

# AF4 2023/2024

## Asset Classes: shares

### Part 3: Fundamental Analysis

The milestones for this part are:

- To understand the function and components of a Balance Sheet and Profit and Loss account.
- To be able to calculate and interpret the main ratios from a Balance Sheet and Profit and Loss Account

### Fundamental analysis

This is where investors “look under the bonnet” of a company. If a company has a record of a steady increase in profits this will be reflected in the share price. Conversely if profits are declining this will be reflected in its share.

Just because the company is increasing its profits doesn't necessarily mean that all is well. Stock market history is full of companies whose share price soared but later crashed and burned. Fundamental analysis will also look for potential warning signs.

A business can expand too quickly and that may have been financed by borrowing which will leave the business vulnerable if its income takes a hit. It might have bought too much stock which it can't sell and that will make it difficult to pay the suppliers.

A lot of this information can be gleaned from the company's accounts which must be published annually. They usually show last year's figures as a comparison but an in depth analysis will look back further to get a fuller understanding of where the business is going.

### Company Accounts

The main sources of information are:

The **Profit and Loss Account** records the income and expenditure over a its trading year.

The **Balance Sheet** is a snapshot of the company's assets and liabilities on a given day, usually the last day of its trading year.

In addition there is the **Cash flow statement** that gives a clearer indication of where and how cash is being earned and spent.

Whilst these are essential to take a view of the company, analysts will look at many more indicators. For example, with supermarkets the sales per square foot will be studied, the

percentage of rooms sold each night together with the average price per room would be a key indicator for a hotel chain.

Note that some of the terms and formulas used in the following may not be the same as you would find in an accountancy textbook. They are based on the definitions in past exams

### Profit and Loss Account

The old accountancy joke is that if you ask an accountant how much profit a company has made you will be asked how much do you want it to be! In other words. it can be managed by deducting different levels of costs.

At its simplest the **gross profit** is Turnover (sales) less cost of sales. The latter would include costs of buying stock, wages, heating lighting etc.

Exam questions will use two key terms:

**Profits before Interest and Tax (PBIT).**

**Profits after interest and tax**

In both cases profits are net profits, that is after taking account of other costs.

### Balance Sheet

This records the company's assets (what it owns) and its liabilities (what it owes)

A simplified balance sheet would typically look like this:

Assets		Liabilities	
Long term assets		Long term Liabilities	
Building	£1,000,000	Mortgage on premises	£800,000
Machinery	£500,000		
Current Assets		Current Liabilities	
Stock	£200,000	Money owing to suppliers	£150,000
Outstanding sales	£110,000		
Cash in Bank	£30,000		
		Shareholder's funds	£880,000
<b>Total</b>	<b>£1,830,000</b>		<b>£1,830,000</b>

The difference between assets and liabilities is the equity in the company which belongs to the shareholders as the owners of the company. In practice it will be made up of three elements:

- Issued share capital, that is the number of shares in issue at their par value

- Share Premium Account, that is the difference between par value and the amount the company received when the shares were issued.
- Retained profits, that is profits that aren't reinvested in the company or paid to investors

If liabilities exceed assets the business is insolvent and it would be a criminal offence for it to continue to trade.

Using both P&L and the Balance Sheet there are some basic calculations that can be made. These can be split into three groups:

- Tests for profitability and return on investment
- Financial Strength of the business
- Financial Structure of the Business

## Profitability ratios

These are:

- Profit ratios
- Return on Equity (ROE)
- Return on Capital Employed (ROCE)

The basic profit ratio is:

$$\frac{\text{Profits BEFORE Interest and Tax} \times 100\%}{\text{Sales}}$$

A restaurant making a PBIT of £80,000 on sales of £400,000 would have profit ratio of 20%.  
(£80,000/£400,000 x 100)

This looks impressive but if the owner has invested £4,000,000 to buy this restaurant then the return on the investment is £80,000/£4,000,000 = 2%. This is known as **Return on Equity**

The basic formula for ROC is:  $\frac{\text{Profit AFTER Interest and Tax} \times 100}{\text{Shareholder's funds}}$

This helps investors compare the return on investment against other assets. In the case above the investor is only making 2% return and other investments might offer a higher figure. To assess how well a company is using its capital we need to calculate the Return on Capital Employed (ROCE)

## Return on Capital Employed

A business has two main source of capital, its equity and borrowings (debt). ROCE is expressed as a percentage and identifies how well it is using that capital. The formula is:

$$\frac{\text{Profit BEFORE Interest and Tax}}{\text{Debt + Equity}} \times 100$$

Company A has Profits before interest and tax of £6 million. Its Debt and Equity is £40m.

Its ROCE is £6m/£40m = 15%

The same figures for company B are £3.6m and £38m

Its ROCE is £3.6m/£38m = 9.47%

The higher the ROCE the better use the company is making of its capital. So in this case Company A is making a better return on its capital.

## Financial Strength ratios

These enable investors to establish whether the company is running out of cash and be unable to pay its debts. They are:

- Working capital
- Acid Test
- Interest rate cover

### Working Capital

A balance sheet splits assets into long term and current assets. The former are not considered to be liquid in that they could be sold but it would not normally be practical if the company had to raise cash to meet its obligations. Similarly any long term debt is not likely to be called in for payment at short notice.

Working capital can be expressed either as a figure or a ratio. For the figure, it is: Current Assets less Current Liabilities

The ratio is:

### Current Assets:Current Liabilities

Alternatively, we can just subtract current liabilities from current assets to get the monetary amount.

A company has £3.5m of current assets and £2m of current liabilities.

Its working capital is £3.5m less £2m = £1.5m.

Expressed as a ratio this would be  $\frac{£3.5m}{£2m} = £1.75$ . This means that for every £1 of liabilities there is £1.75 of assets.

A business should have more assets than liabilities so we would expect to see a positive figure or a ratio of at least 1. Anything less means the company is vulnerable to being squeezed by its creditors. However current assets will include stock which may be difficult to sell at an undiscounted price.

Old Tom Microbrewery built up a large stock of beer in February 2020 but following the lockdown all the orders for its products collapsed and it had to dispose of all its stock

A more stringent test known as the **acid test** is used to give a more realistic picture of the ability of the business to pay its short term debts.

### **Acid Test**

This can also be expressed as a figure or ratio.

The formula is: 
$$\frac{\text{Current assets less stock}}{\text{Current liabilities}}$$

In the worst case a business's creditors may demand their money all at once so this shows how easy it would be to cope with that situation

Following on from the last example if the stock was £1.7m the liquidity ratio would be:  $(£3.5m \text{ less } £1.7m)/£2m = 0.9$ .

This means for every £1 of debt there is only 90p of easily realisable assets.

This can happen at the start of the Christmas season. Retailers will have stocked up with seasonal goods and paid for this on credit. As long as it can sell this over the season all should be well.

On the other hand if a lot of the stock remains unsold it will face serious problems in January

The covid crisis has illustrated the importance of a businesses' cash reserves. With no income coming in it relies on these to pay its costs so the issue is how long can they continue to burn cash before these are exhausted.

## Interest Cover

A company services its debts from its profits. This ratio establishes how easy is it for the business to service its debts. The formula is therefore:

**Profit before Interest and Tax**

**Gross interest payable**

Company A has PBIT of £1m and pays interest of £200,000  
Its interest cover is  $\text{£1m}/\text{£200,000} = 5$

Company B has figure of £1m and £800,000.  
Its interest cover is  $\text{£1m}/\text{£800,000} = 1.25$ .

The higher the number the better the company will be able to cope with a rise in interest rates. Company B will find it more difficult to cope with an increase in interest rates

## Financial strength test

The key measure here is the gearing or debt/equity ratio It tells us what proportion of the business's capital is funded by equity and what is funded by debt

This is usually expressed as a percentage.

The formula is: **Total Loans + Preference shares x 100**  
**Shareholder's funds**

It can also be shown as a ratio

Company A has debt of £1m and equity of £2m  
The debt equity ratio is  $\text{£1m}/\text{£2m} = 0.5$

Put another way for every £1 of debt there is £2 of equity

The same figures for company B are £1m & £1.4m  
Its debt equity ratio is 0.71 or for every £1 of debt there is £1.40 of equity

A high level of debt magnifies returns when profits are high. However, it can reduce or wipe out profits if there is a downturn since the debt and interest payable remains the same.

That concludes this part so you should now:

- Understand the function and components of a Balance Sheet and Profit and Loss account.
- To be able to calculate and interpret the main ratios from a Balance Sheet and Profit and Loss Account