

Interpretation of Financial Statements

Introduction

A financial statement is a summary of how a business is performing. It can provide a company with a lot of information but in order to use this information, you must be able to analyse and interpret its meaning.

Ratio Analysis is the most widely used technique for analysing, interpreting and comparing financial statements. It uses key ratios, each of which sheds some light on at least one aspect of a company's activities.

The interpretation of financial statements is essential for a business as they can analyse the performance of the business to see if it's profitable, liquid and solvent. It can compare its results with last year's results to see if the business has improved or not. It also allows management to make important financial decisions based on the results.

Employees, debenture holders, shareholders, potential investors and financial institutions all are interested in **ratio analysis** as it can enable them to assess the business e.g. whether or not they should buy shares or give a loan to the business.



Role of Ratio Analysis

The role of ratio analysis is to:

- Use key ratios to analyse the performance of a company over the previous financial year
- Use these ratios along with the corresponding ratios from earlier years to establish trends
- Use these trends as an aid to making judgements about likely future performance
- Compare findings with the findings of other companies in the same industry

Trends

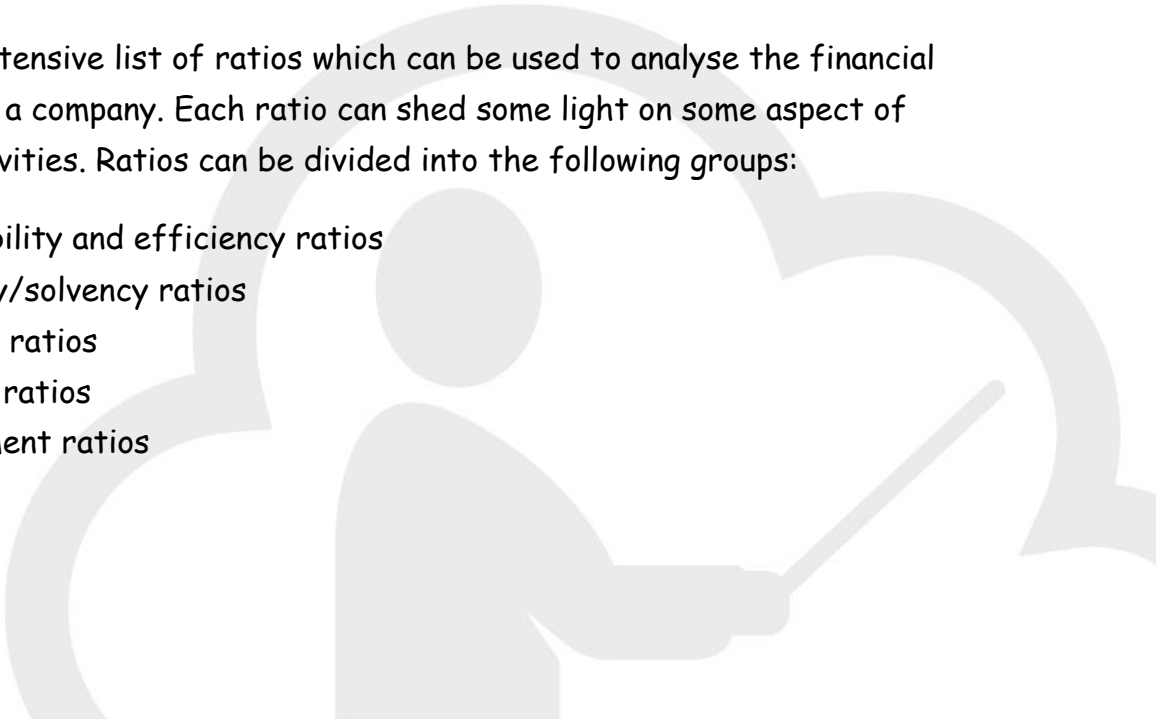
The collection of ratios on a systematic basis allows trends to emerge. Trends are very useful prediction indicators. For a ratio to be meaningful it must be compared with:

- The ratios of earlier years
- The results of competitors

Trends are important as they give us clues about future performance.

Ratio Classification

There is an extensive list of ratios which can be used to analyse the financial statements of a company. Each ratio can shed some light on some aspect of company's activities. Ratios can be divided into the following groups:

- Profitability and efficiency ratios
 - Liquidity/solvency ratios
 - Activity ratios
 - Gearing ratios
 - Investment ratios
- 

Profitability

Return on Capital Employed

Profitability and efficiency ratios measure the effectiveness of management. The **return on capital employed** is the overall measure of earnings performance.

$$\frac{\text{Net Profit (before Interest \& Tax)} \times 100}{\text{Capital Employed}} \quad \text{OR} \quad \frac{\text{Operating Profit}}{\text{Capital Employed}}$$

- Capital employed is the total of the balance sheet
- This return can be compared to the return on a deposit in a financial institution
- ROCE should always be higher than the rate at which the company borrows otherwise any increase in borrowing will reduce shareholders earnings

Return on Shareholders' Funds

The return on shareholders' equity measures the return to the shareholders after interest, taxes and preference dividend.

$$\frac{\text{Net Profit (after Tax and Preference Dividends)} \times 100}{\text{Shareholders' Funds}}$$

Shareholders' Funds

- Shareholders' funds is issued Ordinary Shares + reserves
- This return can be compared to the return on a deposit account in a financial institution



Gross Profit Percentage/Gross Margin

Gross profit percentage indicates how much each €1 of sales contributes to the company before selling expenses have been deducted. This percentage should be compared with the previous year's figures and with figures from similar firms or industry norms.

$$\frac{\text{Gross Profit} \times 100}{\text{Sales}}$$

- The percentage profit on sales

Mark Up

This percentage indicates how much each €1 spent on goods contributes to the company before selling expenses have been deducted.

$$\frac{\text{Gross Profit} \times 100}{\text{Cost of Sales}}$$

- The percentage profit on the cost price

Net Profit Percentage

Net profit is gross profit less expenses. If gross profit is stable but net profit percentage is falling expenses as a percentage of sales must be rising.

$$\frac{\text{Net Profit} \times 100}{\text{Sales}}$$

- The real percentage profit on sales

Expenses as a Percentage of Sales

$$\frac{\text{Expenses} \times 100}{\text{Sales}}$$

Asset/Turnover Ratios

These ratios indicate the efficiency with which a company uses its assets to generate sales.

If a company has low ratio of sales to assets, it can mean that the assets are underutilised or that they are not being efficiently used. As a result, these ratios focus on the use of assets made by management. They measure past efficiency and so provide a reasonable basis for predicting future efficiency and for making decisions which will improve efficiency.

Total Asset Turnover

$$\frac{\text{Sales}}{\text{Total Assets}}$$

- Measures how efficient the business is by utilising its assets to generate sales
- A low ratio implies that the business is not using its assets efficiently or is under-utilising them, e.g. building an extension to premises while sales remains constant

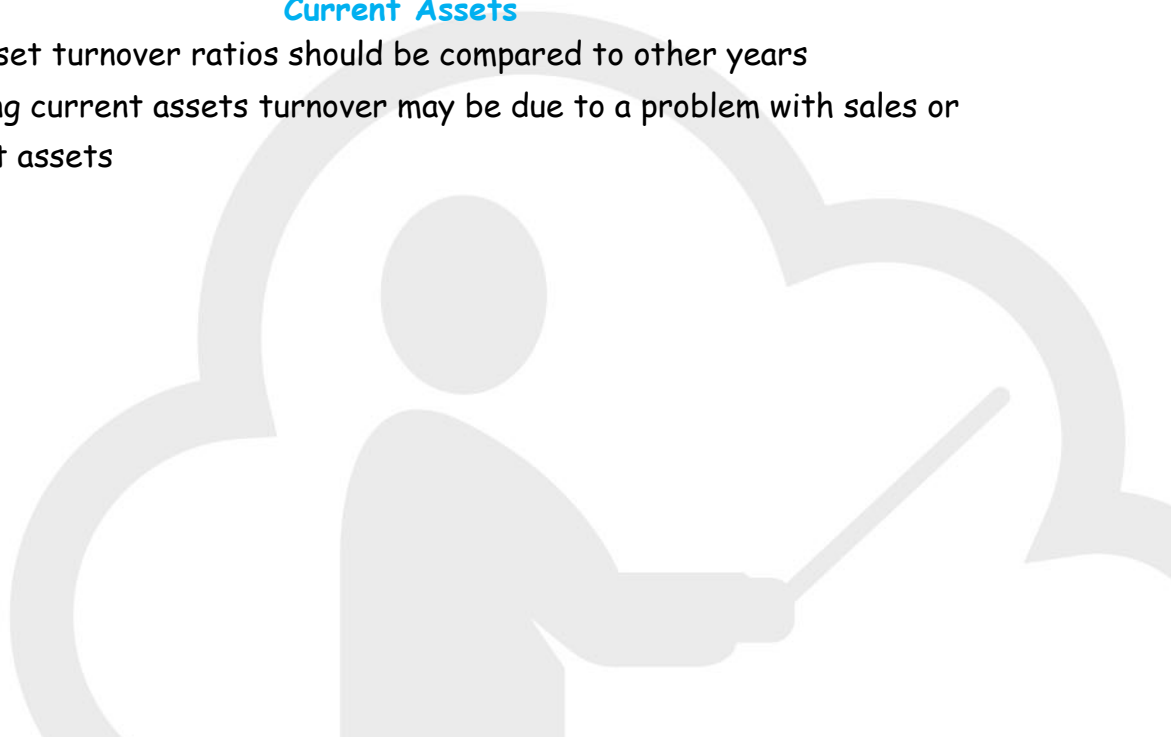
Fixed Asset Turnover

$$\frac{\text{Sales}}{\text{Fixed Assets}}$$

Current Asset Turnover

$$\frac{\text{Sales}}{\text{Current Assets}}$$

- The asset turnover ratios should be compared to other years
- A falling current assets turnover may be due to a problem with sales or current assets



Liquidity measures the ability of a company to pay its short-term debts as the fall due. The more liquid a company is, the more likely it is able to pay its employees, suppliers and other short-term creditors. Liquidity is important to the short-term creditors and to the long-term creditors as well. Investors, both short-term and long-term are interested in liquidity, though long-term investors are more concerned with solvency.

Solvency is the ability of a company to all its debts as the fall due for payment. It is the most important indicator of a company's ability to survive. A company is technically solvent if its total assets exceed its outside liabilities. The greater the excess of assets over the outside liabilities (i.e. the greater the shareholders' funds), the more solvent the company is.

Working Capital

Current Assets - Current Liabilities

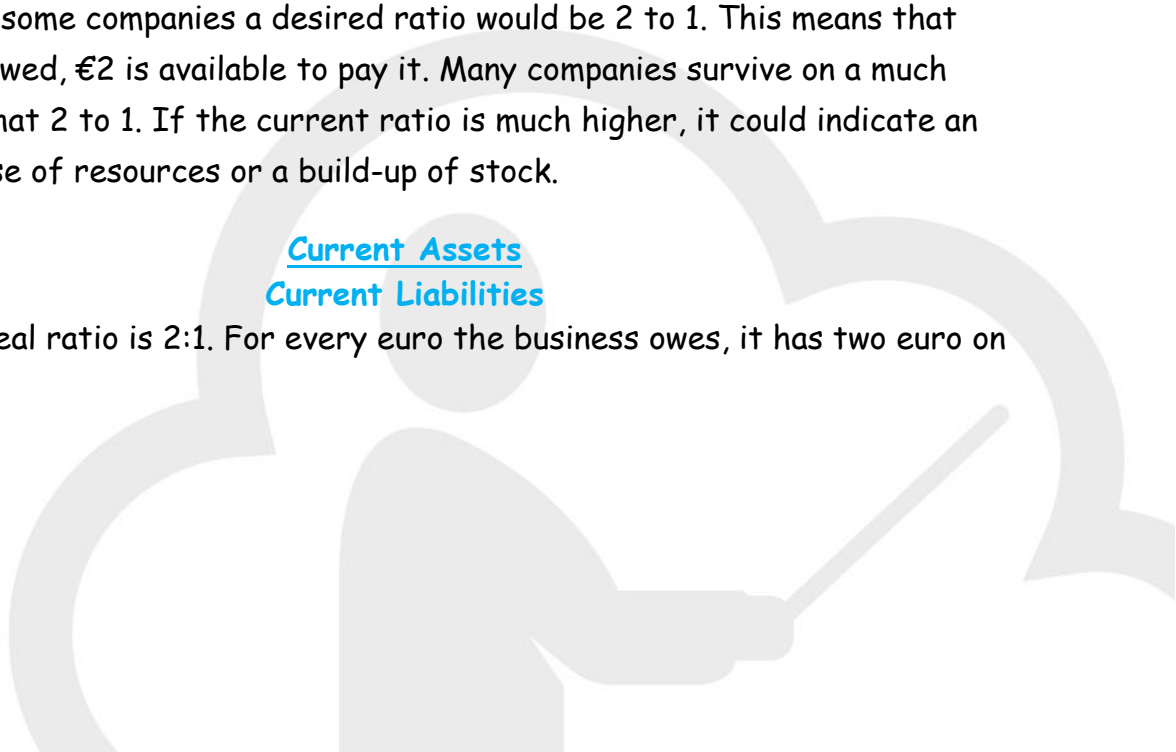
Current Ratio

This ratio shows whether the working capital (i.e. current assets less current liabilities) is adequate to meet the day-to-day costs of running the company. In general the current ratio compares assets that will become liquid inside a year with liabilities that will have to be paid within the same time span.

Creditors and lenders like to see enough current assets to cover current liabilities. In some companies a desired ratio would be 2 to 1. This means that for each €1 owed, €2 is available to pay it. Many companies survive on a much lower ratio than 2 to 1. If the current ratio is much higher, it could indicate an inefficient use of resources or a build-up of stock.

Current Assets Current Liabilities

- The ideal ratio is 2:1. For every euro the business owes, it has two euro on hand



Acid Test/Quick Ratio

The acid test ratio gives a more exact indication of a company's ability to pay its short-term debts. It is a good indicator of liquidity as it includes only liquid assets, namely cash and debtors. The acid test ratio omits stocks as they are unlikely to be turned into cash quickly and their net realisable value would drop in the event of a quick sale.

$$\frac{\text{Current Assets} - \text{Closing Stock}}{\text{Current Liabilities}}$$

- The ideal ration is 1:1. For every euro that the business has to pay in the short-term, it has one euro to cover it.

Liquid Assets

$$\frac{\text{Current Assets} - \text{Closing Stock}}{\text{Current Liabilities}}$$

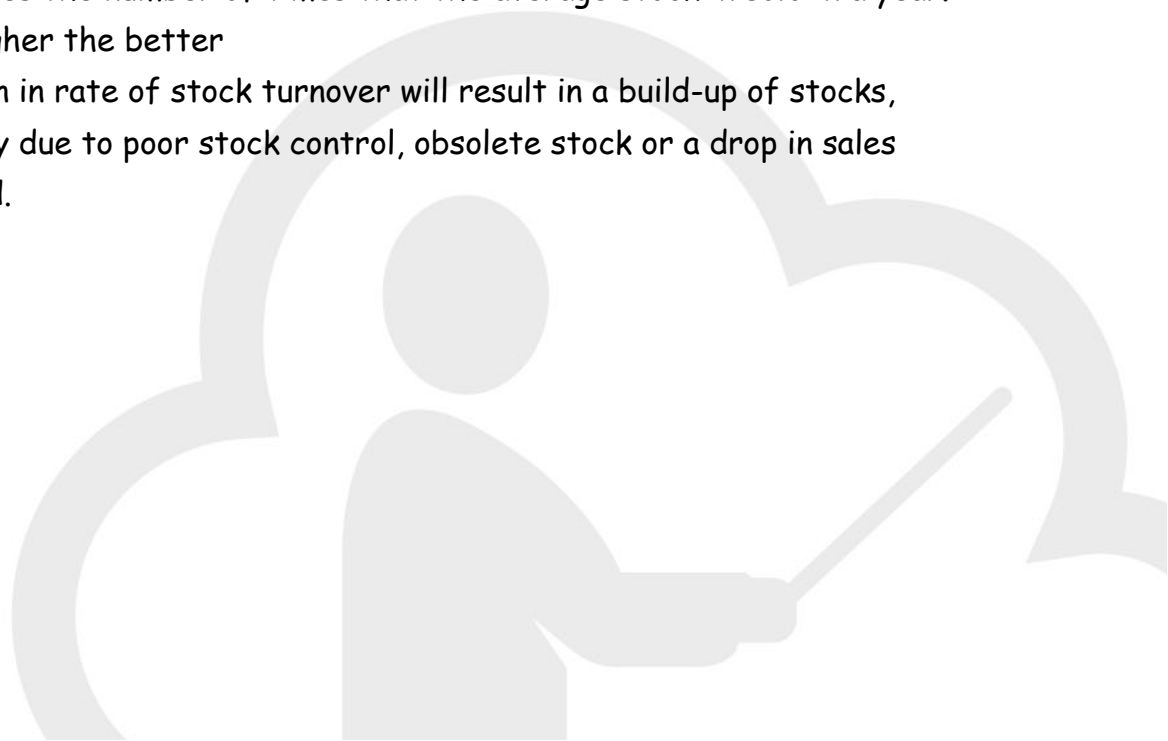
Business Activity

Stock Turnover

Stock turnover is the number of items in a period that the average stock is sold. It is calculated by dividing the cost of sales by the average stock. The average stock is the average stock of the opening and closing stocks or the average of the monthly stocks.

$$\frac{\text{Cost of Sales}}{\text{Average Stock}} \quad \text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

- Measures the number of times that the average stock is sold in a year. The higher the better
- A fall in rate of stock turnover will result in a build-up of stocks, possibly due to poor stock control, obsolete stock or a drop in sales demand.



Period of Credit Received from Creditors

This ratio indicates the average period of credit received from creditors. It can be expressed in days or months. Lengthy credit terms, if available, will help a company finance its activities. However, a company must be careful not to lose out on discounts that are often available for prompt payment of debts. It should try to ensure that the period of credit given to debtors is not significantly longer than that received from creditors.

$$\frac{\text{Creditors} \times 12}{\text{Credit Purchases}}$$

- Number of months or days by which the business has been allowed credit
- A business should collect its debts from debtors before it pays its creditors

Period of Credit Given to Debtors

This ratio indicates the average length of time it takes to collect debts from debtors. It can be expressed in days or months. The information derived from this ratio is valuable because it indicates the length of time cash is tied up. The faster a company can collect cash, the better. However, a company must be careful not to lose sales by operating too tight a credit policy,

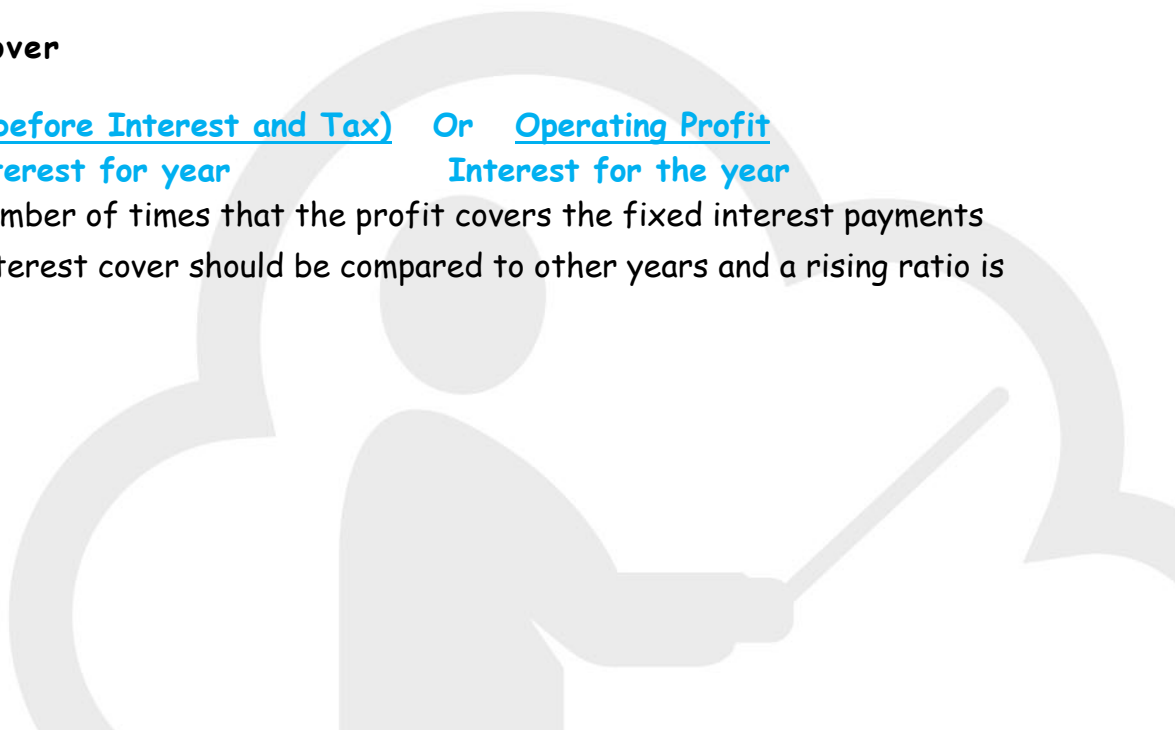
$$\frac{\text{Debtors} \times 12}{\text{Credit Sales}}$$

- The number of months or days credit that the debtors have been granted before payment.
- The quicker a business can collect its debts the better

Interest Cover

$$\frac{\text{Net Profit (before Interest and Tax)}}{\text{Interest for year}} \quad \text{Or} \quad \frac{\text{Operating Profit}}{\text{Interest for the year}}$$

- The number of times that the profit covers the fixed interest payments
- The interest cover should be compared to other years and a rising ratio is good



Gearing Ratios

Gearing compares fixed interest capital and the other capital of a company. Gearing may be expressed as a percentage or as a ratio. Fixed interest capital covers term loans, debentures and preference shares. It can be compared with total capital or with equity capital. Equity capital consists of ordinary share capital and reserves.

Debt Capital

Preference shares + debentures + long-term loans

Equity Capital

Ordinary shares + reserves

Gearing Ratio

$\frac{\text{Debt Capital}}{\text{Equity Capital}}$

Or

$\frac{\text{Debt Capital}}{\text{Capital Employed}}$

- Gearing is high when the equity capital is less than the debt capital
- Gearing is low when the equity capital is greater than the dent capital

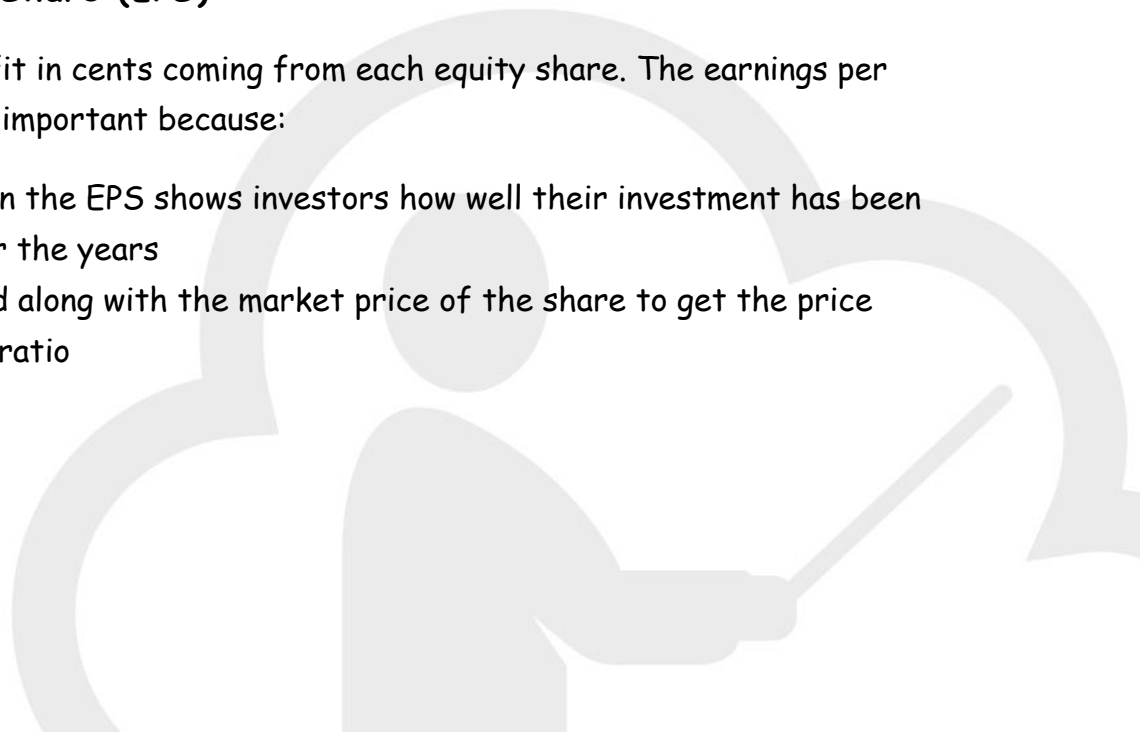
Investment Ratios (Higher Level)

Shareholders and prospective investors will be interested in the performance of the company's shares. The ratios used by investors to assess the performance of companies are as follows:

Earnings Per Share (EPS)

This is the profit in cents coming from each equity share. The earnings per share ratio are important because:

- A trend in the EPS shows investors how well their investment has been used over the years
- It is used along with the market price of the share to get the price earnings ratio





$$\frac{\text{Net Profit - Preference Dividend}}{\text{Number of Ordinary Shares Issued}} \times 100$$

Dividend Per Share (DPS)

This is the amount of the dividend in cents for the year on each ordinary share. It is calculated by dividing the ordinary dividend for the year by the number of ordinary shares.

$$\frac{\text{Ordinary Dividends}}{\text{Number of Ordinary Shares issued}} \times 100$$

Price Earnings Ratio

Price earnings ratio indicates the number of years it would take to recover the share price, based on the current earnings of the company. The market price of a share is an indication of the investor's view of the future earning ability of the company. The market price of a share is an indication of the investor's view of the future earning ability of the company. The price earnings ratio indicates the confidence of the investor in the company.

$$\frac{\text{Market Price per Share}}{\text{Earnings per Share}}$$

- The number of years it would take to recoup the value of the share at present earnings
- A high price earnings ratio indicates that the company is expected to increase profits in the future

Period to Recoup Price at Present Pay-Out

This ratio indicates how long it will take a shareholder to get back his/her investment based on the dividend pay-out policy of the company.

$$\frac{\text{Market Price per Share}}{\text{Dividends per Share}}$$



Dividend Cover/Dividend Pay-out Ratio

This ratio indicates the proportion of earnings retained by the company. It gives an idea of the level of risk to dividends in future years, if profits decline.

$$\frac{\text{Net Profit} - (\text{tax} + \text{pref. dividend})}{\text{Ordinary Dividends}} \quad \text{Or} \quad \frac{\text{EPS}}{\text{DPS}}$$

- This indicates the proportion of earnings retained by the company
- A high cover means more of the profits are being retained

Dividend Yield

The dividend yield shows the return received by investors in the form of dividends as a result of share investment. Investors will compare this return with the return from risk-free investments.

$$\frac{\text{Dividend per Share}}{\text{Market Price per Share}} \times 100$$

- Shows the return received by shareholders in the form of dividends as a result of investing in shares
- This ratio can be compared with the return from risk free investments
- As a business does not give out all its earnings to shareholders, this is not the real return on their share investment

Real Return on Shares

$$\text{Dividend Cover} \times \text{Dividend Yield}$$

Real Value of Shares

$$\text{Last year's PE ratio} \times \text{This year's EPS}$$

While ratio analysis is a useful tool for assessing a company's performance, it has some drawbacks.

1. Ratio analysis is concerned with past events
2. Ratios provide clues to the future, but they do not tell us whether a company is acting wisely
3. The accounts cannot give any indication of other important aspects of the company, such as management/staff relationships, general economic climate and staff morale
4. Ratios do not allow for seasonal fluctuations
5. Accounting statements present a limited picture of a business
6. Companies use different accounting bases when preparing financial statements e.g. depreciation, valuation of fixed assets and stock. Inter-company comparisons can therefore be misleading.

Let's take a look at an example

Q17.1

The following information has been taken from the accounts of James Ltd for the year ended 31/12/2013:

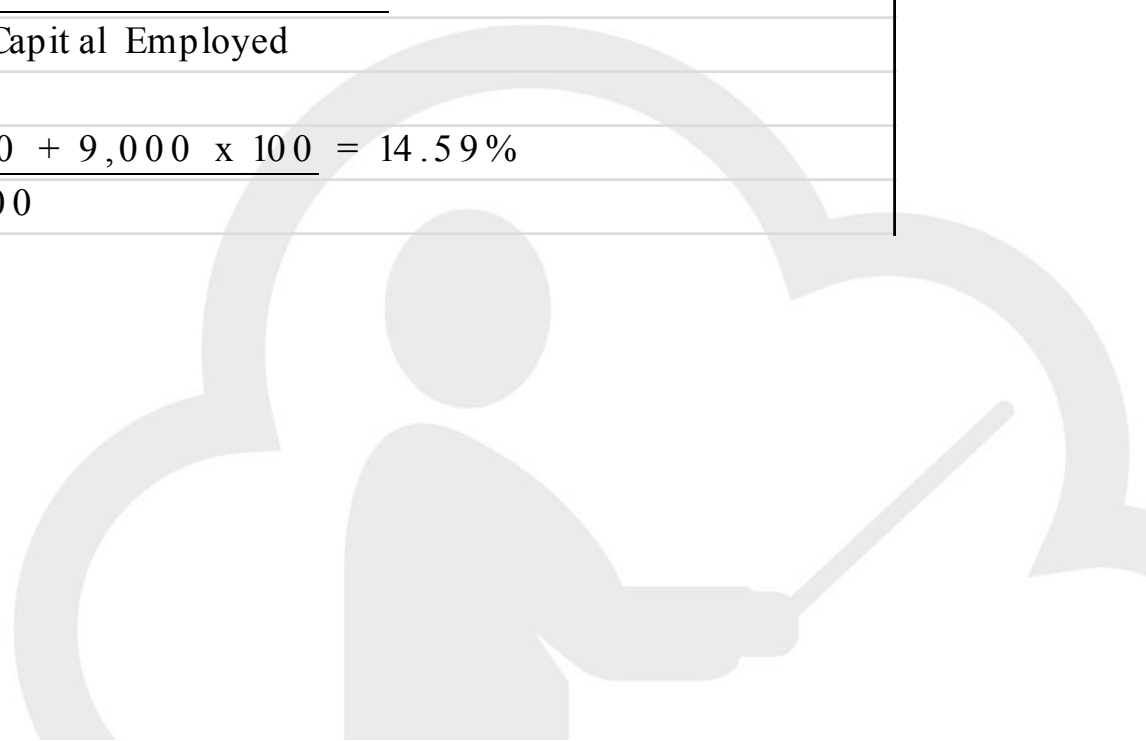
Trading and Profit and Loss Account for the year ended 31/12/2013		
Credit Sales		€ 800,000.00
Less: Cost of Sales		
Stock 1/1/2013	€ 40,000.00	
Add Purchases	?	
	?	
Less Closing Stock	€ 50,000.00	€ 650,000.00
Gross Profit		?
Less: Total expenses (including interest)		€ 70,000.00
Net Profit for year		€ 80,000.00

Balance Sheet as at 31/12/2013		
Fixed Assets		€ 500,000.00
Current Assets (including debtors, 60,000)	€ 140,000.00	
Less Creditors: amounts falling due within one year		
Trade creditors	€ 30,000.00	€ 110,000.00
		€ 610,000.00
Financed By:		
Creditors: amounts falling due after more than one year		
10% debentures (2020/2021)		€ 90,000.00
Capital and Reserves		
Ordinary shares		€ 440,000.00
Profit and loss account		€ 80,000.00
		€ 610,000.00

You are required to calculate:

1. The figure for purchases
2. The period of credit given to debtors
3. The percentage mark-up on cost
4. Return on capital employed

Calculations
1. Purchases
Cost of sales = opening stock + purchases - closing stock
$650,000 = 40,000 + \text{purchases} - 50,000$
$650,000 = \text{purchases} - 10,000$
$660,000 = \text{purchases}$
Gross profit = sales - cost of sales
$\text{Gross} = 800,000 - 650,000$
$\text{Gross} = 150,000$
2. Period of Credit given to Debtors
$\frac{\text{Debtors} \times 12}{\text{Credit sales}} = \frac{60,000 \times 12}{800,000} = 0.9 \text{ months}$
3. Mark up
$\frac{\text{Gross profit} \times 100}{\text{Cost of Sales}} = \frac{150,000 \times 100}{650,000} = 23.08\%$
4. Return on Investment / Capital Employed
$\frac{\text{Net profit} + \text{interest} \times 100}{\text{Capital Employed}}$
$\frac{80,000 + 9,000 \times 100}{610,000} = 14.59\%$



Homework

Ordinary Level Q17.2

5. Interpretation of Accounts

The following information has been taken from the accounts of McBreen Ltd for the year ended 31/12/2015:

Trading and Profit and Loss Account for the year ended 31/12/2015			
		€	€
Credit Sales			680,000
Less: Cost of Sales			
Stock 01/01/2015		42,000	
Add: Credit Purchases		????	
		????	
Less: Stock 31/12/2015		58,000	
Cost of Sales			???
Gross Profit			300,000
Less: Total Expenses (including interest)			220,000
Net Profit for year			80,000
Balance Sheet as at 31/12/2015			
	€	€	€
	Cost	Depreciation	NBV
Fixed Assets	500,000	50,000	450,000
Current Assets (including debtors €20,000)		210,000	
Less Creditors: amounts falling due within 1 year			
Trade Creditors		88,000	122,000
			572,000
Financed by:			
Creditors: amounts falling due after more than 1 year			
6% Debentures (2020/2021)			150,000
Capital and Reserves	Authorised	Issued	
Ordinary Shares at €1 each	600,000	342,000	342,000
Profit and Loss Account			80,000
			572,000

- (a) You are required to calculate: (to 2 decimal places where appropriate.)
- (i) The figure for purchases
 - (ii) The percentage mark-up on cost
 - (iii) Net profit margin/percentage
 - (iv) The period of credit given to debtors. (40)
- (b) Explain the following terms and state how they apply to the above balance sheet:
- (i) Depreciation
 - (ii) Tangible assets
 - (iii) Shareholders' funds
 - (iv) Authorised share capital. (40)
- (c)
- (i) Calculate the acid test ratio for 2015.
 - (ii) What does this ratio tell us about McBreen Ltd? (10)

5. Interpretation of Accounts

[40]

- (a) (i) Purchases

[10]

Higher Level Q17.3

5. Interpretation of Accounts

The following figures have been extracted from the final accounts of Doherty Ltd, a service provider in the tourist industry, for the year ended 31/12/2015. The company has an authorised capital of €900,000 made up of 600,000 ordinary shares at €1 each and 300,000 5% preference shares at €1 each. Doherty Ltd has already issued 500,000 ordinary shares and all of the 5% preference shares.

Trading and Profit and Loss Account for year ended 31/12/2015		
	€	€
Sales		980,000
Opening stock	55,000	
Closing stock	65,000	
Costs of goods sold		(752,000)
Operating expenses for year		(83,000)
Interest for year		(12,000)
Net Profit for year		133,000
Dividends paid		(50,000)
Retained profit		83,000
Profit and loss balance 01/01/2015		45,000
Profit and loss balance 31/12/2015		<u>128,000</u>

Ratios and information for year ended 31/12/2014	
Earnings per ordinary share	13.2c
Dividend per ordinary share	6c
Interest cover	6 times
Quick ratio	1.2:1
Market value of one ord. share	€1.15
Return on capital employed	10.3%
Gearing	54%
Dividend cover	2.2 times
Dividend yield	5.22 %

Balance Sheet as at 31/12/2015		
	€	€
Fixed Assets		856,000
Investments (market value 31/12/2015 €200,000)		<u>150,000</u>
		1,006,000
Current Assets (including stock €65,000 and debtors €95,000)	212,000	
Less Creditors: amounts falling due within 1 year		
Trade creditors	(90,000)	<u>122,000</u>
		<u>1,128,000</u>
Financed by:		
6% Debentures (2017 Secured)		200,000
Capital and Reserves		
Ordinary shares @ €1 each	500,000	
5% Preference shares @ €1 each	300,000	
Profit and loss balance	<u>128,000</u>	<u>928,000</u>
		<u>1,128,000</u>

Market value of one ordinary share on 31/12/2015 is €1.25

You are required to calculate the following for 2015: (where appropriate calculations should be made to two decimal places).

- (a) (i) Cash purchases if the period of credit received from trade creditors is 2 months.
 (ii) Dividend yield.
 (iii) Price earnings ratio
 (iv) Return on capital employed.
 (v) Dividend cover. (50)
- (b) Would you as a shareholder be prepared to purchase more shares in Doherty Ltd? Use relevant ratios and other information to support your answer. (35)
- (c) (i) Explain the term 'Gearing'.

Question 5

- (a)



Dividend Policy [6]

The dividend per share has improved from 6c in 2014 to 7c in 2015. The dividend yield has improved from 5.22% in 2014 to 5.6% in 2015. This is above the return from risk free investments of 2%. The dividend cover has also improved from 2.2 times in 2014 to 3.37 times in 2015. While shareholders will be happy with the improving trends, they will feel that the company has the scope to pay a higher proportion of profits in dividends. Alternatively they could be pleased that profits and cash are retained for the purpose of repaying debenture holders/expansion.

Liquidity [5]

The quick ratio has improved from 1.2 to 1 in 2014 to 1.63 to 1 in 2015. Doherty Ltd. has good liquidity. It should have no problem paying short term debts when they fall due. There is 163c available in liquid assets for every €1 owed in the short term. Shareholders will be pleased with this as there is good ability to pay a dividend and interest as well as having funds available for investment.

Market Price of a Share [4]

The market price of a share has improved from €1.15 in 2014 to €1.25 in 2015. This indicates market confidence in the company which will please shareholders. The price earnings ratio has fallen from 8.7 years to 5.3 years and this means it will take a shorter time-period for an ordinary shareholder to recover his/her investment in one share.

Gearing [6]

The gearing has improved from 54% in 2014 to 44.33% in 2015. The company has moved into a low geared position. The company is not dependent on outside borrowing and is not at risk from outside investors. The interest cover has improved from 6 times in 2014 to 12.08 times in 2015. The company has no problem paying its interest charges.

Sector [5]

The company is in the tourist sector. This is a growing industry at the moment. As economies around the world recover, people have more disposable income to spend on holidays. The weakness of the euro against sterling and the dollar also makes Ireland a cheaper destination for foreign visitors. If there is continued economic growth and the euro remains weak, then future prospects are good.

Overall shareholders will be happy with this and I would buy the shares in the company. [3]

15

(c)

- (i) **Gearing** - This is a measure of how a business is financed on a long-term basis. It measures the relationship between fixed interest debt (loans/debentures + preference shares) and total capital employed/equity. When this is less than 50%/100%, the business is lowly geared. Above 50%/100% is highly geared. Low gearing is preferable.
- (ii) **Benefits of low gearing** - When fixed interest debt is a small proportion of overall capital it has the following benefits:
 1. Low interest repayments means more profits are available for investment elsewhere in the business.
 2. Shareholders are more likely to get a dividend when gearing is low.
 3. The business should find it easier to raise additional loan finance.
 4. Less risk of liquidation due to not being able to make interest payments.
- (iii) **Possible ways to reduce gearing:**
 1. Sell more ordinary shares.
 2. Reduce or repay loans.
 3. Increase reserves/retained profits.
 4. Convert long-term debt to ordinary shares.