Ratio Formulae

- These ratios allow businesses to measure and compare performance with previous years and with competitors
- Most of the numbers used in the ratios come from the Balance Sheet.
- Some come from profit or loss

Profitability

Gross Profit Margin

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

For every £1 of turnover; how much is gross profit

Net profit or Operating Profit Margin

$$\frac{\text{Profit before Tax}}{\text{Sales}} \times 100 = \text{Net Profit \%}$$

For every £1 of turnover; how much is net profit

Interpreting Profit Margins

- If there is a large difference between the two figures then it is advisable to look at reducing overheads
- But what is the cost of cutting cost?
- Or you could increase revenue. But how?

Return on Capital Employed (ROCE)

How much profit is being squeezed out of the money invested in the business?

$$\frac{\text{Profit before Tax}}{\text{Capital Employment}} \times 100 = \text{R.O.C.E\%}$$

Interpreting the ROCE

- The ROCE assesses the % profit being squeezed out of money put into the business
- As an alternative you could have invested your money into a bank and earned the rate of interest; 7%
- So we judge a successful ROCE to be higher than the interest rate

Solvency

- The following ratios help to judge how well the business is managing its working capital
- To avoid working capital problems the business must have enough current assets to pay the current liabilities
- Why?

Solvency

C Assets / C Liabilities = Current Asset Ratio

A value between 1.5 – 2 is seen as OK

This would mean there are more current assets than current liabilities

What if the current ratio is too low?

- This would indicate that if all current liabilities wanted paying now there would not be enough current assets
- Could look to convert some creditors into a bank loan and pay off over time. Therefore reducing current liabilities
- Alternatively you could sell fixed assets. But will this create more problems?

What if the current ratio is too high?

- This is a problem too. You have too much working capital and are not using it effectively. In other words its being wasted.
- Current assets need converting to cash and investing into the business to create future profits

What if the current ratio is too high?

- Stock – this could be reduced using JIT
- Debtors – call these in by offering early repayment discounts or penalise late payers with interest
- Or Factorise the debt

The acid test ratio

$$\frac{\text{C Assets - Stock}}{\text{C Liabilities}} = \text{Acid Test Ratio}$$

This tries to work out if the business has enough working capital without having to sell off stock cheaply

You want an answer to equal 1

What if the acid test is too low?

- This means cash and debtors will not cover current liabilities
- In the first instance you will have to sell off some stock
- However because you are desperate it is likely you will have to sell it off cheaply and so not receive the full price

If the acid test is too high

- You have too much cash and too many debtors who owe you money
- Invest the cash in fixed assets
- Call in debtors and invest the cash in your business in order for it to work for you.

Performance

This ratio considers how often stock is replaced. The higher the figure the better

$$\frac{\text{Cost of Sales}}{\text{Average Stock}} = \text{Stock Turnover}$$

How much do fixed assets contribute to sales. Useful to determine if fixed assets need replacing

$$\frac{\text{Sales}}{\text{Fixed Assets (NBV)}} = \text{F. Assets Turnover}$$

How many days does it take to collect money from people who owe you. Useful to know when managing working capital

$$\frac{\text{Final Debtors}}{\text{Sales}} \times 365 = \text{Debtor Days}$$

How can the figure be improved?

How long is taking you to pay people.

If it's a long time you are either tight or having working capital problems

$$\frac{\text{Final Creditors}}{\text{Purchases}} \times 365 = \text{Creditor Days}$$

Shareholders

How much is each share you own earning?

$$\frac{\text{Profit after Tax}}{\text{No. of Shares issued}} = \text{Earnings Per Share}$$

How much is the share earning compared to its price. The higher the better!

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