

# interpreting financial statements

## relevant to CAT Scheme Paper 6 and Professional Scheme Paper 1.1

# ratios

■ In the exams for CAT Paper 6, *Drafting Financial Statements* and Professional Scheme Paper 1.1, *Preparing Financial Statements* candidates are often required to prepare accounting ratios and to interpret them. The main ratios that candidates will need to know are discussed in this article, and the formulae for them are given in Figure 1 on page 43.

Financial statements provide important financial information for people who do not have access to the internal accounts. For example, current and potential shareholders can see how much profit a company has made, the value of its assets, and the level of its cash reserves. Although these figures are useful they do not mean a great deal by themselves. If the user is to make any real sense of the figures in the financial statements, they need to be properly analysed using accounting ratios and then compared with either the previous year's ratios, or measured against averages for the industry.

### PROFITABILITY RATIOS

One of the most important measures of a company's success is its profitability. However, individual figures shown in the income statement/profit and loss account for gross profit and net profit mean very little by themselves. When these profit figures are expressed as a percentage of sales, they are more useful. This percentage can then be compared with those of previous years, or with the percentages of other similar companies.

Changes in the **gross profit percentage** ratio can be caused by a number of factors. For example, a decrease may indicate greater competition in the market and therefore lower selling prices and a lower gross profit or, alternatively, an increase in the cost of purchases. An increase in the gross profit percentage may indicate that the company is in a position to exploit the market and charge higher prices for its products or that it is able to source its purchases at a lower cost.

The relationship between the gross and the **net profit percentage** gives an indication of how well a company is managing its business expenses. If the net profit percentage has decreased over time while the gross profit percentage has remained the same, this might indicate a lack of internal control over expenses.

The **return on capital employed (ROCE)** ratio is another important profitability ratio. It measures how efficiently and effectively management has deployed the resources available to it, irrespective of how those resources have been financed. Various formulae can be found in textbooks for calculating ROCE. The most common uses operating profit (defined as profit before interest and taxation) and the closing values for capital employed (although using averages for the year is more accurate). This ratio is useful when comparing the performance of two or more companies, or when reviewing a company's performance over a number of years.

### LIQUIDITY RATIOS

Liquidity refers to the amount of cash a company can generate quickly to settle

its debts. A reasonable level of liquidity is essential to the survival of a company, as poor cash control is one of the main reasons for business failure. The **current** ratio compares a company's liquid assets (ie cash and those assets held which will soon be turned into cash) with short-term liabilities (payables/creditors due within one year). The higher the ratio the more liquid the company. As liquidity is vital, a higher current ratio is normally preferred to a lower one. However, a very high ratio may suggest that funds are being tied up in cash or other liquid assets, and may not be earning the highest returns possible.

A stricter test of liquidity is the **acid test** ratio (also known as the **quick** ratio) which excludes inventory/stock as a current asset. This approach can be justified because for many companies inventory/stock cannot be readily converted into cash. In a period of severe cash shortage, a company may be forced to sell its inventory/stock at a discount to ensure sales.

Caution should always be exercised when trying to draw definite conclusions on the liquidity of a company, as both the current ratio and the acid test ratio use figures from the balance sheet. The balance sheet is only a 'snapshot' of the financial position at the end of a specific period. It is possible that the balance sheet figures are not representative of the liquidity position during the year. This may be due to exceptional factors, or simply because the business is seasonal in nature and the balance sheet figures represent the cash position at just one particular point in the cycle.

### EFFICIENCY RATIOS

Most companies offer their customers credit in order to increase their sales. However, giving credit to customers incurs an opportunity cost as the cash is tied up in financing receivables/debtors, and there is also the risk of the debts not being paid. Therefore, companies will normally seek to collect their debts as soon as possible. The **receivables/debtors collection period** (in days or months) provides an indication of how successful (or efficient) the debt collection process has been.

The **payables/creditors payment period** links the value of payables/creditors with the amount of goods and services that a company is purchasing on credit. A common view is that payables/creditors provide a source of free finance to the company, and that the payments to payables/creditors should be deferred as long as possible. However, this view ignores the value of any cash settlements or discounts that may be offered by suppliers. In addition, excessive delays in payment may result in a reduction in the general terms of trade that suppliers are prepared to offer.

A company needs to carefully plan and manage its inventory/stock levels. Ideally, it must avoid tying up too much capital in inventory/stock, yet the inventory/stock levels must always be sufficient to meet customer demand. The **inventory/stock turnover period** indicates the average number of days that inventory/stock is held for. A change in the inventory/stock turnover period can be a useful indicator of how well a company is doing. A lengthening in the inventory/stock turnover period may indicate a slowing down of trading or an unnecessary build up of inventory/stock.

#### INVESTOR RATIOS

The **earnings per share** ratio of a company represents the relationship between the earnings made during an accounting period (and available to shareholders) and the number of shares issued. For ordinary shareholders, the amount available will be represented by the net profit after tax (less any preference dividend where applicable).

Many investment analysts regard the earnings per share ratio as a fundamental measure of a company's performance. The trend in earnings per share over time is used to help assess the investment potential of a company's shares. However, an attempt should be made to take into account the effect of a company increasing its retained earnings. Most companies retain a significant proportion of the funds they generate, and hence their earnings per share will increase even if there is no increase in profitability.

The **dividend cover** ratio focuses on the security of the current rates of dividends, and therefore provides a measure of the likelihood

that those dividends will be maintained in the future. It does this by measuring the proportion represented by current rates of dividends of the profits from which such dividends can be declared without drawing on retained earnings. The higher the ratio, the more profits can decline without dividends being affected.

The **dividend yield** compares the amount of dividend per share with the market price of a share, and provides a direct measure of the return on investment in the shares of a company. Investors are able to use this ratio to assess the relative merits of different investment opportunities.

The **price earnings** ratio compares the benefits derived from owning a share with the cost of purchasing such a share. It provides a clear indication of the value placed by the capital market on those earnings and what it is prepared to pay for participation. It reflects the capital market assessment of both the amount and the risk of these earnings, albeit subject to overall market and economic considerations.

#### FINANCING RATIOS

Current and potential investors will be interested in a company's financing arrangements. The extent to which a company is financed by outside parties is referred to as gearing. The level of gearing in a company is an important factor in assessing risk. A company that has borrowed money obviously has a commitment to pay future interest charges and make capital repayments. This can be a financial burden and possibly increase the risk of insolvency. Most companies will be geared to some extent.

The **gearing** ratio measures the company's commitments to its long-term lenders against the long-term capital in the company. The level of gearing will be influenced by a number of factors, for example the attitude of the owners and managers to risk, the availability of equity funds, and the type of industry in which the company operates.

The **interest cover** ratio measures the amount of profit available to cover the interest payable by the company. The lower the level of interest cover the greater the risk to lenders that interest payments will not be met. If interest payments and capital repayments are not paid when they fall due there can be

serious consequences for a company. In the event of a default, a lender may have the right to seize the assets on which the loan is secured and sell them to repay the amount outstanding. Where lenders do not have security on their loan, they could still apply to the courts for the winding up of a company so that assets can be liquidated and debts repaid.

#### LIMITATIONS OF RATIO ANALYSIS

When interpreting accounting ratios, students should always bear in mind the following:

- Comparative information is essential for any meaningful ratio analysis. A lack of information about either industry averages or previous years' performance will severely limit analysis.
- Accounting ratios are based on income statements/profit and loss accounts and balance sheets, both of which are subject to the limitations of historical cost accounting. Inflation, differing bases for valuing assets, or specific price changes can distort inter-company comparisons, and comparisons made over time.
- Ratio analysis helps to build a picture of a company. The richness of the picture depends on the quality of the financial information on which the ratios are based. If the accounts are poorly constructed (eg poor estimates of depreciation, bad debts etc) then conclusions drawn from the accounting ratios will be flawed.
- Past company performance is not necessarily the best indicator of future performance. Indeed, by the time accounts are published and available for analysis they may already be out of date.

#### CONCLUSION

Accounting ratios are an important tool used by accountants and others for interpreting accounting statements. Students studying for CAT Scheme Paper 6 and Professional Scheme Paper 1.1 need to be able to calculate these ratios and interpret them. Students should be aware of the limitations of ratios and the need for caution when formulating any conclusions. ■

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In the exams for CAT Paper 6 and Professional Scheme Paper 1.1, candidates are often required to prepare accounting ratios and to interpret them. The main ratios that candidates will need to know are discussed in this article, and the formulae for them are given in **Figure 1** below. If the user is to make any real sense of the figures in the financial statements, they need to be properly analysed using accounting ratios and then compared with either the previous year's ratios, or measured against averages for the industry.

**FIGURE 1: KEY ACCOUNTING RATIOS**

<b>Profitability ratios</b>		
Gross profit percentage	$\frac{\text{Gross profit}}{\text{Sales (revenue)}}$	x 100%
Net profit percentage	$\frac{\text{Net profit}}{\text{Sales (revenue)}}$	x 100%
Return on capital employed	$\frac{\text{Operating profit}}{\text{Capital employed}}$	x 100%
<b>Liquidity ratios</b>		
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	:1
Quick/acid test/liquidity ratio	$\frac{\text{Current assets} - \text{inventory/stock}}{\text{Current liabilities}}$	:1
<b>Efficiency ratios</b>		
Receivables/debtors' collection period	$\frac{\text{Trade receivables/debtors}}{\text{Sales}}$	x 365 days
Payables/creditors' payment period	$\frac{\text{Payables/creditors}}{\text{Purchases}}$	x 365 days
Inventory/stock turnover period	$\frac{\text{Inventory/stock}}{\text{Cost of sales}}$	x 365 days
<b>Investor ratios</b>		
Earnings per share	$\frac{\text{Profit after taxation, preference dividends and extraordinary items}}{\text{Ordinary shares}}$	
Dividend cover	$\frac{\text{Earnings per share}}{\text{Dividend per (ordinary) share}}$	
Dividend yield	$\frac{\text{Dividend of the share for the year}}{\text{Current market value of the share}}$	x 100%
Price earnings ratio (P/E ratio)	$\frac{\text{Current share price per share}}{\text{Earnings per share}}$	
<b>Financing ratios</b>		
Gearing ratio	$\frac{\text{Prior charge capital}}{\text{Total capital}}$	:1
Interest cover	$\frac{\text{Profit before interest and taxation}}{\text{Interest payable}}$	