with other ratios. Individually, they are meaningless.

Question 1 invites students to consider how financial statements can be used for trend analysis. Ask students to identify the key components of an income statement and statement of financial position that could be reviewed by a business.

Suggested answer

1 An income statement will provide information about revenue received, cost of sales, expenses, gross profit and profit for the year.

The statement of financial position highlights the non-current assets, current assets, current liabilities, non-current liabilities and equity.

The business could review whether the figures contained in the financial statements have increased or decreased over a period of time. The financial statements will also allow businesses to calculate a range of ratios. These can also be compared from one year to the next.

Look at the case study with the class. It provides an example of how financial ratios may be used. It also emphasises the need to look at financial information in context.

You could use prompt questions as a plenary exercise after the introductory section or as a starter exercise before moving on to discuss the profitability ratios.

- *Suggest what type of business a local clothing retailer could use to compare their ratio results.* (Another clothing retailer of a similar size in a similar location)
- *What is meant by trend analysis?* (Comparing one year's data or ratios with previous year's results to identify any trends)
- *How would a business use an industry average when reviewing their financial performance?* (It would compare its performance against an industry average to decide if it was doing well.)

As the content of this unit is based on analysis, students are required to use higher-order skills. Emphasise that simple statements such as ‘the current ratio is 1 : 1’, is not interpretation. Give students practice in reviewing ratio results and making analytical statements, for example:

- The liquid ratio has increased by *x*.
- The liquid ratio has decreased by *x*.
- The current ratio is considerably higher than that of the competitor.
- The gross margin has decreased over the last three years.

Question 2 builds on the work completed in Unit 6.1. Students consider how the gross margin ratio is calculated. You could use prompt questions as necessary, for example:

- *What is the formula for gross margin?* $\left(\frac{\text{gross profit}}{\text{revenue}} \times 100\right)$
- *What is meant by the gross margin?* (The gross profit of a business expressed as a percentage of revenue generated by sales)
- *Identify the potential causes of a fall in gross margin for a business.* (Failing to pass on cost increases to customers; reduction in selling prices; offering a higher rate of trade discount)

Suggested answer

2 Suggestions may include:

- Increase its selling prices to ensure that any increase in costs incurred in purchasing the goods for resale is covered.
- Reduce the amount of trade discount offered to other businesses.
- Ask suppliers for an increase in trade discount.

Question 3 encourages students to consider the implications of a shortage of working capital. Facilitate an initial discussion about how to improve the working capital position of a business.

If students find this question difficult, it may help to use prompt questions, for example:

- *What is working capital?* (The amount of money a business has to operate on a day to day basis)
- *How is working capital calculated?* (Current assets *less* current liabilities)
- *Why is working capital important to a business?* (Without sufficient working capital, a business would not be able to pay its day to day expenses.)

Suggested answer

3 A business will have difficulty in securing finance, such as a loan or overdraft.

It will limit amount of drawings that an owner will be able to take from the business.

Suppliers may stop offering credit terms to the business.

Students will need extensive practice of both the calculation and the analysis of the various ratios to ensure a good understanding of ratio analysis.

APPLYING

Use this task to ensure students are confident not only calculating the ratios but also making analytical comments on the financial performance of the business, by comparing two years’ financial results.

Answers

Where appropriate, ratios are expressed correct to 2 decimal places (2 dp).

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

2017: $\frac{11\,680}{12\,900} \times 100 = 90.54\%$ (to 2 dp)

2018: $\frac{10\,390}{13\,250} \times 100 = 78.42\%$ (to 2 dp)

Profit margin = $\frac{\text{profit for the year}}{\text{revenue}} \times 100$

2017: $\frac{10\,910}{12\,900} \times 100 = 84.57\%$ (to 2 dp)

2018: $\frac{9400}{13\,250} \times 100 = 70\ 94\%$ (to 2 dp)

Return on capital employed = $\frac{\text{profit for the year}}{\text{capital employed}} \times 100$

2017: $\frac{10\,910}{3050} \times 100 = 357.70\%$ (to 2 dp)

2018: $\frac{9400}{2950} \times 100 = 318.64\%$ (to 2 dp)

Rate of inventory turnover = $\frac{\text{cost of sales}}{\text{average inventory}}$

Average inventory = $\frac{\text{opening inventory + closing inventory}}{2}$

2017: $\frac{650 + 980}{2} = 815$

2018: $\frac{980 + 870}{2} = 925$

2017: $\frac{1220}{815} = 1.50$ times (to 2 dp)

2018: $\frac{2860}{925} = 3.09$ times (to 2 dp)

Trade receivables turnover = $\frac{\text{trade receivables}}{\text{credit sales}} \times 365$

2017: $\frac{810}{12\,900} \times 365 = 22.92$ days (to 2 dp)

2018: $\frac{930}{13\,250} \times 365 = 25.62$ days (to 2 dp)

Trade payables turnover = $\frac{\text{trade payables}}{\text{credit purchases}} \times 365$

2017: $\frac{570}{1550} \times 365 = 134.23$ days (to 2 dp)

2018: $\frac{710}{2750} \times 365 = 94.24$ days (to 2 dp)

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

2017: $\frac{1843}{570} = 3.23 : 1$ (to 2 dp)

2018: $\frac{2035}{710} = 2.87 : 1$ (to 2 dp)

Liquid (acid test) ratio = $\frac{\text{current assets} - \text{closing inventory}}{\text{current liabilities}}$ current assets – $\frac{\text{closing inventory}}{\text{current liabilities}}$

2017: $\frac{1843 - 980}{570}$ = 1.51 : 1 (to 2 dp)

2018: $\frac{2035 - 870}{710}$ = 1.64 : 1 (to 2 dp)

2 Comments may include:

- The gross margin has decreased from 2017 to 2018. This is also the case for the profit margin. Business expenses have increased from 770 000 to 990 000 during the year.
- The current ratio is marginally higher in 2017 than in 2018; however, both are considerably above the generally accepted level. The business should consider paying off their debts.
- The trade receivables turnover has increased from 2017 to 2018. Dover and Sole need to ensure that they chase their trader receivables to ensure that they pay on time.

Knowledge check

- **Answers**: See pages 260–262

Check your progress

Ask students to complete the **Check your progress** section in the Student's Book.

Support

- Ask students needing extra support to work in pairs or small groups to produce a mind map for the topic. They should include actions that could improve the various ratios. These actions can be used as recommendations when analysing business financial performance.
- **Workbook Unit 6.2 Support**

Consolidation

- Students prepare revision cards for the unit. They produce one card for each ratio, summarising the analytical points relating to it.
- **Resources**: Resource 6.2A

  In addition, the cards on the resource provided can added to a matching activity on key terms and definitions from the course.
- **Workbook Unit 6.2 Practice**

Stretch

- Use the ratios calculated in the stretch task for Unit 6.1.
- Ask students to prepare a presentation to the management, analysing the business's financial performance based on the ratio analysis.
- **Workbook Unit 6.2 Stretch**

6.3 Inter-firm comparison

Learning objectives

By the end of this unit, students should be able to:

- understand the problems of inter-firm comparison
- apply accounting ratios to inter-firm comparison.

Resources

- Student's Book pages 313–325
- Workbook pages 80–81
- Resource 6.3A

Key terms

Inter-firm comparison, Accounting principles

STARTING POINT

The questions recap the work completed in Units 6.1 and 6.2 on ratios and financial statements. Most students will be able to identify key components of financial statements and how they can be used by users of financial records. If necessary, they should review the work of Units 6.1 and 6.2.

Suggested answers

1 Trade receivables turnover, trade payables turnover, rate of inventory turnover

2 A business can review whether its profitability, liquidity and efficiency have improved or deteriorated over a period of time. Once a pattern has been identified, the business can review the reasons for the changes and then modify its actions to ensure future success. For example, if a business has improved over the last year and it has been identified that higher-quality goods have caused an increase in sales revenue, this can be continued in the future.

3 Items include:

- non-current assets, for example, premises, fixtures and fittings, motor vehicles
- current assets, for example, inventory, bank balance, cash in hand
- current liabilities, for example, trade payables, bank overdraft.

EXPLORING

The questions consider how ratio analysis can be used to compare business performance. The students are able to apply theory to practice. You may wish to continue the discussion by asking students to think about the differences in the financial statements produced by different types of business – for example, a sole trader and a partnership. Highlight the problems of comparing financial statements and accompanying ratios for different business structures.

Suggested answers

1
- It allows the business to identify their areas of strength and weakness.
- It highlights and identifies issues in a business's performance. For example, a business may have a current ratio of 1.5 : 1 and consider it satisfactory but if a competitor's current ratio is 1.75 : 1 they may need to consider ways to improve this ratio.
- Competitors' data can act as a target for the future, which may be motivational to the workforce.

2 Students may suggest 'real' examples from the local area. A generic answer would be another butcher's store of a similar size in the local area.

DEVELOPING

This unit is a development of the analysis completed in Unit 6.2. Explain to students that the analysis required to make inter-firm comparisons uses the same principles as the analysis they completed in Unit 6.2. The same knowledge and skills should be applied throughout this unit. Emphasise the importance of comparing similar types of business. It is also essential that students understand the limitations of completing an inter-firm comparison.

When making inter-firm comparisons, students need to understand that different accounting methods will affect the final profit figures for a business: question 1 draws out one aspect of this.

If students find the question difficult, it may help to use prompt questions, for example:

- *What is depreciation?* (An estimation of how the cost of an asset should be allocated over its useful life)
- *What are the three main methods of depreciation?* (Straight line, reducing balance, revaluation)
- *Where is depreciation included in the financial statements?* (Annual depreciation is included in the expenses section of the income statement and cumulative depreciation is used to calculate the net book value of non-current assets in the statement of financial position.)

Suggested answer

1 Straight line depreciation is calculated as (cost *less* residual value) *divided by* number of years owned. This depreciation method charges the same amount of depreciation to the income statement each year during the life of the asset. It is frequently used for office equipment. Using the straight line depreciation method, if all other expenses remain constant, profit for the year would remain constant from one year to the next.

Reducing balance depreciation calculates depreciation based on the net book value of an asset. This means that the depreciation charge included in the income statement reduces each year. It is frequently used for motor vehicles to offset the increasing cost of maintenance. Using the reducing balance depreciation method, if all other expenses remain constant, profit for the year would increase from one year to the next as the expenses would decrease.

Revaluation depreciation is a method of depreciation in which the amount of depreciation charged each year is the change in the asset's estimated value from the start to the end of the year. It requires the business to decide each year on a fair value for the asset. The value of the asset can be increased or decreased, based on an estimate of its value. Using the revaluation method, the yearly depreciation is based on the change in the estimated value of the asset from the start to the end of the year. Adjustments are also made for any purchases of the non-current asset during the year.

Question 2 enables students to consider business situations that occur. These are likely to be one-off events that affect the financial statements of the business. Discuss why big businesses are most likely to survive during adverse business situations. Business studies students may identify economies of scale and the effect these will have on larger business organisations.

Suggested answer

2 Examples include:

- seasonal activities, for example, the increase of ice-cream sales during a heat wave
- national recession, meaning that members of the public have considerably reduced spending power to purchase goods or services
- natural disaster, for example, a flood, meaning a business cannot operate for a number of weeks
- sudden increase in demand, for example, the introduction of a new computer game would increase sales in computing stores
- situation, for example, if a world-wide tournament, such as the Football World Cup or Olympics, takes place in a particular area, the businesses will have a significant increase in customers.

Look at the case study with the class. It provides an example of inter-firm comparison. Encourage students to think of supermarket chains in their country. They could decide which of the chains target the low-, medium- and high-cost segments of the market and research which chain has the biggest market share.

You could use prompt questions as a plenary exercise after the introductory section or as a starter exercise before moving on to discuss the profitability ratios, for example:

- *What is meant by 'inter-firm comparison'?* (Comparing the financial data or ratio results of one business with those of another similar business)
- *What are the benefits of using inter-firm comparisons?* (It allows a business to analyse how successful it is and how it could improve in the future; it enables a business to identify areas of strength and weakness.)
- *What are the limitations of using inter-firm comparisons?* (Results of the comparison may be inaccurate; non-financial factors, for example, staff motivation or goodwill will not be considered; may not be clear which accounting principles have been used, leading to inaccurate comparisons.)
- *Suggest what type of business a national supermarket chain could use to compare its ratio results.* (Another national supermarket business in the same area)

As the content of this unit is based on comparison, students are required to use higher-order skills. Emphasise that simple statement of facts such as: 'The current ratio for company A is 1 : 1 and for company B is 2 : 1,' is not comparison. Give students practice comparing ratio results and making analytical statements, for example:

- The liquid ratio of company A is 0.3 higher than that of company B.
- The liquid ratio of company A is 0.1 lower than that of company B.
- The gross margin for company A is considerably lower than that of company B.

Question 3 reinforces the importance of comparing businesses that are similar. Regularly remind students that unless they are comparing similar businesses the information is meaningless. If any students find the question difficult, it may help to use prompt questions, for example:

- *What is meant by similar businesses?* (Organisations of a similar size, operating within the same industry)
- *Think about businesses in your local area. Identify two businesses that could compare their financial results.*

Suggested answer

3 Comparing one business organisation's performance with that of another is a meaningless activity, unless they are similar. For example, it would be inappropriate to compare a local take-away with a large national business such as McDonald's. Ideally the business organisations should be of a similar size and operating in the same industry, in order to give meaningful information that could be used for analysis and evaluation. Business size can be measured in terms of sales revenue or capital employed. This form of comparison and industry analysis allows a business organisation to assess how other business organisations are dealing with external factors that also affect them. For example, a Premier League Football Club could compare itself against another club competing in the same league. They could then review how both clubs are managing changes in television rights and funding.

Question 4 considers the types of issue that a business needs to take into account when making a comparison. Accounting policies used and seasonality are key factors when comparing business accounts. Facilitate a discussion about different seasonal businesses and how this will affect the financial statements that are produced. The holiday industry is one example. You may wish to elicit or suggest appropriate local and national examples to aid understanding.

Suggested answer

4 Accounting policies used, for example, different methods of inventory valuation, depreciation, irrecoverable debts.

A limited company should consider that the information provided is historical data. Historic data may not predict the future.

Financial year ends. Different business organisations have different financial year ends. Depending on the type of business organisation, inventory levels may be lower at certain times of the year and this would be reflected in the final accounts. This is particularly relevant for seasonal business organisations. For example, an ice-cream business will have considerably more inventory during the summer months than during the winter period.

Activity: Causes of differences in profitability ratios

Use this activity at the end of the unit to ensure there is a good understanding of the causes of differences in profitability ratios.

Approximate time required: 15 minutes

Resources: Resource 6.3A

Before the lesson: Print one resource sheet per pair. Cut out and shuffle the cards.

Pair work: Students separate the cards into:

1 causes of differences between two businesses' gross margins

2 causes of differences between two businesses' profit margins.

Stretch task: Students produce similar cards for the liquidity and efficiency ratios.

APPLYING

Use this task to ensure students are confident in interpreting the differences in the ratios of two businesses.

Answers

- The current ratio of White Cliffs Outdoor Supplies is marginally higher than the result for Glencoe Mountain Warehouse.
- The liquid (acid test) ratio of Glencoe Mountain Warehouse is considerable below the result of White Cliffs Outdoor Supplies. This could be caused by a high level of inventory. It could lead to problems if they are unable to pay their trade payables in a timely manner.
- The gross margin of Glencoe Mountain Warehouse is 25% lower than that of the competitor. This could have been caused by a reduction in selling price or mark up in an attempt to attract more customers. Alternatively, Glencoe Mountain Warehouse could have paid a higher purchase price for their goods for resale.
- The inventory turnover rate of White Cliffs Outdoor Supplies is higher than that of the competitor. This would imply that the White Cliffs Outdoor Supplies has reduced its selling price in order to increase sales.
- The profit margin of Glencoe Mountain Warehouse is considerable lower than that of White Cliffs Outdoor Supplies. This would imply that expenses are very high and need to be controlled. A review of marketing or selling costs should be undertaken.
- The return on capital employed of Glencoe Mountain Warehouse is considerably lower than that of White Cliffs Outdoor Supplies. The current rate does not provide investors with an adequate return. There are alternative investments available that would have higher returns with less risk.

Knowledge check

- **Answers**: See pages 262–263

Check your progress

Ask students to complete the **Check your progress** section in the Student's Book.

Support

- Ask students to work in pairs to prepare example comparison statements for each ratio. For example:

  current ratio – company A has a **higher** current ratio than company B.

  Students then highlight the comparison words in each statement.
- **Workbook Unit 6.3 Support**

Consolidation

- Students prepare revision cards for the unit. They produce one card for each ratio, listing the causes of differences in the ratio for two businesses.
- **Workbook Unit 6.3 Practice**

Stretch

- Put students in pairs or groups to compare the ratios they calculated in the stretch task for Unit 6.1 for two companies in the same industry. Students provide an inter-firm comparison to advise an investor as to which business they should invest in.
- **Workbook Unit 6.3 Stretch**

6.4 Interested parties

Learning objectives

By the end of this unit, students should be able to:

- explain the uses of accounting information by the following interested parties for decision making:
  - owners
  - managers
  - trade payables
  - banks
  - investors
  - club members
  - other interested parties such as governments and tax authorities.

Resources

- Student's Book pages 326–335
- Workbook page 82
- Resource 6.4A

Key terms

Stakeholder, Internal stakeholder, External stakeholder, Collateral

STARTING POINT

The questions recap the ratio calculations and analysis studied in earlier units of this chapter.

If students find these questions difficult, it may be helpful to use prompt questions, for example:

- *What are ratios used for?* (Ratio analysis is an accounting technique that allows financial accounts to be analysed.)
- *Name the ratios we have been studying.* (gross margin, profit margin, ROCE, current ratio, liquid (acid test) ratio, rate of inventory turnover, trade receivables, trade payables turnover)
- *What would a business compare its ratio results with?* (With other similar businesses (interfirm comparisons), against a benchmark or against previous years' results)
- *What is the formula for the current ratio?* $\left(\frac{\text{current assets}}{\text{current liabilities}}\right)$
- *What does the current ratio show?* (Measures the liquidity of a business; compares current assets to current liabilities; assesses a business's ability to meet its short-term debts.)

Suggested answers

1 Rate of inventory turnover, trade receivables turnover and trade payables turnover.

2 To undertake trend analysis and interpret the financial statements of the business, in order to assess its performance and progress. The business manager will be able to review profitability, efficiency and liquidity.

3 The current ratio measures the liquidity of the sole trader's business and compares current assets to current liabilities. The ratio assesses a business's ability to meet its short-term debts. For most businesses a ratio in excess of 2 : 1 is generally considered to be acceptable. A lower ratio, for example 1 : 1, means that a business may not be able to pay its debts if required to do so. A higher ratio, for example 5 : 1, may mean that a business is inefficient and has too much money tied up in inventory.

EXPLORING

The questions encourage students to consider how interested parties use accounting information to make informed business decisions. Encourage students to identify key items in financial statements that would be important to a range of business stakeholders.

Suggested answers

1 Sole traders will analyse their income statement to assess their profitability and consider how many drawings they can take. The income statement of a business calculates both the gross profit and profit for the year for a financial period of time. The sole trader will be able to consider trends over time by comparing one year's income statement with another year's. The sole trader will be able to assess whether the business has made sufficient profit to enable them to expand.

2 The potential shareholder will review the financial information of a public limited company to assess whether:

- the company is profitable
- it has sufficient liquidity to pay its debts
- the company is likely to continue in the future
- the company has paid dividends to its shareholders in the past
- the company is likely to have sufficient funds to pay dividends in the future.

3 Both are measures of profitability. A partner can compare their gross margin with their profit margin to assess how well they are managing their expenses. The profit margin is lower than the gross margin, as all business expenses are deducted from the gross profit.

DEVELOPING

Most students will be able to identify key components of financial statements and how they can be used by users of financial records. Business studies students may have already covered the topic of stakeholders (interested parties) in their course.

The purpose of this unit is to explain the uses of accounting information and to consider how this information will be used by various groups for making decisions. You may wish to consider Unit 7.2 alongside this topic. International accounting standards have ensured that financial statements meet the needs of both internal and external stakeholders.

Ensure students consider each of the interested parties in turn. Elicit from students the items in financial statements that may be of interest each group.

Question 1 requires students to consider stakeholders in practice, in the context of a hotel. If students find the question difficult, it may be helpful to use prompt questions, for example:

- *What is a stakeholder?* (An individual or group that has an interest in a business.)
- *Who uses a hotel?* (Guests, employees, managers, members, for example leisure centre, one-off visitors, for example, for a wedding)
- *Who would have an interest in the financial affairs of a hotel?* (The owners, guests, suppliers, government, local hotels, etc.)

Suggested answer

1 Internal stakeholders may include, for example, managers, employees, owners.

External stakeholders may include, for example, hotel guests, hotel spa/leisure club members, banks, government, regulators/inspectors, investors.

Question 2 builds on work in previous units and considers how stakeholders may use financial information and ratio analysis. You could extend the discussion by asking students to explain why their choice of ratios would be of interest to a potential partner thinking of joining an existing partnership.

Suggested answer

2 Ratios include gross margin, profit margin, current ratio, liquid (acid test) ratio, return on capital employed.

Question 3 focuses on external stakeholders, in particular, potential investors. If students find the question difficult, it may be useful to ask prompt questions, for example:

- *What is an investor?* (An individual or group that invests money in a business with the aim of a financial return)
- *Why does an individual invest in a company?* (Usually for financial gain)
- *What does an investor want to gain from investing in a company?* (Dividends each year and/or benefit if the share price of the company increases)

Suggested answer

3 Answers could include: gross profit, profit for the year, dividends, liquidity based on current assets and current liabilities, trends over a period of time.

When considering government and tax authorities as stakeholders, discuss with students how businesses are taxed in their country.

Look at the case study with the class. It provides an example of how tax authorities have used the financial information published by companies. Ask students if they were aware of this issue and if there have been similar issues in their country. Use question 4 as a follow-up to the case study.

Suggested answer

4 The company may get bad publicity and gain a poor reputation. This may lead to low sales and therefore less profit. The government will have less income, thus reducing the money available to invest in the country's economy.

Use some straightforward questions as a starter exercise, for example:

- *Who would be interested in a sole trader's financial statements?* (sole trader, customers, suppliers, government, competitors, etc.)
- *Why would a public limited company's annual report be of interest to a local government?* (The government would need to ensure the business has paid the correct amount of tax.)
- *If a bank is going to lend money to a business, what part of a business's financial statements would be of interest to the bank?* (Income statement and statement of financial position – the bank would be interested in the profit levels and the liquidity (current assets and current liabilities) of the business.)

Activity: Stakeholders

Use this activity to provide students with the opportunity to consider stakeholder interests in practice.

Approximate time required: 30 minutes

Pair/group work: Ask students about the most recent product they purchased, for example, coffee in a café, food from a supermarket, stationery from a retail store. Ask them to choose one item and compile a list of all of the people or businesses (stakeholders) that may have an interest in the business from which the item was purchased. Finally, students consider what accounting information may be of interest to these individuals or businesses.

Applying

Use this task to ensure students are confident in identifying how financial statements will be used by stakeholders.

Suggested answers

1 Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Potential returns

2 Salaries and wages

Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Liquidity: $\frac{\text{current assets}}{\text{current liabilities}}$

3 Salaries and wages

Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Liquidity: $\frac{\text{current assets}}{\text{current liabilities}}$

4 Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Liquidity: $\frac{\text{current assets}}{\text{current liabilities}}$

Non-current assets available as security

5 Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Potential returns

6 Profitability: $\frac{\text{gross profit}}{\text{profit for the year}}$

Tax liabilities: ability to pay tax when due

7 Liquidity: $\frac{\text{current assets}}{\text{current liabilities}}$

Ability to repay debts on time

Knowledge check

- **Answers**: See pages 263–264

Check your progress

Ask students to complete the **Check your progress** section in the Student's Book.

Support

- Ask students who need extra support to revisit the financial statements they produced in Chapter 5 and highlight who would be interested in each of the sections of the financial statements.
- **Workbook Unit 6.4 Support**

Consolidation

- Students prepare revision cards for the unit. They write a stakeholder on one side of the cards and the items in the financial statements that would be of interest to them on the other side. They then take turns providing information of interest for the stakeholders.
- **Resources**: Resource 6.4A

  In addition, the cards on the resource provided can added to a matching activity on key terms and definitions from the course.
- **Workbook Unit 6.4 Practice**

Stretch

- Put students into groups to investigate a situation in which the aims of shareholders and other stakeholders in a company were in conflict. Groups could prepare short presentations about the company, explaining who the stakeholders are and why their aims are different.
- **Workbook Unit 6.4 Stretch**

6.5 Limitations of accounting statements

Learning objectives

By the end of this unit, students should be able to:

- recognise the limitations of accounting statements due to such factors as:
  - historic cost
  - difficulties of definition
  - non-financial aspects.

RESOURCES

- Student's Book pages 336–341
- Workbook pages 83–84
- Resource 6.5A

Key terms

Historic data, Quantitative information, Qualitative information

STARTING POINT

The questions recap the ratio analysis work completed in earlier units of this chapter. If students find these questions difficult, it can be helpful to ask prompt questions, for example:

- *What is ratio analysis?* (An accounting technique that allows financial accounts to be analysed)
- *How are ratios used?* (By different stakeholders to analyse and evaluate financial data. They form the basis of informed decision making.)
- *How are ratios used to compare financial information?* (Ratio results can be compared against previous years' results, against a benchmark or industry averages or against another business's results (inter-firm comparison).)
- *What is meant by 'gross profit' and 'profit for the year'?* (Gross profit is the sales revenue *less* the cost of sales, whereas, profit for the year is the gross profit *plus* additional income less expenses.)

Suggested answers

1. This occurs when a business compares its ratio results against benchmarks or industry averages and previous years' results.
2. Profitability assesses whether a business has met its objectives in relation to profits.
3. Limitations include:
   - Ratios only show the results of businesses that will continue for the foreseeable future.
   - The accuracy of the ratio analysis depends upon the quality of the information from which they are calculated.
   - Ratios can only be used to compare like with like.
   - Ratios tend to ignore the time factor in seasonal businesses.
   - They can be misleading if accounts are not adjusted for inflation.

EXPLORING

The limitations of ratio analysis were discussed in Unit 6.3 and reviewed in Starting point question 3, so students should be able to speculate on the limitations of the financial statements.

Suggested answers

1. Problems include:
   - Different businesses may apply different accounting principles when preparing their financial statements, for example, for inventory valuation and depreciation.

- Accounting statements do not account for the effects of inflation.
- Non-monetary items, such as goodwill and the skills of the workforce, do not appear in the accounting records of a business.
- The information available for the other business may not be typical.
- Different businesses may apply different operating policies. This may include renting premises in preference to purchasing premises and obtaining long-term finance from business owners only, rather than equity from business owners and long-term loans.
- The information available for the other business may not be sufficient for a comprehensive comparison. For example, a statement of financial position provides a net book value for non-current assets. It does not inform the reader when they were purchased, how old each asset is or when it is planned to sell these assets.

2 Non-financial factors include:

- customer service
- reputation
- goodwill
- qualification of workforce
- management expertise.

DEVELOPING

This unit consider the limitations of accounting statements. Encourage students to consider different types of business and different financial statements.

Use question 1 to highlight how the principle of historic cost affects the valuation of assets in a business.

Suggested answer

1 Non-current assets are valued at their net book value when recorded in the statement of financial position. This is calculated as original cost less cumulative depreciation.

Question 2 builds on question 1. Discuss why it is difficult to value certain assets in a business. Point out the difference between quantitative and qualitative information, using practical examples to aid students' understanding.

- Only quantitative information is included in accounting statements and is expressed in monetary terms. Examples include revenue, inventory, purchases, expenses, non-current assets, current assets, current liabilities, non-current liabilities and equity.
- Qualitative information cannot be expressed in monetary terms and is therefore omitted from accounting statements. Examples include customer satisfaction, management skills, location of the business organisation, customer loyalty and the motivation of the workforce.

Suggested answers

2 Valuation is subjective. One person's view of the value may not be the same as another person's view.

Look at the case study with the class. It provides an example of some non-financial aspects of a hotel. Point out to students that, even though location and luxury features cannot be included in the financial statements, this does not mean they don't have an effect on them. Ask students to consider how these features affect revenue, assets and expenditure in comparison to a hotel in a less desirable location, with fewer or no luxury features. They could research local examples.

The following questions can be used as a plenary exercise.

- *How are non-current assets valued in a statement of financial position?* (Non-current assets are valued at their net book value – calculated as original cost less cumulative depreciation.)

- *What is meant by 'historic cost'?* (The only accepted way to record financial transactions is to use the original cost price. Financial statements are produced using data from the past.)
- *Identify accounting terms that may have different definitions.* (For example, profit, provisions, loan interest, depreciation, inventory valuation)

APPLYING

Use this task to ensure students understand the limitations of financial statements. Encourage students to use their imaginations, to add detail to the scenario and give practical examples of the limitations.

Suggested answers

Amala Confectionery Ltd prepares an income statement and statement of financial position each year. These provide useful information for anyone interested in how well the business is doing.

All of the company's stakeholders use this data to make informed judgements. However, the data that Amala Confectionery Ltd has produced have a number of limitations. These include:

- Historic cost – the only accepted way to record financial transactions is to use the original cost price. Financial statements are produced using data from the past.
- Non-financial aspects – only numerical data may be included in the financial records of a business. Non-financial aspects are ignored.
- Difficulties of definition – different businesses define accounting terms in different ways. Comparisons are only meaningful if like for like comparisons are made.

Knowledge check

- **Answers**: See page 264

Check your progress

Ask students to complete the **Check your progress** section in the Student's Book.

Support

- Put students needing extra support into groups and ask them to discuss practical limitations of accounting statements. For example, the valuation of a property may vary depending on the person valuing the property. Ask them to categorise their ideas under the headings 'historic cost', 'difficulties of definition' and 'non-financial aspects'.
- **Workbook Unit 6.5 Support**

Consolidation

- Students prepare revision cards for the unit, summarising the limitations of financial information.
- **Resources**: Resource 6.5A

  In addition, the cards on the resource provided can be added to a matching activity on key terms and definitions from the course.
- **Workbook Unit 6.5 Practice**

Stretch

- Ask students to look at the information in the published accounts of two public limited companies (see stretch task for Unit 6.1) and identify similarities and differences between them. For example, they could consider the dates the companies use for their year end and the method of depreciation they use.
- **Workbook Unit 6.5 Stretch**

Chapter review

- **Resources:** Resource Ch6 review
- **Answers:** See pages 264–266
- **Workbook: Chapter 6 review**

