7 Financial ratio analysis

7.1 Financial statements as a source of financial information

Financial statements can be an important source of financial information about companies. Companies are required to produce financial statements once each year, for their financial year (and stock market companies may be required to publish statements quarterly or every half year).

Ease of access to the financial statements of companies varies between countries, but if a buying organisation wants to look at the financial statements of a potential supplier, the best source is likely to be either:

- government records: in countries such as the UK, companies are required to 'file' a copy of their annual financial statements and this official record is available for public inspection; or
- the supplier organisation itself: a supplier wishing to obtain approval from a buying organisation might be willing to provide the buyer with a copy of its most recent financial statements.

There are four main elements in a company's financial statements.

- A statement of comprehensive income. The most important part of this is what is often called the profit and loss account. This provides details of the company's revenue in the financial year, its costs, pre-tax profit, taxation on profits and after-tax profits.
- A statement of financial position, often called a balance sheet. This provides details of the company's assets, the owner's capital and the company's liabilities, including its debts.
- Notes to the accounts: these provide additional details about items in the profit and loss account and balance sheet.
- A cashflow statement or statement of cashflows. This provides details of where the company obtained its cash, how it used (spent) its cash and how its overall cash balance changed (up or down) during the financial year.

The information in financial statements can be analysed to learn something about the financial stability of the company. Financial analysis includes the use of financial ratios to make assessments.

As procurement professionals, you do not need to know about financial analysis in detail. However you need to understand the basic principles and issues involved in financial analysis, because procurement professionals need to understand what can affect a supplier's financial stability, and why.

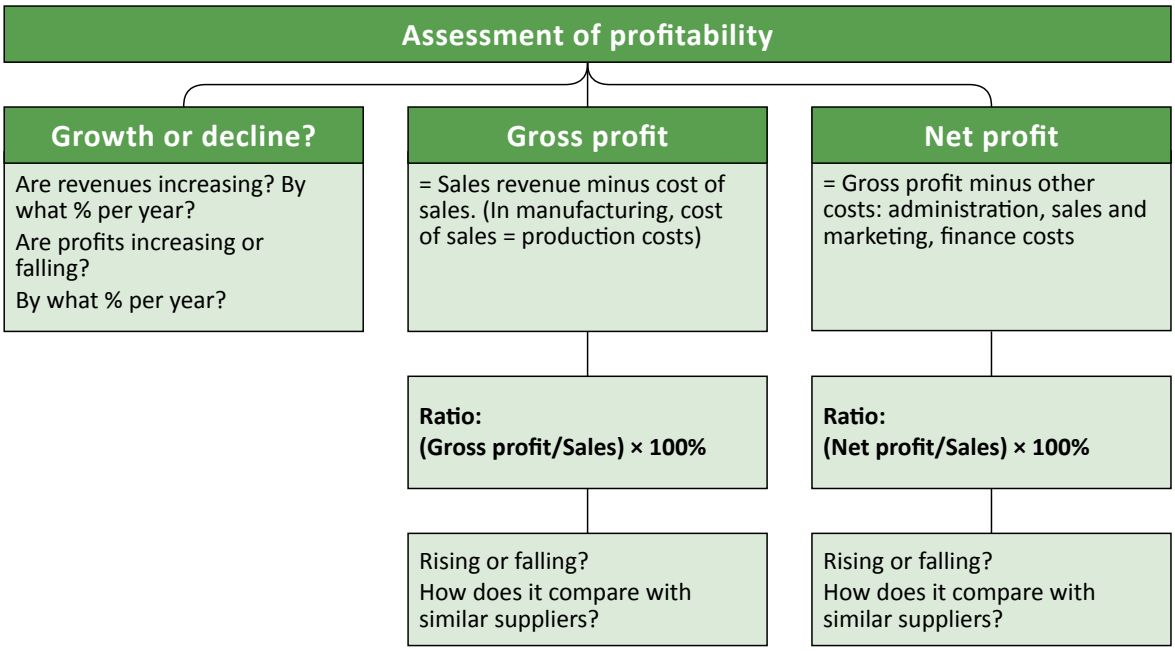
7.2 Profitability

Companies might make losses occasionally, but still be financially stable. However, over the longer term, companies need to be profitable. Changes in profitability over time are also an important measure of the growth of a business – is the company growing, and if so, at what annual rate?

Profitability is often assessed in relation to sales revenue, using profit/sales ratios (profit margins) as a measure. For example, suppose that there are two supplier companies: Company A makes a profit of $100,000 and Company B makes a profit of $200,000. Company A made its profits on sales of $200,000, and Company B's sales were $1,000,000. Company B is more profitable, in the sense that its profits are bigger; but Company A's operations are really more profitable because it made a bigger profit per $1 of revenue.

Measures of profitability are set out in Figure 3.1.

Figure 3.1 *Ratios and other measures of profitability*



Another measure of profitability, which can be used to monitor growth or decline in profitability, is profit after taxation per share, more commonly known as **earnings per share (EPS)**. However, this measure is normally used only for the purpose of measuring profitability in companies whose shares are listed and traded on a stock exchange.

What conclusions might be drawn from an analysis of growth and from profit margins? There is no 'correct' answer to this question, because interpretation of financial ratios calls for the exercise of judgement, but here are some of the relevant considerations.

- Sales revenue and sales revenue growth. These measure the size of the supplier's business and the rate at which it is growing. If a buying organisation expects to spend $100,000 on an item each year, and a supplier's annual turnover is just $200,000 and not growing, there may be a question about the ability of the supplier to meet the buyer's procurement needs in full.
- If a supplier has low profit margins, and if these margins are falling, there is a strong probability that either the supplier will get into financial difficulty due to low profitability, or that it will need to raise its prices at some time in the future, in order to improve profitability.

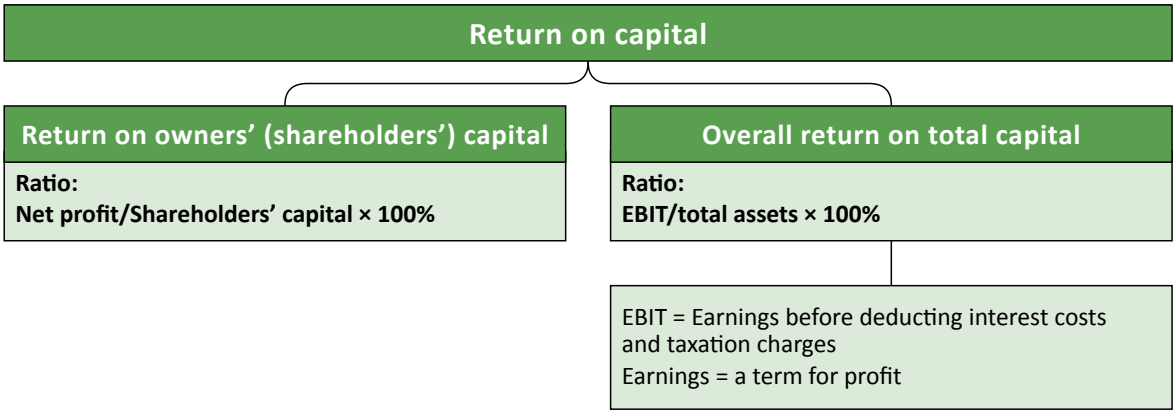
7.3 Return on investment

The profitability of a company might be assessed not just in relation to sales revenue, but also in relation to the amount of capital invested in the company. Two ratios can be used to assess 'return on capital'.

- The return achieved for the owners of the company, as a percentage of their investment
- The return achieved by the company as a whole, as a percentage of the total amount of assets invested in the company (and financed by debt capital as well as owners' capital)

These two ratios are shown in Figure 3.2.

Figure 3.2 *Ratios measuring return on investment*



7.4 Liquidity

For a business, liquidity refers to the availability of liquid assets. Liquid assets are assets consisting of cash and other items that are readily convertible into cash, or that will soon be converted into cash. So liquid assets consist of the following items.

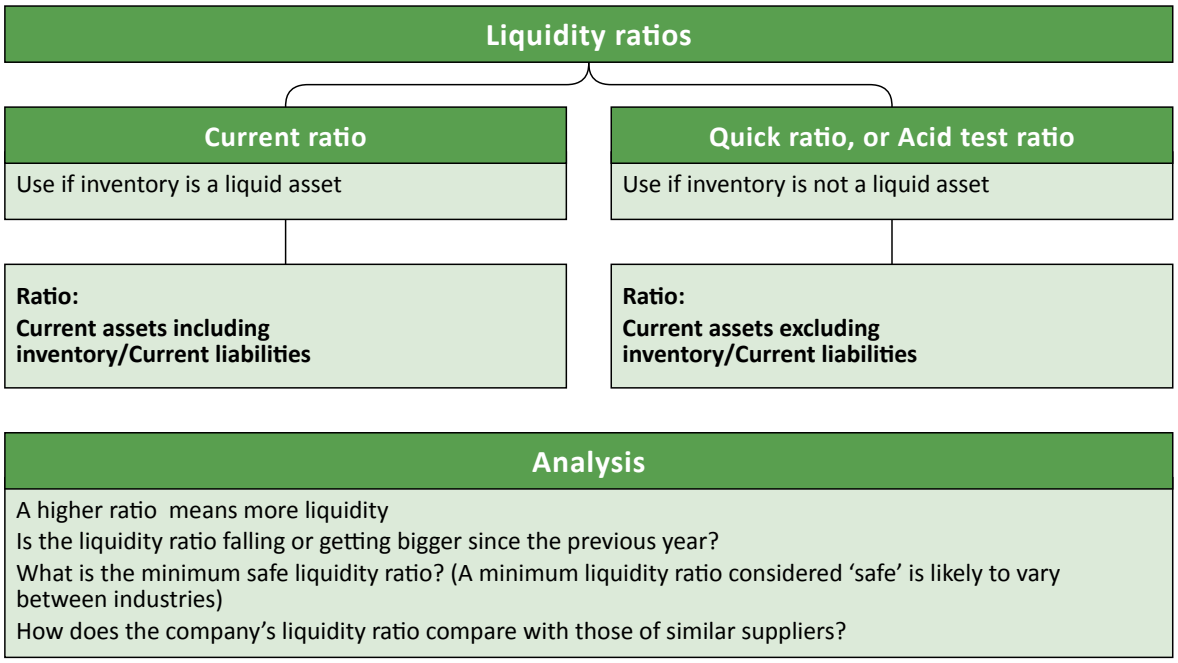
	Cash
+	Investments or savings accounts readily turned into cash
+	'Trade receivables' or debtors: mainly money owned by credit customers
=	**Most liquid assets**
+	Inventory: inventory will be used or sold although whether inventory is a liquid asset depends on how long it is held in stock before it is used or sold
=	**Total current assets**

A company might also have a borrowing arrangement with a bank (such as an overdraft facility) so that if it does not have cash when cash is needed to make a payment, the company can draw on the borrowing facility. The existence of bank borrowing arrangements for 'working capital' is usually ignored when calculating liquidity ratios.

Liquid assets are needed to make payments when they fall due. In financial ratio analysis, payments due in the near future are 'current liabilities', known more formally as 'creditors: amounts falling due within one year'.

Two financial ratios can be used to assess the liquidity of a company. Both relate liquid assets to current liabilities. These are shown in Figure 3.3.

Figure 3.3 *Ratios measuring liquidity*



Cashflow analysis

The current ratio and quick ratio have been used for many years to measure the liquidity of businesses. However, **cashflow statements** are now a much more useful and reliable source of information about a company's liquidity, because they show over an entire financial year where a company has obtained its cash, how the cash has been used, how much cash the company had at its financial year end, and whether its cash position improved or worsened over the year.

7.5 Gearing (leverage)

Many businesses use long-term borrowings to help finance their business. Companies are financed by a combination of shareholders' capital and debt capital. Debt consists largely of bank borrowings, but for large (stock market) companies is also likely to include debt instruments (bonds).

- Borrowing to help finance a business can make very good sense, especially when borrowing is available at low rates of interest. Interest payable on debt capital attracts tax relief, whereas there is no tax relief on shareholders' capital
- However, if a company borrows too much, it is faced with the risk of being unable to meet its payment obligations, and so might default on an interest payment or the repayment of the debt capital at maturity. Borrowing is particularly risky when interest is payable at a variable rate, and there is a risk of market interest rates rising.

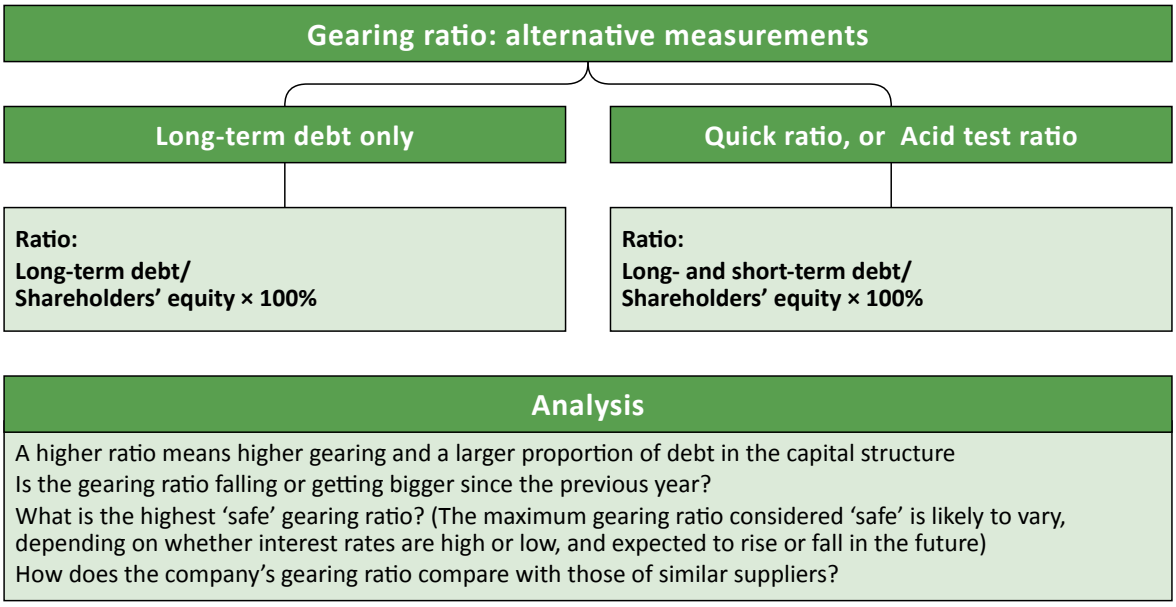
The capital structure of a company, and the relative amount of debt capital in the overall capital structure, can therefore be an important measure of financial stability. Default on debt payments (interest payments or capital repayments) can lead to insolvency.

Debt can be categorised as either:

- Long-term debt: this is long-term bank borrowings and bonds, where the borrowed capital is not repayable within the next 12 months
- Short-term debt, including bank overdrafts, which are or might be repayable within the next 12 months.

A **gearing ratio** (also known as a **leverage ratio**) is a measure of the amount of debt in a company's capital structure. A gearing ratio can be calculated in a number of different ways, but all methods of calculation are measuring the same thing – the proportion of debt in the capital structure. Two methods of calculating a gearing ratio are shown in Figure 3.4.

Figure 3.4 *Gearing ratio*



7.6 The limitations of ratio analysis

A financial ratio on its own is not very informative about the financial stability of a company. For example, if a company's gross profit margin is 25% and if its current ratio for liquidity is 1.8, what does that tell us? In order to extract meaning from financial ratios, it is necessary to make comparisons.

There are several ways of making comparisons.

- Comparisons over time. How are ratios changing over time? Are they getting bigger or smaller? So are they getting better or worse? In order to make comparisons of financial ratios over time, it is probably necessary to have financial statements for at least three consecutive financial years. These might be difficult to obtain, unless a buying organisation 'collects them' and stores them, building up a data file about potential or actual suppliers. Measuring ratios over time might also reveal longer-term trends in a company's financial situation.
- Comparisons with similar companies.
- Comparisons with 'ideal' financial ratios, such as an ideal maximum gearing ratio, an ideal minimum liquidity ratio, or an ideal minimum return on capital.

7.7 Problems with ratio analysis

There are a number of potential problems with financial ratio analysis, which can limit the value of ratio analysis as a method of assessing the financial stability of a company. The major limitations of ratio analysis are set out in Table 3.5.

Table 3.5 *Limitations of ratio analysis*

LIMITATION	*COMMENT*
One point in time	A balance sheet shows the financial position of a company at just one point in time, the end of its financial year. It does not shown how the financial position might have varied through the year.
Seasonal variations	Financial statements do not show whether a company has seasonal variations in its business; for example strong sales in summer and low sales volumes in winter.
A historical record	Financial statements are a record of what has happened in the past. The past might be a good guide to the future, but it might not. Just because a company has been growing, with good profits and good liquidity, this does not necessarily mean that the same situation will continue in the future. Historical performance is not a reliable predictor of the future, and circumstances can change quickly.
Changes in operations	Financial statements present numbers. They do not describe what has happened to the company's business, and whether there have been major changes in operations during the year.
Comparisons with other suppliers	Using ratios to make comparisons with other suppliers might not be appropriate, since businesses manage their financial affairs in different ways.
Reliable accounting figures?	Companies prepare financial statements according to various guidelines and rules (known as accounting standards). Strangely, accounting statements prepared according to these rules, especially by large companies, can give a misleading picture of a company's financial position.
Mixed messages	Ratios might give conflicting impressions of the financial stability of a company. Some ratios might indicate financial stability, whereas others might indicate financial weakness. Interpretation of financial statements might therefore require careful judgement.
Making false conclusions	Ratios are just numbers. They can be used to make judgements about the financial stability of a company, but those judgements can be incorrect. An analyst can simply draw the wrong conclusions from the ratios.