Introduction

Financial analysis enables the user of Financial Statements to develop a financial profile of a business.

Financial ratios

What is a ratio and why is it so useful when you are looking at financial data? A ratio is a relationship between two figures which can be expressed as a percentage, a proportion or as a fraction.

What is the relationship between A $625 and B $250?

It can be expressed as 250%, 2.5:1, or 2.5 times. A is two and a half times as big as B.

We could express it another way, 40%, 0.4:1, or 2/5. B is 2/5 the size of A.

If we apply this to the financial statements we will get financial ratios which will express the relationship between one figure that appears in the financial statements, with another figure from those statements, or some other resource of the business.

Key steps in financial analysis.

Different people have different uses for financial statements. When a business produces a general purpose financial report it does so knowing that there will be many different users of that report. Each user will have their own information needs which will shape the way that they extract the data from the report and use it to satisfy those needs.

Financial analysis is just the same. We will have a suite of ratios to choose from, but we have to make sure that we use those ratios that are best suited to our information needs. For example, a supplier will be interested in liquidity, because they will want to know whether their invoices can be paid. They will also want to know about the profitability of the business so that the long-term future of the business, and their contracts, is assured. They are also interested in the gearing of the business because there may be large loan providers who will get preference when it comes to settling the business’s debts if it does have to stop trading.
So the key steps in financial analysis are

- Identify who the users of the information are and what their information needs will be.

- Select and calculate the appropriate ratios for those information needs.

- Examine the ratio data and then interpret and evaluate the results.

**Other analytical methods**

Besides ratio analysis there are other useful analytical methods that we can use to assist with the analysis. The main techniques are horizontal analysis, trend analysis and common size statements or vertical analysis.

- **Horizontal analysis**

  This compares line items from one year to the next by showing the percentage increase/decrease that has taken place over the previous year.

  *Look at the example on page 719.*

  If you take the sales for Year 2, $100,000 deduct Year 1, $80,000 this will give you the difference of $20,000 and divide by the sales for Year 1, $80,000 and then multiply by 100, this will give you the percentage change, which is 25%. \( \frac{($100,000 - $80,000)}{$100,000} \times 100 = 25\% \).

  If you take the sales for Year 3, $120,000 deduct Year 2, $100,000 this will give you the difference of $20,000 and divide by the sales for Year 2, $100,000 and then multiply by 100, this will give you the percentage change, which is 20%. \( \frac{($120,000 - $100,000)}{$100,000} \times 100 = 20\% \).

  Horizontal analysis highlights the size and significance of the dollar changes by expressing it as a percentage change.

  *Read pages 718 to 721 and look at exhibits 19-1 and 19-2.*

- **Trend analysis**

  Although financial statements are required by law to be prepared for both this financial year and the previous financial year, so that a comparison can be made when analysing the data, any analysis only provides the user of the reports with a snapshot.

  If data was available for 5 or 10 years then key ratios could be plotted on a graph, compared with the ratios for the industry average and also the industry
leader. Some companies publish this data as a summary attached to the financial statements. With data plotted for a number of years it would be easier to discover whether any trends were occurring and attempt to predict the future behaviour of various items based upon an analysis of their past behaviour. A minimum of 3 years is necessary to calculate a trend, but 5 years or more is better.

The data for one year, the base year will be given an index of 100 and other years will be referenced to that base year by their movement from that base year. It is important to be careful when choosing the base year. It needs to be representative of the business’s normal activity, and not unusual in any way, as all other years will be compared to it.

*Look at the example at the bottom of page 721.*

20X2 has been chosen as the base year. So each figure for 20X2 is given the index of 100.

If you take the net sales for 20X2, $737,000 and divide it into the net sales for 20X3, $719,000 and then multiply by 100, this will give you the 20X3 net sales expressed as a percentage of 2002 sales. ($719,000/737,000) x 100 = 98% (rounding to the nearest percentage)

If you take the net sales for 20X2, $737,000 and divide it into the net sales for 20X7, $858,000 and then multiply by 100, this will give you the 20X7 net sales expressed as a percentage of 20X2 sales. ($858,000/737,000) x 100 = 116% (rounding to the nearest percentage)

Besides graphical extrapolation it is also possible to use software programmes specifically written for financial analysis to help predict future business performance.

- **Common size statements or vertical analysis**

  When you compare one set of financial results with another it’s quite difficult at times to get past the clutter of the dollar values to establish exactly what the figures are telling us. Common size statements compare items in the financial statements with other items in that same financial statement. One figure is chosen as the base for the calculation and then the other figures in that same statement are expressed as a percentage of that base.

  Rather than be cluttered by dollar figures we can express everything in an income statement as a percentage of net sales, or in a balance sheet we can express every item in that balance sheet as a percentage of total assets. That way the relative importance of items is shown by comparison to the base figure.

  

Week 11, Financial Statement Analysis
Comparison between years and between businesses can highlight similarities and differences just by looking at the percentage figures. It can also show what movements have taken place over time. So, when some financial ratios produce information that may require further investigation, the common size statement can pin point where the major changes have occurred.

Look at pages 722 to 724, including Exhibits 19-3, 19-4 & 19-5.

**Comparison - Benchmarking**

Calculating ratios on their own does not really tell you a great deal about the organisation as you do not know what is good, what is normal for the industry, and what is bad. Take the gross profit percentage. It does not need a lot of imagination to know that the amount of gross profit that’s made when selling a tin of baked beans will be dramatically different from the gross profit percentage on the sale of a 2 carat diamond ring. Tins of beans will be sold in a low profit margin/ high turnover market and 2 carat diamond rings will be sold in a high profit margin/ low turnover market. Each industry will have its own set of parameters.

When using ratios the financial analyst will need to make a comparison with a benchmark. This might be last year’s figures, or even better the last 5 so that it might be possible to establish a trend. Industry average figures are good too, especially the leading business within the industry as you then have something to aim for.

We do not just use one set of ratios either. As the data in the income statement, the balance sheet and the cash flow statement are linked, so are the ratios. Take the gross profit percentage calculation. You may notice that there has been a decrease. This is strange as the total volume of sales has increased but the relative proportion of gross profit has gone down. Perhaps our business has a new competitor and has had to discount the sales price to encourage customers to continue buying our product. That would decrease the gross profit percentage. If we are cutting prices and sales volume has gone up it means that we are selling more units of stock, but making less profit on each unit of sale. We could also look at the efficiency ratios. One of these is the stock turnover figure which tells us how many times a year we have managed to replace our stock (inventory). The more we sell, the more stock we have to buy to replace the stock that we have sold. How efficient has our sales staff been? These two ratios complement each other. Comparison is important.

Look at pages 724 to 729, including Exhibit 19-6 and the Summary Problem.

**Financial ratio classification**

Calculating ratios can be quite easy but the more difficult part is interpreting the results once you have done the calculations. Don’t think that once you have calculated the ratio that you have done all that you need to do. What is most important is how you use the ratios, not only to highlight the strength and weaknesses of a business, but mainly to
explain those strengths and weaknesses and the reasons behind the changes that have
taken place. You may end up with far more questions than you have answers!

Financial ratios can be grouped into various categories which will indicate how well
the business is performing or the strength of its financial position.

The categories are:

- **Liquidity.** Does the business have enough immediate cash/cash convertible
  assets to meet immediate liabilities as they fall due? This is important. Did you
  know that more businesses fail, not because they are not making profits, but
  because they run out of cash. A business needs to be both profitable AND
  liquid to succeed.

- **Efficiency.** How efficient have the directors/proprietors been in utilising the
  resources under their control?

- **Gearing.** Risk assessment is essential when making financing decisions.
  Knowing the proportion of funds provided by the owners of the business to
  total funds provided by both owners and outsiders will help with that
  assessment.

- **Profitability.** How successful has the business been in creating wealth for the
  owners?

- **Investment.** How have the shares that we have invested performed? What sort
  of return have we received and what sort of return can we expect?

**Liquidity ratios**

How prepared is the business to pay its immediate liabilities as and when they fall
due? Because these ratios focus on the short-term it is the cash and assets that can be
converted into cash that are used in these calculations as well as the debts that must be
paid in the near future.

**Current ratio = Current assets/Current liabilities**

This ratio is expressed as the number of times current assets cover current liabilities.
For example, if current assets are $66,500 and current liabilities are $35,000, then the
current ratio can be expressed as 1.9 times or 1.9:1. So for every $1 of current
liabilities there is $1.90 of current assets to cover them.

The excess of current assets and current liabilities is called the working capital. You
must have enough to satisfy the immediate needs of the business, but too much would
indicate that there are spare resources which are not generating returns. All assets within the business should be used efficiently and effectively. There needs to be a proper balance.

In some accounting texts the ideal current ratio is 2:1 or 2 times. This, however, fails to take into account the nature of the industry that the business operates in. A supermarket will have a low ratio because it will sell only for cash and as a result it will not have debtors. Inventory will be turning over quickly and this will affect the size of the inventory that is held by the business. There will not be a large amount at any given point of time, but it will take a credit period from its suppliers. Consequently it can buy goods on credit, sell them, receive cash for them and still have 30 days credit before the debt has to be settled.

Compare this with a manufacturing business, which will have a high ratio. There will be inventories of raw materials, part processed work-in-progress, and finished goods which will normally be sold on credit, and there will also be debtors.

Again what is important is to compare the current ratio for this year with that of last year, look at the trends. Look at industry averages and look at the industry leader. Management, of course, wouldn’t wait for twelve months to make a comparison. It would happen at least monthly and frequently weekly.

\[ \text{Acid test ratio} = \frac{\text{Current assets (excluding inventory and prepayments)}}{\text{Current liabilities}} \]

This ratio is expressed as the number of times quick assets cover current liabilities. You will appreciate that it can take quite some time to convert inventory into cash. In a manufacturing industry the raw materials have to be processed into finished goods which then have to be marketed and sold. If these sales are on credit then the outstanding debts have to be collected. Even in a retail business the sales still have to be made.

For a more stringent test of liquidity we can exclude inventory, (which takes time to convert to cash), and prepayments, (which just represents cash that we have already spent for which we have not yet received the benefit), and only consider cash/cash equivalents and debtors. The acid test ratio is also known as the quick asset ratio. In some accounting texts the ideal acid test ratio is stated to be 1:1, but again this will depend on the nature of the industry that the business operates in.

Some texts exclude bank overdrafts from the calculation as they can be regarded as a semi-permanent form of funding. A word of caution, although banks can and do provide this facility, bank overdrafts are repayable on demand and the acid test is all about calculating what immediate assets do we have to cover our immediate liabilities. You can not get much more immediate than repayable on demand!

When calculating both the current ratio and the acid test ratio the figures for the calculation will be taken from the balance sheet. As a balance sheet is only a statement of
the business assets and liabilities at a particular point in time care must be taken to examine the figures for seasonal variations, window dressing etc.

*Please read pages 726 to 728, including Exhibit 19-7*

**Efficiency ratios**

More businesses fail because they run out of cash rather than because they are no longer making profits. It is therefore important that proprietors know how efficient the business is in making sales and also how efficient they are in collecting the cash from the debtor/accounts receivables.

The average inventory turnover period, or days inventory, and the average settlement period for debtors, or days debtors, tell us how many days it takes to make the sales and how long it takes to collect the money from the debtors.

**Average inventory turnover period = (Average inventory held/Cost of sales) x 365.**

This is expressed in days and tells us the average length of time that it takes for the business to sell its inventory. We can calculate the simple average by using the opening and closing inventory for the year. Where the opening figure is unavailable then just the closing inventory figure will suffice. If the business is seasonal where the inventory levels can vary considerably from one time of the year to another then a monthly average might be better.

What does this ratio tell us and why is it so important? The ratio tells us how long the inventory is held within the business before it is sold. The business has invested its funds by purchasing the inventory but it will not get a return from that investment until that inventory is sold. In addition to the cost of buying the inventory there are also stock holding costs, that have to be met whilst the inventory is being held, for example, insurance, wages, security, storage, losses due to theft, obsolescence and damage. It therefore makes sense to offload the inventory as quickly as possible.

The average inventory turnover period when compared with the previous year’s results will show how efficient the sales team have been during the past year. It will also be reflected in the cash-flows and this may also be seen when the liquidity ratios are also calculated. The turnover period can vary from industry to industry. You would not expect to keep a loaf of bread or half a kilo of fresh fish the same length of time that as a second-hand car or an expensive piece of jewellery, so comparisons can be also made with industry averages.

Although a reduction in time would indicate that the staff were turning over stock in a shorter period of time compared with the previous year, which usually would show that the staff were being more efficient, however a very quick stock turnover in the early years of a business may indicate that the business is under-funded and that
whatever stock the business has must be traded more frequently just to keep the cash coming in.

This topic is dealt with on pages 729 & 730 where the industry averages for days that stock is held are given for selected industries in Exhibit 19-8. The calculation has been performed in two stages: the inventory turnover which shows the number of times that inventory has been turned over in a year. You can compare one period with another and note the changes, but the real differences can be highlighted by expressing this in the average number of days that inventory is held. Comparisons showing the differences in days and the scale of the change are more immediate. The second part of the calculation uses the number of times the stock has been turned over to calculate the number of days that the inventory has been held.

*Have a look at pages 729 & 730*

**Accounts receivable turnover and days sales in receivables**

This topic is dealt with on pages 730 & 731 where the accounts receivable turnover is calculated and then one days sales is calculated and then this is divided into the average trade debtors. This seems a rather long winded way of calculating things and I would recommend the calculation as stated below. By using this method the same technique can be used for inventory and for the debtor collection period

\[ \text{Average settlement period for debtors} = \left( \frac{\text{Average trade debtors}}{\text{Cost of sales}} \right) \times 365. \]

This is expressed in days and tells us the average length of time that it takes for the business to collect the money from the debtors. Although the business has made credit sales the cash will not start coming in until the debtors, the accounts receivable, pay up. The credit control department has the job of not only granting credit to customers, but also seeing that customers stay within their credit limits and pay their accounts on time. Keeping an eye on the length of time that customers are taking to pay their debts is vital when monitoring the efficiency and the liquidity of the business.

The longer it takes to make sales and the longer it takes to convert credit sales into cash means that the business may not have sufficient cash when it needs it to pay its creditors/accounts payable. An adverse change in this ratio may indicate that the credit control department is not as efficient as it should be.

Care must be taken to ensure that the business does not alienate its customers. Although a shorter settlement period is to be encouraged, so that our business is spending less time funding other people’s businesses, each industry will have its average collection period. A business still has to retain the goodwill of its customers, so there will need to be a balance between what is good business practice and what is an over enthusiastic credit control department! As we will see in our later studies the credit period granted to our debtors should not be greater than the credit period taken from our suppliers. If our
business is having to pay its creditors more frequently than it is collecting debts from customers then at some stage the cash will run out.

Both the inventory and debtors turnover can be affected by a wish to increase sales, by either discounting the sales price, so more inventory is sold, or by extending the period of credit, so that the debtors take longer to settle their debts. This can also affect the ratios, so when analysing changes these possibilities must be taken into account.

*Have a look at pages 730 and 731, including Exhibit 19-9.*

**Gearing (Financial leverage)**

\[ \text{Gearing ratio} = \left( \frac{\text{Long-term liabilities}}{\text{Owner’s equity} + \text{long-term liabilities}} \right) \times 100 \]

*Or in the case of a company*

\[ \left( \frac{\text{Long-term liabilities}}{\text{Share capital} + \text{reserves} + \text{long-term liabilities}} \right) \times 100 \]

This ratio is expressed as a percentage. Gearing is basically the amount by which a business funds its operations from outside sources. Any business that has non-current liabilities has gearing. By borrowing, the business will have to service the debt by paying interest and will also have to repay the principal of the loan. This means that there must be sufficient profit to cover the interest and sufficient cash, not only to pay the interest, but also to repay the loan as and when the instalments become due. The larger the proportion of debt to total funding, then the greater the risk and the larger the interest payments.

The loan providers will want some form of security for their loan and, besides a seat on the board of directors, they may also have restrictive covenants built into the loan contract. This means that they can demand that the business generate a sufficient level of profit to cover the interest, for example, 3 times, and that the business maintains its assets so that their value is always twice that of liabilities. Failure to do so could result in the loan becoming repayable immediately.

So, the greater the loan, the greater the risk. If that was the case, why would any firm borrow funds with which to finance the business?

Besides the inability to generate the funds internally and the need for finance, it makes sense from a tax perspective. Payments to the owners of a business, either in drawings or dividends paid to shareholder, are not tax deductible. This means that they have to be paid out of post tax profits and the amounts paid as a percentage of total funds provided by the owners will be high, as the owners will demand a higher return on their investment as their risk is higher.
Conversely, money borrowed from a bank will attract rates of interest that would be lower than the returns demanded by owners, and because the money had been borrowed for business purposes it will be tax deductible so it can be paid out of pre-tax profits. Borrowing from outsiders is a cheaper form of finance than obtaining it from the owners.

Again there is a need for balance. No borrowing and the business isn’t making the most of its debt capacity, too much and it is in danger of not complying with the terms of the loan and could find itself being wound up. Again it does depend on the general economic climate, the industry, and the product life cycle, but a business could safely borrow between 40 to 80 percent of total funding from outsiders.

Other ratios that measure the ability to pay and service long term debt are the debt ratio and the debt to equity ratio. The debt ratio is expressed as total liabilities/total assets and the debt to equity ratio is total liabilities/total shareholders equity.

Please read the explanation on pages 731 & 732.

Interest cover (times interest earned) = Profit before interest and taxation/ interest expense

This ratio is expressed as the number of times that an entity’s EBIT cover the entity’s net interest expense. The smaller the number of times, the greater the financial risk, conversely, the greater the number of times, the smaller the financial risk. Again this will depend on the nature of the industry that the business operates in but a rough rule is that interest cover should not drop below three times. Loan providers may have higher limits in the restrictive covenants.

Please read the explanation on pages 732 & 733 and the Exhibit 19-10.

Profitability ratios

If we want to see how much a business makes on its trading operations we can divide the gross profit by the net sales figure and we end up with the gross profit percentage.

Eg gross profit is $80,000, and net sales are $250,000.

The gross profit percentage is (80,000/250,000) x 100, = 32%

If it changes from one year to another we will want to know why. Can you think of reasons which would make the gross profit percentage change?
Gross profit margin = (Gross profit/Net sales) x 100.

This is expressed as a percentage. It is an important ratio as it reflects the ability of the business to trade. The gross profit is the difference between net sales, (sales less any returns from customers) and cost of sales. This is the profit that a business expects to make from either buying goods in, or manufacturing them, and then selling the goods to customers.

The gross profit is calculated before any of the day to day running costs of the business have been deducted, eg rent, insurance, etc, so it is very important that at this stage the business is making a profit, or it will not be in business for very long. You can now see that any movement in the gross profit margin from one year to another will need to be investigated to see that any downward trend is halted and upward trends are actively encouraged.

Industry associations quite often collect data from their members and then publish average results. These are useful as a business can compare their results against the industry average and by doing so can gauge the how well they are performing. The gatherer of the largest amount of business financial data is the Australian Taxation Office. The ATO will have data on all industries and no doubt a business’s gross profit margin will be checked against its industry average and its previous year’s results as well. The ATO is interested in changes too. They want to know that the proprietor is declaring all of their income. If cash sales aren’t recorded then this will affect the gross profit margin.

So why does the gross profit margin change?

- Has the sales price changed?
- Have we given discounts?
- Has the quality of our product decreased so that we have to give allowances and refunds?
- Has our selling policy changed?
- Have our customers changed?
- Is there new competition/products to make us change our prices or lose our market share?
- If we sell a variety of goods and some of these different types of goods are more profitable than others are we selling different proportions of these goods this year when compared to last year?
• Has the cost of sales changed?

• Have the costs gone up and we haven’t been able to pass the increases on to our customers?

• Have the inward freight costs gone up?

• Are we receiving discounts?

• Has our purchasing policy changed?

• Have our suppliers changed?

• If we manufacture goods, rather than just buy then in, have our production processes changed?

• Is the quality of our raw material better/worse?

• Do we have the correct number of staff with the appropriate skills and experience?

• Do we have more/less waste?

• Have we had to pay overtime?

• Have we had production or supply problems?

• Have we had production efficiencies?

As you can see you can end up with far more questions than answers!

**Net profit margin = \( \frac{\text{Net profit before interest and taxation}}{\text{Net sales}} \times 100 \).**

As with the gross profit margin calculation this is also expressed as a percentage. This ratio is also important as it shows how profitable the business is after all day to day running expenses have been deducted. The net profit before interest and taxation represents the return that has been earned from the use of all of the assets within the business. These assets will have been funded by the proprietor and may also have been financed by borrowing.

The amount of borrowing as a proportion of total funding may vary from year to year and will vary from business to business, so then will the interest expense vary from
year to year and from business to business. The amount and proportion of taxation will vary also. This makes a meaningful comparison very difficult, hence the use of the net profit figure before interest and taxation have been deducted. This may require that the interest expense has to be added back to the net profit figure to arrive at the figure that we require for the calculation.

A change in the net profit margin will also reflect changes that have occurred in the gross profit margin. There are other causes as well. Unless the proprietor monitors the amount of expenses by comparing actual expenses against the budget it is very easy to let costs blow out. This will be reflected in the net profit margin. Remember all of the day to day expenses will be reflected in the income statement. There may have been a change from renting a property to owning it. The labour costs may have altered due to outsourcing.

If the relative proportion of the expenses change then they will need to be investigated. A way of drilling down to discover the reason for the changes can be to express the expenses as a percentage of total costs.

\[
\text{Return on total assets (ROA) = } \left( \frac{\text{Net profit before interest and taxation}}{\text{Average total assets}} \right) \times 100.
\]

This shows how successful the management has been in utilising the assets. As assets can be funded by using retained equity, by injections of equity or by borrowing the profit that is used in the calculation is EBIT, the earnings before any interest has been deducted.

\[
\text{Return on owners’ equity (ROE) = } \left( \frac{\text{Net profit after taxation}}{\text{Average owner’s equity}} \right) \times 100
\]

\[
\text{Or in the case of a company}
\]

\[
= \left( \frac{\text{Net profit after taxation and preference dividend}}{\text{Average ordinary share capital plus reserves}} \right) \times 100
\]

This is expressed as a percentage. It compares the amount of profit that is available to the owners with their share of the equity in the business. In the case of a proprietorship once the taxation has been paid then the remainder belongs to the owner.

For companies there may be preference shareholders who will be entitled to a share of the profits before the ordinary shareholders. Once the preference dividend has been funded then it represents the profit that is available to the ordinary shareholders.
For companies, reserves will include funds that the directors have allocated to general reserves, reserves that have arisen on the revaluation of assets, and the profits that have been retained within the business rather than being paid out by way of a dividend.

The average figure is used as this is more representative of the amount invested in the business by the proprietor over the financial year. The easiest way to calculate the average is just to take the opening owners’ equity add it to the closing owners’ equity and divide by two. If you don’t have this information then just use the year end figure will do.

So what does the return on owners’ equity tell us? It indicates the return annual return in cents for every dollar that the owners have invested in the business. How do we know whether the ROE is good or bad? Compare the result with other investment opportunities bearing the same risk that are available to the owners. If other investments of a similar risk give a better return then the owners would find it difficult to attract more investors for their business.

The ROE reflects the profitability, asset efficiency and capital structure of the business.

*Have a look at pages 733 to 736 including Exhibits 19-11 & 19-12.*

**Investment (market performance) ratios**

These ratios apply to companies that are listed on a stock exchange and are referred to regularly in the financial press and help investors and financial analysts assess the returns on investments.

*Earnings per share = Earnings available to ordinary shareholders/Weighted number of ordinary shares in issue*

This ratio is expressed in cents per share. The earnings represent the net profit after tax and preference dividends as this is the amount that will be available for the ordinary shareholders. The number of ordinary shares in issue is weighted because, as the shares are quoted on a stock exchange, it means that the company can issue new shares and buy back surplus capital at any time during the year. The numbers of ordinary shares in issue throughout the year can vary. As the profits are generated throughout the year it makes sense to apportion the profits that are available to the ordinary shareholders over the weighted average of ordinary shares in issue throughout the year.

This ratio is used a lot, through trend analysis, to evaluate the earnings potential of the company’s shares. Compare the results with one year and another and over a number of years. There isn’t much benefit comparing the results of one company to another because companies can have such different capital structures comparison.
**Price earnings (P/E) ratio = Current market price per share/Earnings per share**

This ratio is expressed as the number of times the market price of a share covers the earnings per share. It is a measure of the market confidence in the company’s future earnings. The higher the P/E ratio indicates that the market has greater confidence in the future earning power of the company. If the company has a market price of $4.50 and the latest earnings per share is $0.50 then the P/E ratio would be 9 times. This indicates that the market would be prepared to pay nine times the current earnings to buy the company’s shares.

The market price reflects the market’s confidence in the company and comparison with the P/E ratios of the company’s competitors will show how the market views the company’s future prospects compared to the rest of the industry. The P/E ratio does alter with changes in the market price and this is affected not only by the company’s prospects but by market confidence in the economy, the industry and the equity market generally.

One of the most important notes that is attached to the Financial Statements is the note on Accounting Policies. This note states the accounting policies that have been adopted by the company. As accounting policies can vary from one company to another, this can lead to a different net profit figure simply because a different choice in accounting policy has been made. Comparisons of the P/E ratios of different companies can be distorted because of the selection of different of accounting policies. The P/E ratio does differ from industry to industry.

**Dividend yield = dividend per ordinary share/market price per ordinary share**

This is of particular interest to shareholders as it shows the ratio of the share market price that is returned annually to the shareholder by way of dividend. Comparisons are useful over a period of time. For preference shareholders, who usually only receive a dividend, and do not usually participate in capital growth, this is particularly important.

**Book value per ordinary share = Total ordinary shareholders’equity/number of ordinary shares in issue.**

Where there may not be a market price for the shares as the company isn’t listed or isn’t a public company another way of attributing value to the shares can be by way of the book value. The total shareholders’ equity less the preference shareholders’ equity will represent the equity that is due to the ordinary shareholders. As the company becomes more profitable and retains more of its earnings that equity will grow. A way of measuring that growth is to calculate the book value pr ordinary share and then to compare the result from one period to another.

*Have a look at pages 736 to 738 including Exhibits 19-13 & 19-14.*
Limitations of ratio analysis

Ratios are very helpful when trying to analyse General Purpose Financial Reports on behalf of a particular group of users of those reports. It is important, however, to appreciate that the financial ratios are calculated using data from the financial statements, and so many of the limitations that are found in the financial statements must also limit the benefit of the ratios.

- **Quality of financial statements.**

  If the standard of accounts preparation is not as accurate as it should be, then the ratios will be based on inaccurate information. The choice of accounting policies selected will also impact on the size of the profits and the valuation of the assets and liabilities. This also will affect the ratios.

- **Restricted vision of ratios.**

  Although ratios have the benefit of removing the difference of scale and vast numbers from the decision making process, it must be remembered that sometimes it is essential to look at scale and size.

  If our business was looking to invest in another company and there was a choice as to which company to invest in, the ratios can give you part of the answer, but it is wise to consider other indicators as well before a final decision is made.

  Company A provides a Return on Owners’ Equity of 18% and Company B 25%. The net profit after tax and preference dividends for Company A was $5million, and for Company B was $1.25million.

  Although the rate of return for Company A was less that that of Company B, size does matter. The return for Company A is four times that of Company B. Also when considering the rate of return, remember the higher the rate of return the greater the risk. That too must be taken into consideration.

- **Basis for comparison**

  A ratio on its own will not tell you a great deal. What is important is the ability to compare it with a similar ratio, either with previous years of the same business, or with similar businesses.

  - When comparing earlier years’ results did the business prepare its financial accounts using the same accounting policies?
o Has the funding of the business remained consistent over the period of comparison?
o When comparing the ratios for different businesses, are they similar in size?
o Do they service the same markets?
o Are their product lines similar in variety, design, innovation, and product cycle?
o How does the other business finance itself?
o Is it labour intensive or has it been mechanised/computerised?
o Are their accounting policies similar?

As you can see, when you have many differences between years/businesses, meaningful comparison can be difficult and how confident can you be with the conclusions drawn from those comparisons?

• **Balance sheet ratios**

The balance sheet only reflects the values of the assets, liabilities and owner’s equity at a given point in time. Consequently when figures are taken from that balance sheet for use in ratio analysis the figures might not be representative of the net wealth of the business for the year as a whole. This is particularly the case when the business is involved in a very seasonal trade.

Cash, debtors, inventory and creditors can vary significantly depending upon the time of the year that they are measured. A monthly measurement would help to even out these fluctuations and portray a more realistic view of the business.

• **Cash flow ratios**

It is also possible to incorporate data from the cash flow statement into financial analysis. After all the cash flow statement tells us how much cash is generated from the operating activities of a business. It is the cash that will be needed to pay the immediate liabilities. So the operating cash flow to current liabilities can be calculated, as can the operating cash flow to cash interest cost ratio which shows how prepared the business is to cover the interest payments. Both of these ratios can be found on page 754.

*Have a look at pages 738 & 739*

**Economic Value Added**

Where a business is large enough and well established it’s difficult to use operating performance to measure the performance of the managers. The reason is because the business is already successful the managers can rely on that success and be rewarded without having to do a great deal themselves. By introducing a required rate of return that the business expects on its funding, the managers will be assessed on how well...
they manage to beat that target. The target is known as the Capital Charge and is calculated thus:

\[
    \text{Capital charge} = (\text{bills payable} + \text{loans payable} + \text{long term debt} + \text{shareholders’ equity}) \times \text{Cost of capital}.
\]

The cost of capital is a rate of interest that takes into consideration the company’s level of risk, not only from an industry perspective, by also from the stage of development that the company and its products happen to be at. What returns do the loan providers and the shareholders require to compensate for this risk? This must also be built into the cost of capital.

\[\text{The economic value added} = \text{net profit} + \text{interest expense} - \text{capital charge}.\]

The managers will be assessed on, not only whether they have achieved the target of the capital charge, but by also how much they have managed to exceed it when compared to the last set of results.

*Have a look at pages 739 & 740*

*Pay particular attention to the Red Flags section, Analysing non-financial data and the Summary Problem when reading pages 740 to 747.*

As stated at the start of this Study Guide

“Different people have different uses for financial statements. When a business produces a general purpose financial report it does so knowing that there will be many different users of that report. Each user will have their own information needs which will shape the way that they extract the data from the report and use it to satisfy those needs.”

It is therefore important for the producers of reports into the financial health of a company to tailor their reports to the needs of the users to whom they are reporting. The importance of this subject is not just to be able to calculate these ratios, but to also be able to interpret them and to report on them for specific users according to those users’ information needs.

Part of this process will require the student to be able to produce a proper report identifying the user’s needs, selecting the relevant ratios, interpreting the results, and presenting their conclusions to their client.

You may wish to look at the following library text which illustrates report writing:

*W. Fleet, J. Summers, B. Smith, Communication Skills Handbook for Accounting, John Wiley & Sons, Brisbane*

Week 11, Financial Statement Analysis
After that please attempt the tutorial exercises, Ch19 S19-1 to 19-12, E19-6, 19-7, 19-8, 19-9, 19-11.