

Extended writing

- 1 Evaluate the following statement: 'For a business such as Tesco, a strong commitment to social responsibilities is vital to the company's long-term success.'

(20)

- 2 Evaluate the view that most businesses use CSR as a strategy for gaining a competitive advantage.

(20)

Section 3.5 Assessing competitiveness

19 Interpretation of financial statements

Definition

There are two key financial statements: the balance sheet and the profit and loss account. The balance sheet shows an organisation's assets and liabilities at a precise point in time, usually the last day of the accounting year. A profit and loss account shows a firm's sales revenue over a trading period and all the relevant costs involved in generating that revenue.

Linked to: Ratio analysis, Ch 20; Key factors in change, Ch 23

19.1 Introduction

The function of accounting is to provide information to various stakeholder groups on how a particular business has performed during a given period. The groups include shareholders, managers, bankers and suppliers. The period in question is usually one year. There are two key financial documents from which this information can be drawn:

- The statement of comprehensive income is more widely known as the profit and loss account; generally, large plcs use the former phrase, while smaller companies use the latter.
- The statement of financial position is more widely known as the balance sheet; large plcs may use the former phrase, while smaller companies (and the media) use the latter.

By law, public limited companies must publish these accounting statements so that they can be investigated by journalists, competitors or staff. Late on 24 December 2014, City Link (a parcel delivery business) went into receivership. This was especially devastating for those of its drivers who had opted to be contractors, owning their own van and paying personally for it to be painted in City Link colours. They spent Christmas knowing not only that their income was at an end and that their investment in the van was wasted, but also wondering whether they

would be paid any outstanding sums they were owed. If City Link had been a plc, its financial position would have been open for staff to consider. In fact, it was a private-equity-owned business so staff were completely in the dark right up until the Christmas Eve announcement.

For staff – or other interested parties – published accounts allow an analyst to find out:

- the amount of cash or near-cash the company holds in its bank accounts
- how that cash total compares with its short-term liabilities (the bills it needs to pay in the coming twelve months)
- how much of all the firm's long-term capital is in the form of debt – and therefore needs to be serviced with interest payments and eventually must be repaid
- how profitable the business is – both in absolute terms (the sum of money) and in relative terms, perhaps profit as a percentage of sales **revenue**. Between 2008 and 2015 operating profits at John Lewis rose from £394 million to £450 million. This seems less impressive when looked at as a percentage of sales: 6.5 per cent in 2008 down to 4.1 per cent in 2015. So in 2015 John Lewis made about 4p profit per £1 of sales.



Figure 19.1 John Lewis store

Real business

Between 2008 and 2015, John Lewis Partnership pursued growth objectives. Despite the difficult economic circumstances of the time, both divisions of the business (John Lewis and Waitrose) opened new stores throughout the UK. Financing this growth required huge extra borrowings, pushing long-term debts over £2.5 billion in 2015. The result of the extra debts was higher interest payments. Figure 19.2 shows the extraordinary growth in the net financing costs of John Lewis from £14 million in 2008 to £100 million in 2015. And all this at a time of record low interest rates.

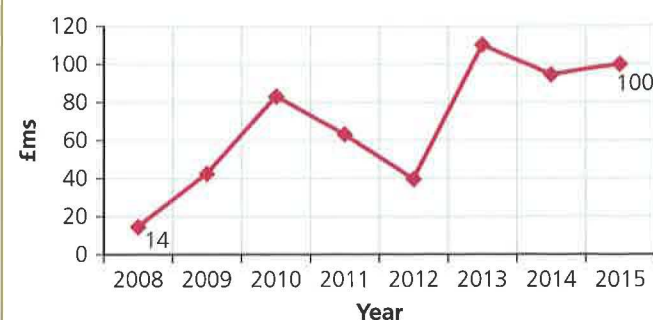


Figure 19.2 The increasing cost of coping with debt at John Lewis Partnership (source: JLP accounts)

'Debt is a prolific mother of folly and of crime.'

Benjamin Disraeli, nineteenth-century Prime Minister

19.2 Balance sheets (also known as 'statement of financial position')

This accounting document looks at the question: 'How rich are you?' To find out how rich someone is, you would need to find out what they own (big house?) and what they owe (fat mortgage?). The balance sheet does this for a business, adding up the totals on the last day of the financial year. Balance sheets show the wealth, or the indebtedness, of the business – vital information for shareholders, managers, financiers and other stakeholders.

The balance sheet shows where a business has obtained its finances – its liabilities. It also lists the assets purchased with these funds. Therefore, the balance sheet shows what the business owns and what it owes. For bankers, this is of vital importance when deciding whether or not to:

- invest in a business
- lend it some money
- buy the organisation outright.

The composition of the balance sheet

The balance sheet is a 'snapshot' showing the position of a company at a given point in time. It shows what the business owns and owes on one day; in other words, it shows an organisation's assets and liabilities.

The foundations of the balance sheet (at the bottom) consist of the firm's capital. This may have come from shareholders, bankers or from reinvested profit. If Spark plc has £400,000 of capital invested, it follows that it must have £400,000 of assets (see Table 19.1). The top section shows the type of assets bought.

Spark Ltd: Simplified balance sheet	
	£
Long-term (non-current) assets	300,000
Short-term (current) assets	100,000
Total assets	400,000
Balancing with: Total capital	400,000

Table 19.1 An example of a simplified balance sheet

Types of asset

Long-term (non-current) assets

Non-current assets are long-term assets such as:

- land and buildings: property owned by a business, either freehold or leasehold
- plant/machinery/equipment: anything from specialised machinery used in manufacturing to computers or even furniture
- vehicles: all types.
- patents/copyright: although patents are not physical assets such as a building, the exclusive rights to a technical advance can have huge long-term value.

Current assets

Current assets are short-term assets that change daily, perhaps hourly. There are three main types of current asset.

Inventories

This is the value of all the stock a firm holds, either on shop shelves or in warehouses; all these stocks are valued at cost in a balance sheet. This is because it's more **prudent** to value stock at the lower cost figure instead of at the higher figure for selling price (in case the stock doesn't sell and has to be sold off at a discount).

Receivables

Receivables are the sums owed by customers who have bought items on credit; for some firms this can be a large sum of money; for example, small suppliers to Boots the Chemist can be kept waiting for 105 days before

Boots pays up; if customers are big and powerful, small suppliers may have to invest a lot of their own cash in the balance sheet item 'receivables' (also known as debtors).

Cash

Cash means all forms of bank account that can easily be accessed, e.g. the balance on a current account; in business, the term **liquidity** is used to measure how able a business is to pay its bills and finance near-term spending; cash is the most liquid asset of all.

Spark plc: Fuller version of the firm's balance sheet	
	£
Property	180,000
Machinery and vehicles	120,000
Inventories	80,000
Receivables and cash	60,000
Current liabilities	(40,000)
Assets employed	400,000
Total capital	400,000

Table 19.2 An example of a fuller version of a balance sheet

Capital on the balance sheet

Companies have three main sources of long-term capital: shareholders (share capital), banks (loan capital) and retained profits (**reserves**). Loan capital carries interest charges that must be repaid, as must the loan itself. Share capital and reserves are both owed to the shareholders, but do not have to be repaid. Therefore they are treated separately. Added together, share capital and reserves are known as total equity.

Assuming Spark plc's capital came from £50,000 of share capital, £250,000 of loan capital and £100,000 of reserves, the final version of the balance sheet would look like the one shown in Table 19.3. Note that the two-column format allows sub-totals to be shown in the right-hand column.

Spark plc: Balance sheet for 31 December last year		
	£	£
Property	180,000	
Machinery and vehicles	120,000	300,000
Inventories	80,000	
Receivables and cash	60,000	
Current liabilities	(40,000)	
Total assets less current liabilities		400,000
Loan capital	(250,000)	
Net assets		150,000
Share capital	50,000	
Reserves	100,000	
Total equity		150,000

Table 19.3 An example of a final version of a balance sheet

19.3 Key information: assessing financial performance using a balance sheet

Financial performance really means the level of success (or failure) achieved by a business. Typically this is measured by profit – perhaps the percentage growth in profit compared with the previous year. That can be found in a firm's profit and loss account. The balance sheet gives a vital clue, though, to a company's real performance over time through the item known as reserves. This item shows the accumulated, retained profit ever since the business started trading. For a long-established business such as John Lewis, this should be a substantial figure. At the end of July 2014, the reserves figure for John Lewis was £1,861 million. If, in 2015, the business made an operating loss, that negative number would be added to the reserves total – bringing the accumulated figure down. If profits are made (and not all paid out to the owners in the form of **dividends** or bonuses), the reserves total will rise.

The value of this approach can be seen by a look at Tesco plc's performance over several years. As shown in the Figure 19.3 below, Tesco's reserves figure rose consistently in the period up until 2012. The decline in 2013 and 2014 shows the start of Tesco's financial problems. The collapse in reserves in 2015 is partly a reflection of Tesco's awful trading position, and partly due to one-off write-offs due to closure of overseas businesses and stores in the UK. The graph shows how profits accumulated in Tesco's balance sheets over many years collapsed from a value of £12 billion to £2 billion in just three years.

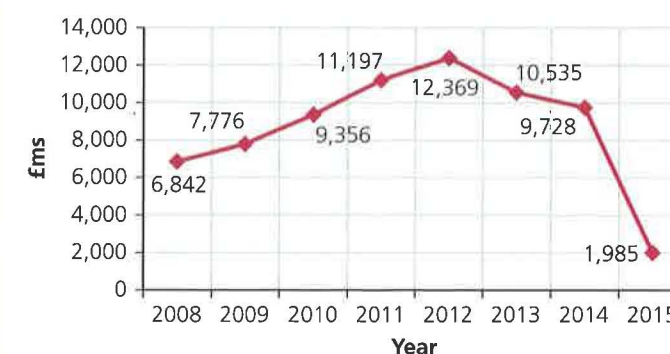


Figure 19.3 The collapse in value of Tesco's accumulated retained profits: its reserves (source: Tesco annual reports and accounts)

19.4 Stakeholder interest in balance sheets

Most companies believe that stakeholders, even shareholders, tend to steer clear of the balance sheet. The words and the numbers are assumed to be too confusing. This may be true and, if so, it's a great shame. A glance at the John Lewis Partnership accounts for 2015 suggests that stakeholders could use the data to ask some serious questions of management. These include:

- Bankers could ask: why have long-term borrowings risen nearly 50 per cent in 2015, from £629 million to £924 million? And what plans has the business for when the Bank of England starts pushing interest rates up?
- Suppliers could ask: why do you owe suppliers over £1,600m when you hold under £600 million of their stock? How long do you delay before paying your bills? (The answer is that they take 91 days to pay.)
- Staff (who are also – nominally – the owners of the business) could ask: why has the accumulated profit of the business (its reserves; its true store of wealth) declined year after year in recent times? The actual figures are as follows:

	John Lewis Partnership reserves
2012	£2,002 million
2013	£1,891 million
2014	£1,779 million
2015	£1,507 million

Table 19.4 John Lewis Partnership accounts 2012–2015

This means a quarter of the partnership's wealth has been wiped out in the period 2012–2015.

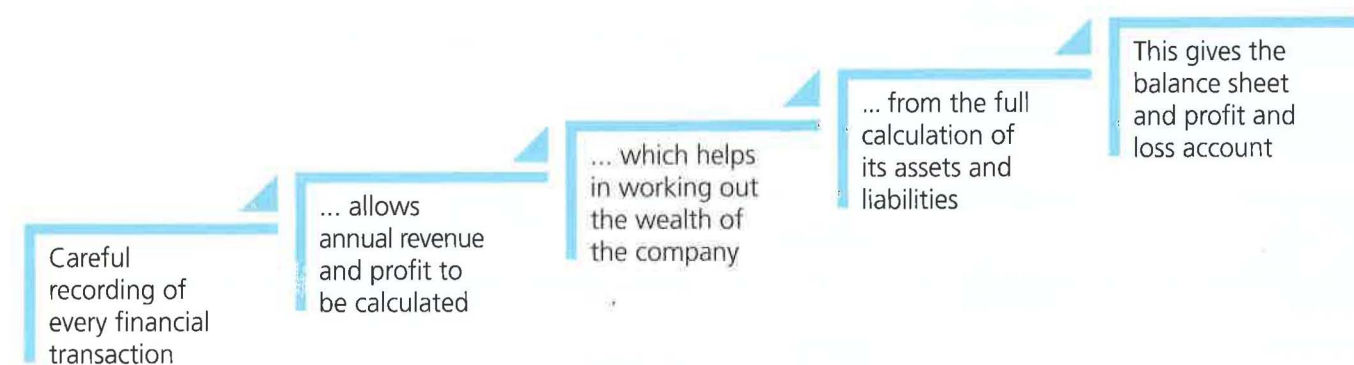


Figure 19.4 Logic chain: from daily data to the year's accounts

19.5 Profit and loss accounts (also known as statement of comprehensive income)

The profit and loss account (P&L) records all a business's revenues and costs within a trading period. This constitutes a vital piece of evidence for those with interests in a company. For many stakeholders, profit is the main criterion by which to judge the success of a business:

- Shareholders are an obvious example of those assessing profitability.
- Government agencies such as the tax authorities require data on profits or losses in order to be able to calculate the **liability** of a business to **corporation tax**.
- Suppliers to a business also need to know the financial position of the companies they trade with, in order to establish their reliability, stability and creditworthiness.
- Potential shareholders and bankers will also want to assess the financial position of the company before committing their funds to the business.
- Staff are also interested, especially if they receive a profit-related bonus; for partners in employee-owned John Lewis this is especially important. In 2008, a good year's profit allowed the business to pay a bonus worth 20 per cent of a year's salary to all permanent staff; poor management leading to faltering profitability explains why the bonus rate fell to 11 per cent in 2015.

Making a profit is one of the most significant objectives for business organisations. It is this profit motive that encourages many people to establish their own business or expand an existing one. Without the potential for making a profit, why should individuals and companies commit time and resources to what may be a risky venture? Even charities must seek to generate revenues to at least match their expenditure, otherwise they cannot survive. Therefore the P&L account is as important to a charity as it is to a company.

19.6 How a P&L account shows a company's profit or loss

Table 19.5 sets out the basic structure of a profit and loss account for a public limited company.

		£m
	Revenue	26.0
Less	Cost of sales	(17.0)
Gives	Gross profit	9.0
Less	Overheads	(4.0)
Gives	Operating profit	5.0
Less	Financing costs	1.5*
Gives	Profit before taxation	6.5
Less	Tax	(2.0)
Gives	Profit after taxation for the year	4.5

Table 19.5 The basic structure of a profit and loss account.

*In this case more interest was earned than paid out

The P&L comprises four main stages, as outlined below.

- 1 First, **gross profit** is calculated. This is the difference between the income (or 'turnover') and the cost of the goods that have been sold. The latter is normally expressed simply as 'cost of sales'.
- 2 Second, '**operating profit**' is calculated. This is done by deducting the main types of overhead, such as distribution costs and administration costs.
- 3 Next, profit before taxation is calculated, which is arrived at by the inclusion of interest received by the business and interest paid by it. These are normally shown together as a net figure labelled 'financing costs'.
- 4 The final stage of the P&L is to calculate profit after taxation (net profit). This is arrived at by deducting the amount of tax payable for the year and shows the net amount that has been earned for the shareholders.

Calculating gross profit

This top section of the profit and loss account shows how much revenue has been earned from sales less the **cost of sales**. In other words, it calculates gross profit.

$$\text{revenue (turnover)} - \text{cost of sales} = \text{gross profit}$$

When calculating revenue, sales taxes such as VAT are excluded as they are paid directly to the tax authorities.

Calculating operating profit

The next stage of the statement sets out the operating profit or loss made by the business. To calculate it, overhead expenses are deducted from gross profit.

Overhead expenses

Expenses are payments for something that is of immediate use to the business. These payments include cash expenditures on labour and fuel, as well as non-cash items such as depreciation.

Examples of overhead expenses include:

- wages and salaries
- rent and rates
- heating, lighting and insurance
- distribution costs.

Operating profit

Deducting overhead expenses from gross profit leads to operating profit. Most firms regard this as the key test of their trading performance for the year. At the very least a firm would want operating profit to be:

- up by at least the rate of inflation compared with the previous year
- at least as high a percentage of capital employed as that achieved by rival companies
- high enough to reinvest in the future of the business while still paying satisfactory dividends to shareholders.

Financing costs

Financing costs can add to or subtract from the operating profit of a business. Most companies have relatively high borrowings and therefore have to pay out a large proportion of their profit in interest charges. Japanese and German companies like to have substantial bank deposits earning interest, so this item can be a positive figure.

Profit before and after taxation

All businesses are required to pay corporation tax on their profits. In 2015, the rate of corporation tax paid by UK companies is 20 per cent. Once tax has been deducted, the final figure on the P&L is profit after taxation for the year. This figure is also known as net profit.

Using profits

Net profit can be used in two main ways: it can either be distributed or retained. Usually businesses retain some profits and distribute the remainder. The balance between these two uses is influenced by a number of factors.

- **Distributed profit:** the company directors will decide on the amount to be paid out to shareholders in the form of dividends; if the shareholders are unhappy with the sum paid out, they can vote against the dividend at the annual general meeting.
- **Retained profit:** any prudent owner or manager of a business will use some of the profit made by the business to reinvest in the business for the future.

'The substance of the eminent socialist gentleman's speech is that making a profit is a sin, but it is my belief that the real sin is taking a loss.'

Winston Churchill, UK politician and WW2 leader

'The accounts are a snapshot of the business at a moment in time. Take a picture the following day and the scene may look very different. As with many of us, companies like to look their best when they are photographed and sometimes dress for the occasion.'

M.A. Pitcher, accounting author

19.7 Key information: assessing financial performance using a profit and loss account

Public limited companies (plcs) are required by law to publish their accounts. This means that they are available

for scrutiny not only by the owners (shareholders), potential investors and bankers, but also by competitors.

When a company draws up its profit and loss account for external publication, it will include as little information as possible. Public limited companies usually supply no more detail than is required by law. SuperGroup (owner of the Superdry brand) has no wish to give information to rivals such as Abercrombie & Fitch. But the following statement shows the level of detail provided by a public limited company.

	2015 (£m)	2014 (£m)
Revenue (sales excluding VAT)	486	431
Cost of sales	(190)	(174)
Gross profit	296	257
Administrative and other expenses	(236)	(212)
Operating profit	60	45
Net finance expense	(0.5)	-
Profit before tax	59.5	45
Taxation	(13.5)	(17.5)
Net profit for the year	46	27.5

Table 19.6 Summarised profit and loss account for SuperGroup plc (year ended 31 March 2015)

To assess SuperGroup's P&L, it makes sense to start at the top. In 2015, revenue rose from £431 million to £486 million, which is a rise of 12.8 per cent. This sparked a 15 per cent rise in gross profit. Administrative expenses rose, but not too much, allowing operating profit to rise by 33 per cent to £60 million. Helped by a lower tax bill in 2015, SuperGroup's net profit for the year was hugely up on the 2014 figure.

Real business

Profits and Candy Crush

In March 2014, King Inc, the company behind the Candy Crush phenomenon, launched onto the US stock market. It sold just 10 per cent of its share capital for \$500 million, valuing the company at \$5,000m. Many commentators were amazed that people were willing to buy shares in a business that relied on one game (Candy Crush) for 78 per cent of its revenue. But the startling growth figures shown in Table 19.7 give an idea of the attractions of the shares.

What happens when players get bored with Candy Crush, though? The share buyers hope that King will be able to come up with new products that work the same business miracle as Candy Crush.

King Digital Entertainment Inc		
	Revenue (\$m)	Operating (net) profit (\$m)
2011	64m	(1.3m)
2012	164m	7.8m
2013	1,880m	567.6m

Table 19.7 Starting growth figures of King Inc 2011-2013

Five whys and a how

Questions	Answers
Why do plcs have to publish their accounts?	So that any member of the public can check on the company's progress, from investor to employee.
Why is a balance sheet sometimes called a 'snapshot' of the finances of a business?	Because it's drawn up on a single day (usually the last day of the financial year). This restricts its usefulness.
Why do firms need to publish both a profit and loss account and a balance sheet?	Because the P&L shows the flow of revenue in and costs out, whereas the balance sheet shows the wealth at a point in time.
Why might it be useful to look at a company's balance sheet reserves?	Because they show how much profit has been made (and kept) in the past – and changes in reserves give insight into company performance.
Why might shares in King Digital (Candy Crush) be high risk?	Because the business is over-reliant on one game – and that game might be near or past its saturation point.
How difficult is it to get the figures right?	Tesco showed in 2014 that it's possible to get the figures wrong by £260 million; this would not surprise professors of accounting who acknowledge that it's hard to achieve the accuracy shareholders want.

19.8 Interpretation of financial statements – evaluation

Two evaluative themes can be considered in relation to published accounts. It is easy to make the assumption that a rising level of operating profit is evidence of a company that is performing well. There are a number of factors that need to be considered when making such a judgement. Has a new management pushed up prices, boosting profit for a year or so, but at the cost of damaged market share in the future? Is a company that pollutes the environment, uses materials from unsustainable

sources, but makes a large profit, a successful business? Is profit necessarily the best measure of the performance of a business?

Even if we assume current profits are a good indication of how a company is performing, a number of other factors need to be taken into account. Is the market growing or declining? Are new competitors coming onto the scene? To what extent is the business achieving its corporate objectives? Is the profit earned likely to be sustained into the future? Information such as this is vital if a meaningful judgement is to be made about business success.

Key terms

Corporation tax: a tax levied as a percentage of a company's profits.

Cost of sales: all the costs arising from sales to customers, including raw materials, supplies and packaging.

Dividends: regular payments to shareholders as a reward for their investment.

Gross profit: revenue less cost of goods sold; profit made on trading activities.

Liability: a debt (that is, a bill that has not been paid or a loan that has not been repaid).

Liquidity: a measurement of a firm's ability to pay its short-term bills.

Operating profit: gross profit minus expenses.

Prudent: an accounting term meaning cautious ('being on the safe side').

Reserves: a company's accumulated, retained profit; it forms part of the company's total equity.

Revenue: sales revenue (that is, the value of sales made); also known as turnover.

19.9 Workbook

Revision questions

(40 marks; 40 minutes)

- 1 Outline two possible reasons why a bank would want to see a company's statement of comprehensive income. (4)
- 2 Look at Figure 19.2.
 - a) Calculate the per cent increase in the annual net financing costs for John Lewis between 2008 and 2015. (3)
 - b) Explain one possible effect of this increase on the business. (4)
- 3 Outline two ways in which employees may benefit from looking at their employer's balance sheet. (6)
- 4 Distinguish between gross and operating profit. (3)
- 5 Explain why even a charity such as Oxfam may want to make a profit. (4)
- 6 State two items that may be listed as current liabilities. (2)
- 7 Distinguish between non-current and current assets. (3)
- 8 Explain what may be included under the heading 'financing costs'. (4)
- 9 Look at the profit and loss account for SuperGroup plc shown in Table 19.6.
 - a) Revenue rose 12.8 per cent between 2014 and 2015, but what was the percentage change in the company's cost of sales? (3)
 - b) Explain one conclusion that can be drawn from those findings. (4)

Revision activities

Data response

Whitbread plc was once a brewery, but is now focused on three markets: coffee bars (Costa), budget hotels (Premier Inn) and restaurants (Beefeater Grill). Costa has been a great success both in the UK and China. Table 19.8 shows Whitbread plc's statement of comprehensive income summarised. Study the figures and answer the questions.

	Year to 28/02/15	Year to 27/02/2014
	£m	£m
Revenue (turnover)	2,608	2,294
Cost of sales	?	?
Gross profit	1,660	1,472
Operating expenses	(1,159)	(1,080)
Operating profit	501	392
Net finance income	(37)	(45)
Profit before taxation	464	347
Taxation	(98) s	(24)
Net profit for the year	366	323

Table 19.8 Adapted from Whitbread plc group report and , accounts 2015

Questions (50 marks; 60 minutes)

- 1 a) Calculate Whitbread's cost of sales for both periods. (4)
- b) Calculate each figure as a percentage of the company's revenue for the corresponding period. (4)
- c) Comment on your findings. (6)
- 2 a) Calculate the percentage increase Whitbread achieved in 2015 compared with 2014 in:
 - i) revenue
 - ii) operating profit. (4)
- b) Assess the data to suggest why the increase in operating profit was greater than the increase in sales revenue. (12)
- 3 Whitbread's two main operating divisions are Hotels and Restaurants (mainly Premier Inn) and Costa Coffee. UK hotel profits rose by 15.2 per cent in 2015 and at Costa UK rose by 20.7 per cent. Evaluate how Whitbread's management might respond to that information. (20)

Extended writing

- 1 People start businesses to make profits and from there to build a sellable asset. Evaluate how effectively the profit and loss account and balance sheet capture that information. (20)
- 2 'Profit is the most important thing and the way you get profit is through gross margins,' says Arthur Snyder, businessman. Evaluate whether this argument is robust. (20)

20 Ratio analysis

Definition

Ratio analysis is an examination of accounting data by relating one figure to another. This approach allows more meaningful interpretation of the data and the identification of trends.

Linked to: Interpretation of financial statements, Ch 19; Causes and effects of change, Ch 22

20.1 Introduction

The function of accounting is to provide information to stakeholders on how a business has performed over a given period. But how is performance to be judged? Is an annual profit of £1 million good or bad? Very good if the firm is a small family business; woeful if the business is KFC and annual sales exceed £10 billion. What is needed is to look at the £1 million profit in relation to another variable, such as sales revenue. This helps judge a firm's financial performance in relation to its size and its competitors. The technique used to do this is called ratio analysis.

Financial accounts, such as the profit and loss account and the balance sheet, are used for three main purposes:

- 1 financial control
- 2 planning
- 3 accountability.

Ratio analysis can assist in achieving these objectives. It can help the different users of financial information answer questions such as:

- Is this company/my job safe?
- Should I stop selling goods on credit to this firm?
- Should I invest in this business?

20.2 Interpreting final accounts: the investigation process

To analyse company accounts, a well-ordered and structured process needs to be followed. This should

ensure that the analysis is relevant to the question being looked at. The seven-point approach shown in Figure 20.1 is helpful.

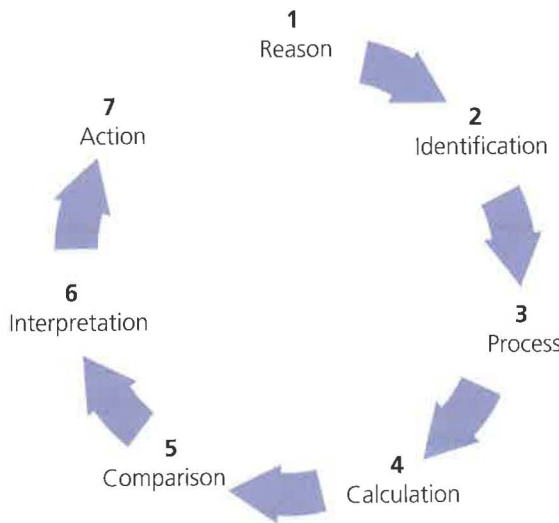


Figure 20.1 The seven-point approach to ratio analysis

20.3 Types of ratio

The main classifications of ratios are as follows.

- **Profitability ratios:** measure the relationship between gross/net profit and revenue, assets and capital employed. They are sometimes referred to as performance ratios.
- **Liquidity ratios:** these investigate the short-term financial stability of a firm by examining whether there are sufficient short-term assets to meet the short-term liabilities (debts).
- **Gearing:** examines the extent to which the business is dependent upon borrowed money; it is concerned with the long-term financial position of the company.

The following sections look at each classification of ratios in more detail. An explanation of the seven-point approach to ratio analysis is given in Table 20.1.

The investigation process

Step 1	Reason	The starting point for interpreting financial accounts is establishing why you are doing so. If you are considering supplying a company with a large order of goods, you want to try to establish its financial stability and ability to pay.
Step 2	Identification	Identify the relevant figures from the financial accounts.
Step 3	Process	Decide which method(s) of analysis will provide you with the most useful and meaningful results.
Step 4	Calculation	Make a comparison between data by calculating one figure as a ratio of another. For example, profit as a percentage of sales revenue or borrowings as a proportion of total capital.
Step 5	Comparison	Compare the figures from this period with the results from the last period, those of your competitors or other companies under investigation.
Step 6	Interpretation	Look at the results obtained and interpret them in relation to values that would be considered poor, average or good.
Step 7	Action	If certain results are worrying, initiate further investigation (maybe into areas that are not covered in the financial accounts), or take corrective action.

Table 20.1 An explanation of the seven-point approach to ratio analysis

20.4 Liquidity ratios

These ratios focus on the short-term financial health of a business. If the ratios are too low, they may be indicating that the business will struggle to pay its bills when they come due.

Current ratio

This ratio looks at the relationship between current assets and current liabilities. It examines the **liquidity** position of the firm. It is given by the formula:

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

This is expressed as a ratio such as, for example, 2:1 or 3:1.

Example

Bannam Ltd has current assets of £30,000 and current liabilities of £10,000:

current ratio = current assets : current liabilities
= £30,000 : £10,000
= 3 : 1
current ratio = 3

Interpretation

The above example shows that Bannam Ltd has three times as many current assets as current liabilities. This means that, for every £1 of short-term debts owed, it has £3 of assets to pay them. This is a comfortable position.

Accountants suggest the 'ideal' current ratio should be approximately 1.5:1 (that is, £1.50 of assets for every £1 of debt). Any higher than this and the organisation has too many resources tied up in unproductive assets; these could be invested more profitably (or the cash could be handed back to shareholders). A low current ratio means a business may not be able to pay its debts. It is possible that the result may well be something like 0.8:1. This shows the firm has only 80p of current assets to pay every £1 it owes.

The current ratios of a selection of public companies in 2015 are shown in Table 20.2. As this table shows, it would be wrong to panic about a liquidity ratio of less than 1. Huge firms such as Tesco have often had liquidity levels of below 1.

Company	Balance sheet date	Current assets £millions	Current liabilities £millions	Current ratio
French Connection plc	31/01/2015	£82,500,000	£37,700,000	2.19
Ted Baker plc	25/01/2015	£160,000,000	£91,100,000	1.76
Tesco plc	28/02/2015	£11,958,000,000	£19,805,000,000	0.60
Morrisons plc	01/02/2015	£1,228,000,000	£2,273,000,000	0.54
JD Wetherspoon	25/01/2015	£81,839,000	£262,784,000	0.31

Table 20.2 The current ratios of a selection of public companies in 2015

Altering the ratio

If the ratio is so low that it is becoming hard to pay the bills, the company will have to try to bring more cash into the balance sheet. This could be done by:

- selling under-used fixed assets
- raising more share capital
- increasing long-term borrowings
- postponing planned investments.

Acid test ratio

This ratio takes a sharper look at the relationship between current assets and current liabilities. It does this by excluding stock levels from the calculation. This is because when times are tough it can be very difficult to sell (to 'liquidate') stock.

Calculating the acid test ratio requires the following formula:

$$\text{Acid test ratio} = \frac{\text{current assets (excluding stock)}}{\text{current liabilities}}$$

This is expressed as a ratio such as 0.5:1.

Example

Bannam Ltd has current assets of £30,000 of which £18,000 is in the form of stock; its current liabilities are £10,000:

Company	Balance sheet date	Current assets excl. stock £millions	Current liabilities £millions	Acid test ratio
French Connection plc	31/01/2015	£47,000,000	£37,700,000	1.25
Ted Baker plc	25/01/2015	£48,500,000	£91,100,000	0.53
Tesco plc	28/02/2015	£9,001,000,000	£19,805,000,000	0.45
Morrisons plc	01/02/2015	£570,000,000	£2,273,000,000	0.25
JD Wetherspoon	25/01/2015	£57,757,000	£262,784,000	0.22

Table 20.3 The acid test ratios of a selection of public companies in 2015

$$\begin{aligned} \text{Acid test ratio} &= \text{highly liquid assets} : \text{current liabilities} \\ &= £12,000 : £10,000 \\ &= 1.2 : 1 \end{aligned}$$

Interpretation

The above example shows that Bannam Ltd has 1.2 times as many highly liquid assets as current liabilities. This means that, for every £1 of short-term debts owed, it has £1.20 of assets to pay them. This is a comfortable position.

Accountants suggest the 'ideal' acid test ratio should be approximately 1:1 (that is, £1 of assets for every £1 of debt). A low acid test ratio means a business may not be able to pay its debts. It is possible that the result may well be something like 0.4:1. This shows the firm has only 40p of current assets to pay every £1 it owes.

The current ratios of a selection of public companies in 2015 are shown in Table 20.2. As this table shows, it would be wrong to panic about an acid test ratio of less than 1 (though the position of Morrisons and Wetherspoons looks worrying).

20.5 Gearing

Gearing is one of the main measures of the financial health of a business. Quite simply, it measures the firm's level of debt. This shines a light onto the long-term financial stability of an organisation.

Gearing measures long-term liabilities as a proportion of a firm's capital employed. It shows how reliant the firm is upon borrowed money. In turn, that indicates how vulnerable the firm is to financial setbacks. The Americans call gearing 'leverage'. In boom times, banks and investors find leverage (debt) very attractive; but high gearing always means high risk.

Highly geared companies can suffer badly in recessions, because even when times are hard they still have to keep paying high interest payments to the bank.

The formula for gearing is:

$$\text{gearing} = \frac{\text{non-current liabilities}}{\text{capital employed}} \times 100$$

This is expressed as a percentage.

Interpretation

The gearing ratio shows the level of long-term risk in a company's balance sheet. If loans represent more than 50 per cent of capital employed, the company is said to be highly geared. Such a company has to pay substantial interest charges on its borrowings before it can pay dividends to shareholders or retain profits for reinvestment. The higher the gearing, the higher the degree of risk. Low-gearred companies provide a lower-risk investment; therefore they can negotiate loans more easily and at lower cost than a highly geared company.

Company	Balance sheet date	Non-current liabilities (long-term loans)	Capital employed	Gearing (%)
Ted Baker plc	31/01/2015	£0	£140,574,000	0
Home Retail Group plc	28/02/2015	£311,300,000	£2,984,200,000	10.4
Morrisons plc	01/02/2015	£3,304,000,000	£6,898,000,000	47.9
Tesco plc	28/02/2015	£17,333,000,000	£24,404,000,000	71.0
JD Wetherspoon plc	25/01/2015	£781,187,000	£1,000,809,000	78.1

Table 20.4 The gearing ratios of a selection of companies in 2015

Real Business

Carlyle Capital Corporation

During the Credit Crunch, a US blogger with the fabulous name of Postman Patel warned that the Carlyle Capital Corporation (an American investment fund) was unable to pay its bills. Within a week it had collapsed, owing over \$16 billion. It emerged that Carlyle Capital had a gearing level of 97 per cent. In other words, only 3 per cent of the money it invested was its own money; all the rest was borrowed. When times were good, its shares were worth \$20 each. Now they were worth nothing. High gearing means high risk. Ridiculously high gearing means ridiculously high risk.

Altering the ratio

The gearing ratio can be altered in several ways, depending on whether the organisation wishes to raise or lower its gearing figure. Ways in which an organisation's gearing figure may be altered are shown in Table 20.5.

Raising gearing	Reducing gearing
Buy back ordinary shares	Issue more ordinary shares
Issue more preference shares	Retain more profits
Obtain more loans	Repay loans

Table 20.5 Altering an organisation's gearing ratio

20.6 Profitability ratios

For private businesses, a key objective is to make a profit. But how much profit? Consider the following example.

Example

Companies A and B operate in the same market. At the end of the year they report profits as follows:

	Company A	Company B
Profit	£100,000	£1 million

Table 20.6 Profits of Companies A and B

Which is the more successful company? Company B, surely. However, take into account the following additional information.

	Company A	Company B	As a %
Profit	£100,000	£1 million	10%
Sales revenue	£200,000	£10 million	2%

Table 20.7 Profits and sales revenue of Companies A and B

This shows that company A's profit is terrific in relation to its sales; better, in fact, than company B. Profitability ratios allow comparisons such as this to be made in detail. The figures can be compared in percentage terms. This makes comparison easier.

	Company A	Company B
Profit	£100,000	£1 million
Divided by	£200,000	£10 million
× 100 (to get a percentage)	50%	10%

Table 20.8 Profitability ratios of Companies A and B

Company A's success can now be seen much more clearly.

Chapter 37 of the AS book (*Business Year 1* for Edexcel) looked into profit margins in detail. It is worth re-reading that section, but here is a summary of what you need to know to answer A level questions on profit margins:

	Gross profit margin	Operating profit margin	Net profit margin
Formula	Gross profit/ Sales revenue × 100	Operating profit/ Sales revenue × 100	Profit after tax/ Sales revenue × 100
What it shows	Gross profit per £ of sales	Operating profit per £ of sales	Net profit per £ of sales
How to improve it	Price up Unit variable costs down	Boost gross margin Cut overheads per £ of sales Increase sales	Boost operating profit margins Cut corporation tax bill (legally!)
Problem if it's too low	May not be enough gross profit to cover overhead expenses	May not be enough operating profit to reinvest into the business and so get growth	May be too low to provide shareholders with acceptable annual dividends

Table 20.9 Summary of profit margins and profitability

Return on capital employed (ROCE)

This is sometimes referred to as being the primary efficiency ratio and is perhaps the most important ratio of all. It measures the efficiency with which the firm generates profit from the funds invested in the business.

$$\text{ROCE} = \frac{\text{operating profit}}{\text{capital employed}} \times 100$$

Operating profit is profit after all operating costs and overheads have been deducted. Capital employed is all the long-term finance of the business (debt plus equity).

Interpretation

The higher the value of this ratio the better. A high and rising ROCE suggests that resources are being used efficiently. ROCE measures profitability and no shareholder will complain at huge returns. The figure needs to be compared with previous years and that of other companies to determine whether this year's result is satisfactory or not.

A firm's ROCE can also be compared with the percentage return offered by interest-bearing accounts at banks and building societies. If bank interest rates are 6 per cent, what is the point of a sole trader investing money in his or her business, working very hard all year and making a return on capital employed of 4 per cent? The sole trader would be better off keeping the money in the bank, taking little risk and staying at home.

So what is the *right* level of ROCE? There is no clear answer, but most companies would regard a 20 per cent ROCE as very satisfactory. The returns achieved by a selection of public companies in 2015 are shown in Table 20.12.

Real business

A difficulty with using the return on capital ratio is that modern balance sheets hide the figure for capital employed. The problem can be seen with these figures from John Lewis Partnership (see Table 20.11). To find the capital employed, it's necessary to understand a bit about the balance sheet. Capital employed is all the long-term finance within a business. It comes from three sources: share capital, reserves and long-term loans (known as non-current liabilities). In 2014, JLP had £1 million of share capital, £1,781 million of reserves and £2,037 million of long-term debt. Note that although the non-current liabilities are in brackets on the balance sheet, I don't treat the figure as a negative number. It's simply in brackets because it's a liability not an asset. So JLP's capital employed in 2014 was £3,819 million.

In 2014, the business had operating profits of £424 million, so its ROCE figure was £424/£3,819 million × 100 = 11.1 per cent.

In 2015, the figure was:

2015 share capital	£1m
2015 reserves	£1,518m
2015 non-current liabilities	£2,641m
Total 2015 capital employed:	£4,160m

Table 20.10

So 2015, ROCE was: £450.2m / £4,160m × 100 = 10.8 per cent.

All figures in £millions

	2015	2014	2013
Non-current assets	4,682	4,385	4,116
Inventories	581	554	514
Receivables	252	226	192
Cash	340	360	542
Current liabilities	(1,695)	(1,706)	(1,634)
Net current assets	(522)	(566)	(386)
Non-current liabilities	(2,641)	(2,037)	(1,828)
Net assets	1,519	1,782	1,902
Share capital	1	1	1
Reserves	1,518	1,781	1,901
Total equity	1,519	1,782	1,902

Table 20.11 John Lewis partnership balance sheet (last day of January)

Altering the ratio

The return on capital employed can be improved by:

- increasing the level of profit generated by the same level of capital invested, or
- maintaining the level of profits generated but decreasing the amount of capital it takes to do so.

Company (in Costa's case it is a division of a company)	Annual operating profit	Capital employed	ROCE
Costa UK (coffee bars)	£132,500,000	£286,100,000	46.3%
Ted Baker (retailing)	£49,759,000	£140,574,000	35.4%
Marks & Spencer (retailing)	£600,000,000	£6,085,000,000	9.9%
Mandarin Oriental (hotels)	£120,800,000	£1,537,000,000	7.9%

Table 20.12 The return on capital employed (ROCE) achieved by a selection of public limited companies in 2014/2015

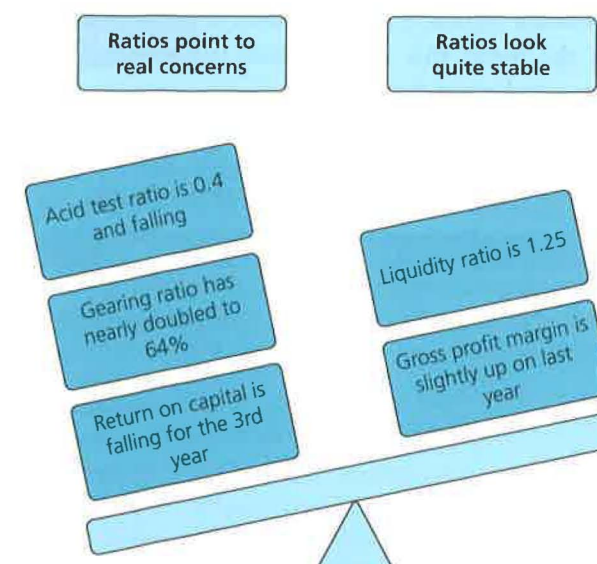


Figure 20.2 Logic balance: judging a company's finances using ratios

20.7 Interpret ratios to make business decisions

Money acts as the language of accounting, allowing business transactions to be measured, compared and added together. This means that accounts focus on items that can be given a financial value. Yet a successful business depends on a lot more than the price paid for property and equipment, or the size of its outstanding debt. For example, a firm's culture and its attitude to risk-taking will be at the heart of its performance. Similarly, a highly skilled, loyal and motivated workforce, a commitment to behaving in an ethical and environmentally friendly manner or a reputation for excellent customer service can increase a firm's ability to compete against rivals. These aspects of a business are likely to make it worth more, both to existing owners and potential buyers. However, such features are difficult to express in numerical terms and are therefore ignored by the main accounting statements.

To help make business decisions, the most important issue that ratios can help with is: can we afford it? The decision itself can be evaluated using investment appraisal or decision tree techniques. But can the business afford it? If not, it shouldn't proceed. There are three main ways of financing a decision:

- Use working capital, such as cash or the cash soon to come from customers; note, though, that taking cash from your working capital will worsen your liquidity ratios.

- Borrow the capital, e.g. in the form of a five-year loan from the bank; this will increase the gearing ratio, perhaps making it riskily high.
- Fund the expansion by asset sales; this will work well from a ratio viewpoint, but leave the business with too few assets to fall back on if times get tough.

Decision	Ratios	Evaluation
Can we afford to spend £50 million on launching in China?	Acid test 0.95 Gearing 24.5%	Finance can come from extra borrowing (to a 50% gearing maximum) plus some use of working capital (to an acid test minimum of 0.6)
Do we need to put our prices up?	Gross margin This year: 8.7% Last year: 10.2%	The problem should be addressed, but price elasticity of demand must also be considered before proceeding
Should we focus on Divisions A and B and sell off Division C?	ROCE figures for: Division A 22.6% Division B 31.4% Division C 5.7%	Unless Division C produces something of value to Division A or B, there's a strong case for selling it off and focusing on the strongest areas of the business

Table 20.13 Interpreting ratios to make decisions

20.8 Limitations of ratio analysis

Weaknesses

The main single weakness is to take the figures from ratio analysis as if they are facts; the reality is that they are more like averages – and averages can be deceiving. The average temperature for the year in London and in Calgary, Canada is similar at around 10 degrees centigrade. But in London a typical range is from +2 to +24 centigrade. In Calgary it's from -12 to +29. Consider the importance of this in relation to the following.

Receivables

Firms are usually content to sell goods on credit to customers in order to generate sales; any outstanding payments are recorded as a current asset on the balance

sheet. However, this figure tells us very little about the nature of the receivables themselves. Does the overall figure consist of regular customers who can be relied upon to pay on time, or long overdue amounts that are unlikely to ever be received? A high proportion of receivables made up of **bad debts** will result in an overvaluation of a firm's current assets on the balance sheet. That would mean that the current and acid test ratio figures would overstate the true liquidity position of the business.

Stock

The value of stock at the end of a trading period affects both the value of the business due to its inclusion on the balance sheet (under current assets) and the value of profit (due to its effect on cost of goods sold in the trading account). But how reliable is the value attached to it? The value of stock can change rapidly, especially in industries subject to frequent changes in customer tastes. The traditional accounting practice is to value stock at cost or **net realisable value**, whichever is the lower. This means that the value of unsellable stock is potentially zero.

Profit quality

The ability to generate profit is generally accepted as a key indicator of success. However, it is also worth checking the source of this profit in order to assess the likelihood of such profits continuing into the future. Selling off a piece of machinery at a price above its book value will generate a surplus, but this can only happen once and is, therefore, described as being of low **profit quality**. It is important that a firm's accounts separate 'one-off' low-quality profit from the high-quality profit that results from its normal trading activities.

'How do you explain to an intelligent public that it is possible for two companies in the same industry to follow entirely different accounting principles and both get a true and fair audit report?'

M. Lafferty, banker and writer

'Research evidence is consistent with the view that managers use latitude in existing financial reporting to benefit themselves.'

Lawrence Revsine, US academic

20.9 Ratio analysis – evaluation

Ratio analysis is a powerful tool in the interpretation of financial accounts. It can allow for comparison between rival companies (**inter-firm comparison**), appraisal of financial performance and the identification of trends. It can therefore be of great help in financial planning and decision-making.

However, because of its usefulness and the range of possible applications, there is a tendency to attach too much importance to the results gained from this analysis. Other types of analysis exist such as market share trends, and there are sometimes more important issues at stake than just financial performance. A changing society has seen a greater interest in social and ethical aspects of business performance. Although ratio analysis is useful, it is limited in the area it investigates.

'When you combine ignorance and leverage (gearing), you get some pretty interesting results.'

Warren Buffet, investment guru

'A pig bought on credit is forever grunting.'

Proverb

Key terms

Bad debts: money owed to the business that will never be repaid; perhaps a customer has gone into liquidation.

Inter-firm comparisons: comparisons of financial performance between firms; to be valuable, these comparisons should be with a firm of similar size within the same market.

Liquidity: the ability of a firm to meet its short-term debts; liquidity can also be understood as being the availability of cash or assets that can easily be converted into cash.

Net realisable value: the price that can be obtained for second-hand stock after deducting the selling costs.

Profit quality: this assesses the likelihood of the source of the profit made by a business continuing in the future. High-quality profit is usually that which is generated by a firm's usual trading activities, whereas low-quality profit comes from a one-off source.

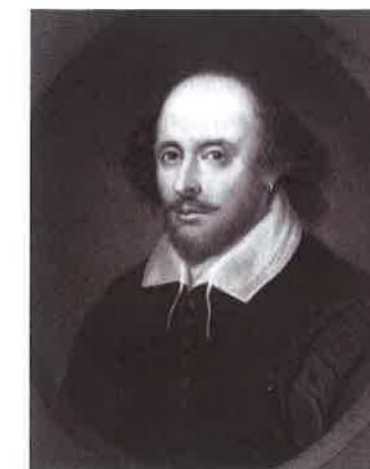


Figure 20.3 'Neither a borrower nor a lender be.'
W. Shakespeare, playwright: Hamlet

Five whys and a how

Questions	Answers
Why are financial ratios needed at all?	Because they cut through the huge amount of data in company accounts, allowing the user to focus on a few key pieces of analysis.
Why is it sometimes said that ratios raise questions but don't answer them?	Because the ratio results don't tell you the thinking behind them, so a rise in gearing may be because the business is 'gearing up' for a major new product launch.
Why is ROCE usually regarded as the single most important ratio?	Because it shows the real profitability of the business – measured against all the capital invested, so it measures financial efficiency.
Why do some firms operate with acid test ratios as low as 0.3?	Because they have the market strength to be confident that suppliers will not press too hard to be paid on time.
Why do some businesspeople and City analysts find gearing exciting?	Because high gearing means high risks but also high rewards if things go well.
How many ratios do you really need to understand a company's performance?	The three most important ratios are ROCE (profitability), the acid test ratio (short-term financial health) and gearing (longer-term financial health).

20.10 Workbook

Revision questions

(30 marks; 30 minutes)

- 1 List four groups of people who may be interested in the results of ratio analysis. (4)
- 2 State the key stages in conducting an analysis of company accounts using ratios. (7)
- 3 Explain why the return on capital employed (ROCE) is regarded as one of the most important ratios. (3)
- 4 Explain why a financial analyst might criticise a company for having a current ratio that's 'too high'. (4)
- 5 Outline two problems that a company could experience if its gearing ratio rose significantly. (4)
- 6 Explain one reason why investors might treat the results of ratio analysis with caution. (4)
- 7 Explain how a business might set about improving its return on capital ratio. (4)

Practice exercises

(40 marks; 40 minutes)

- 1 A garden furniture producer wants to buy a garden centre. It has identified two possible businesses and conducted some ratio analyses to help it decide which one to focus on. Look at the ratios in Table 20.14, and decide which business you would recommend and why. (10)

	Blooms of Broadway	Cotswold Carnations
Gross profit margin	60%	45%
Return on capital	15.2%	14.6%
Gearing	52%	35%
Sales growth (last 3 years)	+3.5% per year	+4.8% per year

Table 20.14 Ratio analysis conducted for two garden centres

- 2 The balance sheet for GrowMax Co as at 31 December is shown in Table 20.15.

	£000
Non-current assets	860
Inventories	85
Receivables	180
Cash	15
Current liabilities	200
Non-current liabilities	360
Share capital	160
Reserves	420

Table 20.15 Balance sheet for GrowMax Co as at 31 December

- a) Calculate the firm's net current assets and capital employed. (8)
- b) Last year's revenue was £1,460,000 and operating profit margin was 10 per cent. Assess the firm's profitability this year. (10)
- c) Assess the difficulties there may be in drawing firm conclusions from comparisons between the ratios of two rival companies. (12)

Revision activities

Data response

	Tesco 2015	Sainsbury's 2015	Morrisons 2015
Revenue	62,300	23,800	17,700
Cost of sales	(64,400)	(22,600)	(16,600)
Gross profit	(2,100)	1,200	1,100
Overheads and interest charges	(3,300)	(550)	(400)
Exceptional one-off profits/losses	(1,000)	(720)	(900)
Pre-tax (operating) profit	(6,400)	(70)	(200)
Tax	600	(90)	(50)
Profit after tax	(5,800)	(160)	(250)
Dividends	(900)	(330)	(280)
Retained profit	(6,700)	(490)	(530)

Table 20.16 Published accounts from three grocery retailers: Income statement (year to Feb/March 2015) (all figures in £millions)

	Tesco 2015	Sainsbury's 2015	Morrisons 2015
Fixed (non-current) assets	32,200	12,000	7,950
Stock (inventories)	3,000	1,000	660
Debtors (receivables)	6,300	2,200	330
Cash	2,700	1,300	240
Trade payables	(10,000)	(6,300)	(2,230)
Overdraft	(9,800)	(600)	(50)
Net current assets	(7,800)	(2,400)	(1,050)
Long-term (non-current) liabilities	(17,300)	(4,100)	(3,300)
NET ASSETS	7,100	5,500	3,600
Share capital	5,500	1,600	400
Reserves	1,600	3,900	3,200
TOTAL EQUITY	7,100	5,500	3,600

Table 20.17 Published accounts from three grocery retailers. Balance sheets as at Feb/March 2015 (all figures in £millions)

Questions (40 marks; 45 minutes)

- 1 a) Calculate the current ratio for each of the three retailers. (4)
b) Assess the liquidity of each on the basis of your findings. (10)
- 2 Assess the profitability of the three retailers using return on capital employed. (12)
- 3 a) Calculate the gearing levels for each of the three grocers. (4)
b) On the basis of this data, assess which is in the weakest position to raise extra loan capital. (10)

Extended writing

- 1 'The ability to assess the long- and short-term financial stability of an organisation is vital to every stakeholder.' Evaluate this statement. (20)
- 2 With the economy entering a recession, an investor wants to reassess her share portfolio. Evaluate whether she can rely solely on the return on capital ratio, given the economic circumstances. (20)