**Analysing financial performance & position of a business**

We can use ratios and trends to analyse the financial performance and position of a business.

To analyse financial performance and position we compare accounting information this year with accounting information generated in prior years or we compare accounting information in one company with accounting information in another company.

To analyse:

1. Calculate ratios and trends e.g. profit margin or growth in sales revenue
2. Use information in the reports and accounts or wider information available to explain

HOW and WHY the changes may have happened

**Categories of ratios**

* Profitability ratios
* Liquidity ratios
* Working capital / efficiency ratios
* Gearing / capital structure ratios
* Stock market / Investors’ ratios

**PROFITABILITY RATIOS**

The following are the most common ratios used to assess profitability.

|  |  |  |
| --- | --- | --- |
| Name of Ratio | Formula | State result as |
| 1. Gross Profit margin | Gross profit/Sales revenue  page25image45234048 | % |
| 2. Operating profit margin | Operating profit /Sales revenue  page25image45234240 | % |
| 3. Net profit margin | Profit after tax/Sales revenue  page25image45234432 | % |
| 4. Return on Capital Employed | Operating profit / Equity & Non-current liabilities  page25image45234624 | % |
| 5. Return on Equity | Profit after tax /Equity  page25image45234816 | % |

Why do profitability ratios change?

Profit margin increase – possible reasons?

* Increase in selling price but costs/expenses stay the same
* Change in mix of products – selling more products with higher margins and fewer products with lower margins
* Reduction in costs/expenses

ROCE increase – possible reasons?

* Higher profit generated but capital employed stays the same
* No change in profit but reduction in capital employed (e.g. not raising new finance but repaying some debt capital)

ROE increase – possible reasons?

* Raising debt finance and investing in projects which generate a high return
* Profit increase but no change in equity finance
* No change in profit but reduction in equity finance e.g. share buyback

**LIQUIDITY RATIOS (and WORKING CAPITAL): Liquidity is essential for a company’s survival.**

Working capital is the money needed by a business to fund its day to day operations. Without working capital, a company cannot continue to trade. It is the difference between current assets and current liabilities. This is sometimes called ‘net current assets’

The main components of working capital are:

* Inventory
* Receivables
* Bank and cash balances
* Payables
* Bank overdraft

What are the aims of working capital management?

Liquidity – how much cash & near cash do we need to avoid running out!  
In general a higher level of working capital is better for liquidity. More current assets and fewer current liabilities means that a business is less likely to run out of cash.

Profitability – working capital levels can have an impact on profitability. In general, a lower level of working capital is better for profitability. The main reason is that investment in working capital is not productive and needs to be financed e.g. bank overdraft and therefore interest will need to be paid.

Liquid assets

These will vary from industry to industry, but normally would include cash/bank balances and receivables. Inventories are excluded from liquid assets as they are not readily convertible into cash. Therefore, either of two ratios are used to assess a company’s liquidity:

• The Current ratio = Current Assets /Current Liabilities

• The Acid Test or Quick Ratio

= Current Assets less inventory/Current Liabilities

**WORKING CAPITAL/EFFICIENCY RATIOS**

To assess this, the following ratios should be calculated:

* Inventory holding period (normally days)
* Receivables period (normally days)
* Payables period (normally days)

How do we calculate the periods?

|  |  |  |
| --- | --- | --- |
| Name of Ratio | Formula | State result as |
| Inventory Holding Days | Average or closing inventory/Cost of sales x 365 | Days |
| Receivables days | Receivables/ Credit sales or Sales x 365 | Days |
| Payables days | Payables/Credit purchases or Purchases or Cost of sales x 365 | Days |

The Working Capital/Efficiency Day ratios:

Inventory days......the lower, the better.

Receivable days.......the lower, the better.

Payable days......the higher, the better....(within reason\*.)

\*If the company takes *too long* to pay its suppliers, it’ll get a poor credit reputation**.**

Please note: Instead of taking “*year-end*” data......it is thought to be “*good practice*” to use data for *average* *inventories*, *average* *receivables* and *average payables*....by taking start-of-year and year-end figures, adding them together, and dividing by 2; this is provided the start-of-year data is available.

**Overtrading**

Overtrading happens when a company grows too quickly, and, as a result, runs out of finance and hence cash!

The company may be profitable and profits may be increasing but the company doesn’t have enough long-term finance to invest in assets.

Typical symptoms of over-trading are:

* Rapid increase in sales revenue but low gross and operating profit margins
* Rapid increase in the level of current assets and current liabilities
* Low cash balance but big bank overdraft
* Increase in receivables days, inventory days and payables days
* Increase in current ratio

**CAPITAL STRUCTURE/GEARING RATIOS**

For these ratios assume DEBT = NON-CURRENT LIABILITIES

|  |  |  |
| --- | --- | --- |
| Name of Ratio | Formula | State result as |
| 1. Gearing ratio | Non-current liabilities/ Equity and Non-current liabilities  page34image45157952 | % |
| 2. Gearing ratio (alternative) | Non-current liabilities/Equity  page34image39111936page34image45158144 | % |
| 3. Interest Cover ratio | Operating profit/Finance charge [or interest]  page34image45158336 | times |

Gearing ratios indicate the level of gearing (amount of debt) in a company and hence the level of financial risk to shareholders.

A high gearing ratio means more financial risk to shareholders. A low interest cover ratio means more financial risk to shareholders.

**INVESTORS/STOCK MARKET/ SHAREHOLDERS’ RATIOS**

|  |  |  |
| --- | --- | --- |
| Name of Ratio | Formula | State result as |
| EARNINGS PER SHARE or EPS | Earnings (profit) after tax /Number of ordinary shares in issue  page30image45303488 | Pence or [cents] |
| DIVIDEND PER SHARE or DPS | Dividends paid to ordinary shareholders/ Number of ordinary shares in issue  page30image45303680 | Pence [or cents] |
| DIVIDEND COVER | Earnings (profit) after tax/Dividend paid to ordinary shareholders [or EPS/DPS] | times |
| DIVIDEND YIELD | Dividend per share /Market value per share (i.e. share price) | % |
| PRICE - EARNINGS RATIO or P/E | Share price/Earnings per share | times |

Some key points about investors/stock market/ shareholders’/ ratios

Dividend per share and earnings per share

Ordinary shareholders receive a dividend per share. This is the main (yearly) return to an ordinary shareholder

These ratios represent the dividend paid on each ordinary share that is in issue from the earnings per ordinary share that is in issue.

Investors generally expect both the dividend per share and earning per share to increase steadily each year. The percentage change in earnings per share is an important trend that is analysed.

An increase in the earnings per share (EPS) each year means that there is more profit available to each shareholder who invests in the ordinary shares of the company.

Dividends and dividend cover

A high dividend cover ratio indicates that a company is retaining and reinvesting a lot of the profits that are being generated – may lead to high growth

If the dividend cover is high it may also indicate that the company is likely to be able to maintain or grow the dividends in the future even if profits fall. An investor will be confident that the current dividend can at least be maintained in the future

Dividend yield

The dividend yield represents the percentage ‘return’ to a shareholder if we ignore the possibility of the share price changing over time.

Price earnings ratio

The P/E ratio tells us a lot about how much confidence investors have in the future of the company.

If the P/E ratio is high it generally means that investors have lot of confidence about the future potential of the company.

A high P/E ratio means that investors are prepared to pay a high price for one share in relation to the current earnings being generated.

A high P/E ratio may be a result of:

* The current earnings per share being unusually low e.g. because of exceptional costs. Investors expect earnings to return to ‘normal’ in the future
* Confidence that earnings will grow at high rate in the future
* A belief that the risk attached to future earnings is low

**Example: Volkswagen – background information**

The world’s largest automobile maker by sales volume and value! Has many strong brand names.

4 reporting divisions:

* Passenger cars
* Commercial vehicles
* Power engineering
* Financial services





Volkswagen – diesel emissions scandal

In September 2015 the US Environmental Protection Agency discovered that VW had intentionally programmed their engines to ‘cheat’ emissions testing. The emissions of were found to be 40 times higher when the vehicles were used on the road compared to the vehicles being used in laboratory settings!

*The share price fell by a third on the announcement of the news.*

In April 2016 VW announced plans to spend €16.2 billion on rectifying the emissions issues. This included refitting the vehicles as part of a recall campaign.

VW has also faced significant legal action including fines by regulatory authorities and legal action by affected customers.

**Example on financial performance analysis: profitability, liquidity and efficiency**

The latest financials for R plc are summarized below:

**Income statement (extracts) for the year ended 31/12/2019 (in £000s)**

Sales revenue 1,650

Cost of sales (1,070)

Expenses (110)

**Statement of financial position as at 31/12/2019 (in £000s)**

|  |  |  |
| --- | --- | --- |
| **ASSETS** |  |  |
| Non-current assets |  | 3050 |
| Current assets |  |  |
| Inventory | 250 |  |
| Trade receivables | 300 | 550 |
| **Total Assets** |  | **3600** |
| **EQUITY & LIABILITIES** |  |  |
| Ordinary share capital |  | 500 |
| Retained profit |  | 2100 |
| Total Equity / Shareholders’ funds |  | 2600 |
| Non-current liabilities: 8% Bank Loan |  | 500 |
| Current liabilities |  |  |
| Trade payables | 80 |  |
| Bank overdraft | 420 | 500 |
| **Total Equity & Liabilities** |  | **3600** |

Key financial indicators / ratios are available for R plc for 2018:

|  |  |
| --- | --- |
| Net profit ratio | 20% |
| Gross profit ratio | 30% |
| Current ratio | 1.8:1 |
| Acid test | 1.1:1 |
| Receivables collection ratio (days) | 30 |
| Payables (days) | 40 |
| Inventory holding (days) | 60 |

**Required:**

**a) Calculate the equivalent ratios (as above) for R plc for 2019.**

**b) Critically discuss the performance of R plc compared to that of 2018 as a whole using the ratios that you have calculated for 2019.**

**INDICATIVE ANSWER**

**a) Net profit (£000) = 1650 – 1070 – 110 = 470**

**Net profit ratio = Net profit / Sales x 100**

**= 470/1650 x100 = 28.5%**

**Gross profit (£000) = 1650 – 1070 = 580**

**GP ratio = GP / Sales x100 = 580 / 1650 x100**

**=35.16%**

**Current assets (£000s) = 550**

**Current liabilities (£000s) = 500**

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

**= 550 /500 = 1.1 (or 1.1:1 or 1.1 times)**

**Quick assets = current assets – inventory or in this**

**case it is the receivables (£000s) = 300**

**Quick / Acid test ratio**

**= Quick assets / Current liabilities = 300/500 = 0.6:1**

**Receivables ratio = Receivables / Sales x 365**

**= 300 / 1650 x 365 = 66.35**

**= 66 days**

**Payables ratio = Payables / Cost of sales x 365**

**= 80 / 1070 x 365 = 27.28**

**= 27 days.**

**Inventory days = Closing Inventory / cost of sales x**

**365 = 250 / 1070 x 365 = 85.28 = 85 days**

**b)**

**2018 2019**

|  |  |  |
| --- | --- | --- |
| Net profit ratio | 20% | 29%; Better |
| Gross profit ratio | 30% | 35%; Better |
| Current ratio (norm 2:1) | 1.8:1 | 1.1:1; Weak |
| Acid test (norm 1:1) | 1.1:1 | 0.6:1; Weak |
| Receivables (collection) ratio (days) | 30 | 66; Longer |
| Payables ratio (days) | 40 | 27; Shorter |
| Inventory holding ratio (days) | 60 | 85; Longer |

**Problem areas are in red**

**Commentary**

**Profitability** (ability to generate profits)

**2019 has a higher GP ratio: Is R plc’s 2019 selling prices higher or its purchase costs/cost of sales lower compared to those of the 2018 or is it the effects of both?**

**R plc’s 2019 NP ratio is also higher: R plc has better control or management of expenses in 2019.**

**Liquidity** (ability to pay expenses and liabilities as they fall due)

**Both the current and the quick ratios of R plc for 2019 are lower than that of 2018 as well as the norms.**

**Is R plc comfortable operating at these lower liquidity levels in 2019; otherwise it may be facing liquidity problems? The company appears to be relying on a large bank overdraft and this can be risky and can be made worse if interest rates increase.**

**(Alternative comment: Is R plc taking advantage of the large bank overdraft available to it in 2019 to allow longer credit period for its credit sales thus increasing its sales and profits at the expense of liquidity? It may also be doing this with its credit purchases by paying for these early and taking discounts. The combination of these policies may have resulted in poor liquidity ratios.)**

**Efficiency / working capital management**

**Receivables collection in 2019 is high or longer (more than 2 times) compared to 2018 – this may be due to lacking control of receivables which can lead to higher bad and doubtful debts.**

**(Alternative comment: On the other hand, is R plc giving longer credit periods as compared to other companies in the industry to its customers in order to increase its sales and earn more profits at the expense of liquidity?)**

**Payables ratio is lower for R plc in 2019 – does the company get better discounts and lower purchase costs from its suppliers by paying earlier or is it a market leader in the industry taking advantage of its position? This cost advantage can increase gross profits at the expense of liquidity.**

**Inventory holding is higher in 2019 than that in 2018 – shows lacking in the management of inventory; the risk here is whether this will lead to inventory being obsolete.**

**Conclusion / summary**

**It appears that R plc has better profitability but may be facing liquidity problems in 2019 as compared to 2018. Liquidity may be improved by reducing both its receivables and inventory ratios.**

Alternative commentary

Conclusions/summary

Profitability ratios are higher in 2019 than those in 2018 and may be due to generating higher profits.

Attention should focus on the receivables ratios to improve credit control / the cash flow and reduce bad & doubtful debts. Attention should focus on inventory management to improve the sales and reduce obsolete inventory.

Attention should focus on payable ratios to get a longer credit period from suppliers and get better purchase prices and discounts.

Additional points:

* Does the company have cost advantages in purchase costs and expenses resulting in better profitability?
* Is there a link between liquidity problems and the large bank overdraft?
* The longer receivables days/credit period may be a deliberate attempt by R to attract customers/increase sales compared to its competitors in 2019.