56 The value and limitations of ratio analysis

The value of ratio analysis

Ratio analysis is used by people such as business owners, managers, financial analysts and the media to help evaluate the performance of businesses. It is a tried and trusted approach to financial analysis and has a number of distinct advantages.

Simplicity Ratios are easy to calculate. They are generally one number divided by another, using figures that can be taken directly from the accounts (or notes to the accounts). Most ratios have a consistent formula and only a few (such as gearing) are subject to variation in definition by different users. This simplicity makes ratios easy to understand. For example, a net profit margin of 7 per cent is easily recognisable as being better than one of 4 per cent.

Speed Ratio analysis can be carried out very quickly. Once the necessary information has been gathered from annual reports the financial situation of a company can be analysed very quickly indeed. Most companies make their annual reports available on the Internet and other important information, such as share prices, can also be accessed instantly online.

Comparisons Ratios are ideal for making comparisons between companies, especially those in the same industry that operate under the same environmental conditions. They may be companies of a different size and shape but ratio analysis can be used to look at them in the same light. Interfirm comparisons, comparisons over time and interfirm comparisons over time can all be made using ratio analysis. A business might also use ratios to make internal comparisons. For example, it could compare the net profit margins for different products or the ROCE in different divisions.

Decision making Ratio analysis may be of use to decision makers in businesses. This is because ratio analysis can help to identify strengths and weaknesses in the organisation. For example, if a business discovers that its gross profit margins are very high but net margins are very low, the manager may decide to undertake a cost minimisation strategy.

Limitations to ratio analysis

Unfortunately ratio analysis is not without its problems, consequently it must be used with caution. Some of the key limitations are outlined below.

The basis for comparison A great deal of care must be taken when making comparisons using ratios. It is very important to compare 'like with like'.

- Comparisons over time Care must be taken when comparing ratios from the same company over time. Many companies remain broadly in the same industrial sector over time. But others can diversify and change very rapidly. Equally, some companies remain the same size over time. Others grow rapidly or shrink quickly. Such factors can affect the way in which ratios can be used as a measure of performance. The measures of performance of a small company which starts off in the defence sector and grows rapidly to become a leading telecommunications equipment manufacturer will change over time. The value of a particular ratio that is appropriate for the company will therefore change. This must be taken into account when comparing ratios.
- Interfirm comparisons Caution must also be used when comparing ratios between companies at a point in time. Comparing the ratios of two companies which make broadly the same products is likely to say something about their relative performance. But comparing the ratios of a supermarket chain with a cement manufacturer is unlikely to be helpful in most cases. The two companies, for example, will have different working capital needs, different profit margins and different asset turnover ratios. Even companies operating in the same industry can have 'subtle' differences. An example is shown in Figure 1.

Figure 1: Comparing 'like with like'

Tesco and Sainsbury are supermarket chains. However, Tesco is selling more and more non-food products such as electrical goods, clothing and kitchen equipment. This makes a direct comparison less meaningful. For example, the profit margins on non-food items might be much higher than those on groceries.

Sainsbury's
Sainsbury's
Sainsbury's
6 free range eggs
TESCO
Tea Towels
TESCO
14cm Milk pa
Home
£75
TESCO
Mortgage finder
A great of extende
TESCO
Loans
Only
6.8%
APR Typical
2007

- Other differences Even when companies are well matched in their activities and operating circumstances, there may be other differences between them which must be observed. For example, two similar companies may use different accounting techniques. They may use different methods to calculate depreciation or employ different stock valuation methods. If the same accounting conventions have not been used comparisons may be misleading. Companies can also have different year-ends. For example, two companies publishing their accounts for 2008 could be presenting financial information in two quite different time periods. This would happen if one company ended its financial year on 31 December and the other on 31 July. In this case only six months of the year would be truly comparable.

Limitations of the balance sheet Because the balance sheet is a 'snapshot' of the business at the end of the financial year, it might not be representative of the business's circumstances through the whole of the year. If, for example, a business experiences its peak trading activity in the summer, and it has its year-end at a time when trade is slow, in the New Year, figures for stock and debtors will be unrepresentative.

Qualitative information is ignored Ratios only use quantitative information. However, some important qualitative factors may affect the performance of a business. Such factors may be ignored by ratio analysis. For example, in the service industry the quality of customer service may be an important performance indicator. Ratio analysis cannot easily embrace such information.

The quality of final accounts Ratios are based on financial accounts such as the balance sheet, profit and loss accounts and income statements. Consequently ratio analysis is only useful if the accounts are accurate. One factor that can affect the quality of accounting information is the change in monetary values caused by inflation. Rising prices can distort comparisons made between different time periods. For example, in times of high inflation, asset values and revenue might rise rapidly in monetary terms. However, when the figures are adjusted for inflation, there might be no increase in **real terms**. There is also the possibility that the accounts have been **window dressed**. This is discussed next.

Window dressing

Accounts must represent a 'true and fair record' of the financial affairs of a business. Legislation and financial reporting standards place limits on the different ways in which a business can present accounts. These limits are designed to prevent fraud and misrepresentation in the compilation and presentation of accounts. However, businesses can manipulate their accounts legally to present different financial pictures. This is known as WINDOW DRESSING. Businesses may want to window dress their accounts for a variety of reasons.

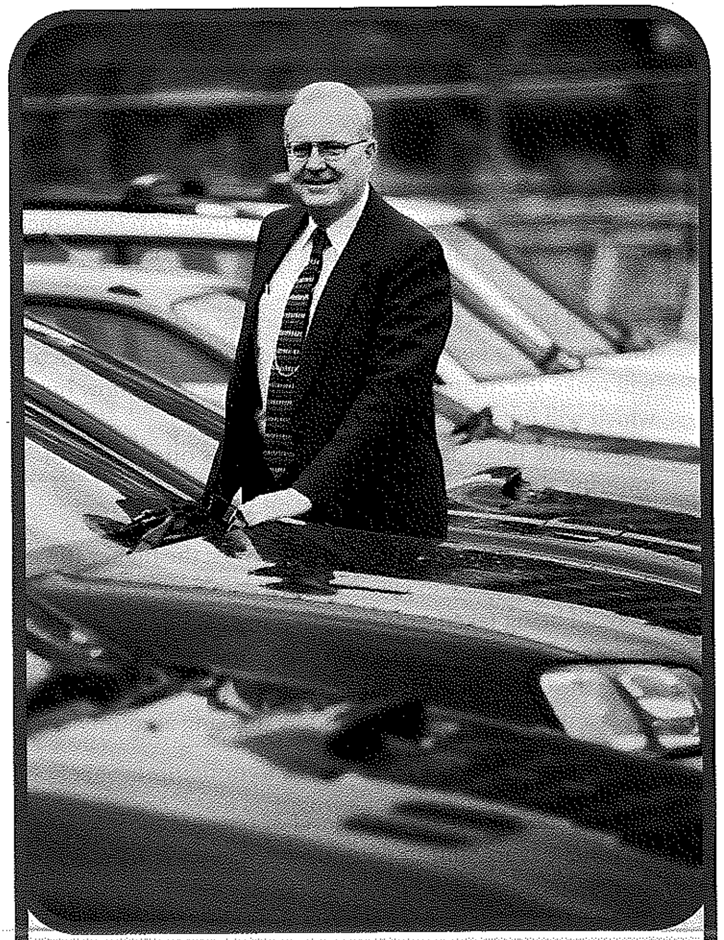
- Managers of companies might want to put as good a financial picture forward as possible for shareholders and potential shareholders. Good financial results will attract praise and perhaps rewards. They might also prevent criticism from shareholders and the financial press.
- If a business wants to raise new capital from investors, then it will want its financial accounts to look as good as possible.
- Where a business has experienced severe difficulties during the accounting period, it may decide to take action which will make the financial position look even worse now but which will improve figures in the future.
- Making the financial picture look worse is often a way of lowering the amount of tax that is paid.
- If the owners of a business want to sell it, the better the financial position shown on the accounts, the higher the price they are likely to get. Equally, a company which wants to avoid being taken over can discourage predators by showing flattering accounts because these accounts would make the cost of buying the company higher.

There is a number of ways of window dressing accounts explained in this unit.

Manipulating sales Increasing the level of revenue recorded on the profit and loss account or income statement will increase profit in that accounting period. This can be done in a number of ways. Some businesses, for example, are able to choose when they record a sale onto the profit and loss account. For example, a software company can choose under UK accountancy practice either to record a software licence deal when a contract has been signed or when the revenue has been received. Choosing to record a deal today will boost profits at the expense of profits in future accounting periods.

Another practice relates to stocks. At the financial year end, a business may make a special effort to dispatch all outstanding orders. This can boost sales in that accounting period and so flatter the profit and loss account figures. It also reduces stocks of finished goods. This can flatter the balance sheet figures, for example, by increasing the stock turnover ratio.

Costs and depreciation Profits on the profit and loss account or income statement can be increased if costs are reduced. One way of reducing costs is to reduce the cost of depreciation. Depreciation of assets like buildings, vehicles or machinery takes place over a number of years. Take a building initially valued at £1 million. If the business depreciates the building over 10 years using the straight-line method, then each year the cost of depreciation will be £100,000 (£1 million ÷ 10). This is a cost on the profit and loss account. What if the business were to depreciate the building over 25 years instead? Then the annual depreciation charge would be £40,000 (£1 million ÷ 25 years). For the first ten years, profits on the profit and loss account would then be £60,000 (£100,000 - £40 000) a year higher with depreciation over 25 years compared to a depreciation over a ten



Question 1.

Pennell's plc is a medium sized car dealership in East Anglia. This year has been very disappointing for sales. Despite record sales nationally, Pennell's sales have actually declined. Senior management were worried about the impact this would have on the share price and on shareholder reaction. They therefore agreed on a strategy to boost sales in the all important last financial month of the year to 30 April.

All car sales staff were offered twice the bonus they normally received for selling cars during April so long as the customer took delivery of the car and paid for it in full by the last day of the financial year. As the end of the month approached, sales staff were having to be very persuasive to get some customers who had chosen a car and placed a deposit on it to take delivery of the car on the 30 April rather than in early May.

At the same time, employees were told to cut all unnecessary expenses. There had been a ban in place since mid-February on replacing existing staff who left. Stocks of parts were also run down as far as possible. All this led to some operating difficulties. Waiting times for a service lengthened from around 3 days to 4 days, while some customers found that their repairs took a day longer because parts, normally kept on site, had to be ordered specially from suppliers.

(a) Explain how the managers at Pennell's manipulated (a) sales and (b) costs to window dress the profits of the company at its year end.

(b) Discuss what impact this window dressing might have had on revenues, costs and profits for the next financial year.

year period. However, for years 11-25, profits would be £40 000 lower. This is because if it has been depreciated over ten years, there is no cost for years 11-25. But if it has been depreciated over 25 years, £40 000 a year is still being accounted for as a cost on the profit and loss account.

Depreciation also has an effect on the balance sheet. In the above example, depreciating the building over 25 years rather than 10 years means that profit on the profit and loss account would be higher in the first ten years because the annual depreciation charge, an expense, would be lower. In later years profit will be lower. On the balance sheet, the reverse is true. Fixed assets will tend to be higher if the asset is depreciated over 25 years rather than 10 years. For example, if the £1 million building is depreciated over 25 years, then it has a fixed asset value of £600 000 at end of year 10 (£1 million x 15 ÷ 25). But if it is depreciated over 10 years, it has £0 value at the end of year 10.

A business can also 'write off' its R&D (research and development) costs. Accounting standards allow R&D costs to be written off immediately. Or they can be 'capitalised', treated as an intangible asset and then amortised (i.e. depreciated) over a number of years. What if development costs are depreciated immediately instead of over a number of years? This will reduce profits this year on the profit and loss account but increase them in future years. For example, assume that a company has spent £10 million on R&D this year. It could write these off immediately, increasing costs on the profit and loss account by £10 million and so reducing profit by £10 million. Or it could capitalise the R&D and depreciate it over, say, 10 years. Then each year, including the first year, there would be a cost on the profit and loss account of £1 million (£10 million ÷ 10 years) reducing profit each year by £1 million.

A business must be consistent in the method of depreciation it uses. Businesses don't frequently change their method of depreciation. Indeed, accounting standards only allow a business to change methods if there are 'justifiable reasons'. However, businesses occasionally do change their method of depreciation, for instance by lengthening the period of depreciation or changing the way in which R&D is amortised. This can provide a boost to profits over a number of years and is helpful to a company which is perhaps experiencing low profits and is being criticised by shareholders.

Extraordinary items Businesses are allowed to classify some costs as **extraordinary items**. These are 'one-off' costs such as the costs associated with shutting down a factory or writing off the goodwill from the acquisition of a company. Writing off assets in this way might seem to put a business in a bad light with investors or shareholders. But some companies choose deliberately to write off assets in an accounting period when the business has done badly anyway. Getting all the 'bad news' out at once is better than having continued poor performance over a number of years.

For example, take a business which made some disastrous acquisitions in the past. The companies it bought have performed very poorly. It also paid more for the companies taken over than the value of their tangible assets. Hence, there is now, say, a £100 million entry on the balance sheet as goodwill, an intangible asset. This year, the company is due to announce a £50 million loss. So its directors decide to get all the bad news out at once by writing off the £100 million in goodwill. The loss this year then becomes £150 million. But in future years, reported profits will be higher because there will be no depreciation on the goodwill.

Writing off assets like this also improves future rates of return on capital. In the example, the company now has higher future profits from writing off the £100 million. But in future it will also have £100 million less in assets. Since the rate of return on capital is profit divided by assets, the rate of return will inevitably increase.

Bad debts A business may choose to write off some of its bad debts. This has exactly the same effect as writing off fixed assets. In the short term, profit is reduced by the value of the bad debts. But future profit figures are likely to be improved. This is because most of those bad debts would have had to be written off anyway. A few of the debts may, however, suddenly be paid. This would then be counted as part of revenue boosting profit.

Changing asset values A business can increase the value of tangible fixed assets such as land and buildings, where this is justified by property valuations. Unlike equipment, land and property can increase in value over time, rather than depreciate. A business choosing to revalue its property on the balance sheet would boost the value of its assets, possibly making the balance sheet look stronger. Note that a company which chooses to do this must make an equal and opposite adjustment under capital on the balance sheet under the revaluation reserve.

Boosting liquidity A business may be able to boost liquidity on its balance sheet. Some businesses have too little liquidity, giving rise to cash flow problems as well as working capital problems. One way to boost liquidity is to use sale and leaseback with property. By selling property to a property company and arranging for that property to be leased back to it, a business can release cash tied up in a fixed asset. In the first year, the cash benefit to the business is the value of the property sale minus the lease payment. Sale and leaseback therefore is a way of increasing liquid assets through the sale of fixed assets. If the cash generated from a sale and leaseback scheme is used to pay off long-term loans, the business will also be able to reduce its gearing. Gearing is loans ÷ equity expressed as a percentage. If equity was £20 million and loans £30 million, then gearing would be high at 150 per cent (100% x £30 million ÷ £20 million). If a sale and leaseback deal generated £8 million, loans could be reduced to £22 million (£30 million - £8 million) and gearing would fall to 110 per cent (100% x £22 million ÷ £20 million).

Current assets and liabilities Some businesses have problems with aspects of their current assets and liabilities. The year end can be a time when the business makes a special effort to improve its performance. For example, a business can improve its debtors' data by making a special effort to collect in money owed by late paying debtors. This is likely to increase the amount of cash in the business or reduce short-term borrowings on overdraft. It also improves debtors' ratios. It can attempt to improve its creditors' position by repaying as much as possible, for example by repaying early. It could also get discounts for doing this, which might help show its accounts in a better light. As explained above, a business could try to hide a problem of excessive stock levels by not ordering new stock towards the year end and by making a special effort to dispatch finished stock to customers.

KEYTERMS

Window dressing – the legal manipulation of accounts by a business to present a financial picture which is to its benefit.

KNOWLEDGE

1. Explain three advantages of using ratio analysis.
2. When making comparisons with ratios it is important to compare 'like with like'. Explain what this means.
3. Why does ratio analysis ignore qualitative information?
4. Explain why a company may want to window dress its accounts.
5. How can a company manipulate (a) its sales and (b) its costs to flatter its recorded profits on the profit and loss account?
6. How might (a) extraordinary items and (b) exceptional items be used to window dress accounts?
7. How might bad debts be manipulated to window dress accounts?
8. How might liquidity be boosted on the accounts?
9. How might a company manipulate its current assets and liabilities to window dress its accounts?