3.5 Profitability and liquidity ratio analysis

Profitability ratios II: Return on capital employed

Making connections

Businesses use the statement of profit or loss and the statement of financial position (balance sheet) for the data needed to calculate return on capital employed. See Subtopic 3.4 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39045).

Return on capital employed (ROCE) is a profitability ratio, but it compares different financial figures from the ones explored in Section 3.5.1 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/prof-ratios-i-gross-profit-and-profit-margin-id-39306). The ROCE measures the business's profit before interest and tax in terms of the capital that has been 'employed' or used in the business. The formula to calculate ROCE is as follows:

$$\text{ROCE} = \frac{\text{profit before interest and tax}}{\text{capital employed}} \times 100$$

Capital employed is the value of all sources of longer-term internal and external finance for a business. The formula for calculating capital employed is as follows:

$$\text{Capital employed} = \text{non-current liabilities} + \text{equity}$$

You can calculate the ROCE using the financial information for Pap-Pie Ltd that was used in Subtopic 3.4 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39045).

Net profit before interest and tax = \$310 000
Non-current liabilities = \$180 000
Equity = \$530 000

$$\text{ROCE} = \frac{\text{net profit before interest and tax}}{(\text{non-current liabilities} + \text{equity})} \times 100$$

$$= \frac{310\ 000}{(180\ 000 + 530\ 000)} \times 100$$

$$= 44\%$$

An ROCE of 44% means that every $100 of resources (equity) used generates $44 in profit. This figure represents a good ROCE ratio for Pap-Pie Ltd.

To be interpreted more effectively, however, the ROCE must be compared with other businesses in the same industry. For example, if the industry ROCE is 50%, then Pap-Pie Ltd is doing less well by this measure compared to competitors. This is because its ROCE is below the industry standard. Therefore, Pap-Pie Ltd is not using its resources as effectively as the other businesses in the industry.

Another way of using the ROCE to evaluate business performance is to compare the data over time for Pap-Pie Ltd. If the business increases the ROCE over time, it is becoming more efficient at converting resources into profit.

A third way of interpreting the ROCE is to consider whether it is higher than the interest rate that could be earned from placing the financial resources in a regular, relatively risk-free savings account. The ROCE should be above the interest rate that would be earned on such an account. If it is not, then it would make more financial sense to put the financial resources into a risk-free account.

Some ways of evaluating ROCE performance may not be appropriate for for-profit social enterprises. For-profit social enterprises may have a lower ROCE than other businesses in the industry because they are distributing value more widely in their organisation. They may be charging lower prices for their products, paying workers living and fair wages, and working to regenerate ecosystems, among other actions. These are likely to lower the financial return on investment but increase other kinds of returns to stakeholders.

Activity

Learner profile: Knowledgeable
Approaches to learning: Thinking skills (transfer)

Figure 1. Zazia Perfumes Ltd – a fictional Japanese company.
Credit: Yulia Naumenko, Getty Images

Examine the data from the financial statements of Zazia Perfumes Ltd, a fictional business based in Tokyo, which produces beauty products and perfumes. Then answer the questions that follow. All financial figures are in millions of JPY.

Table 1. Data from the financial statements of Zazia Perfumes Ltd (in thousands of JPY).

	2020	**2021**
Sales revenue	50	65
Cost of sales	10	15
Expenses	25	30
Non-current liabilities	70	70
Equity	50	50

Questions

1. Calculate the GPM for Zazia perfumes Ltd. for both 2020 and 2021 and comment on your findings. [4 marks]

2. Calculate the PM for Zazia perfumes Ltd. for both 2020 and 2021 and comment on your findings. [4 marks]
3. Calculate the ROCE for Zazia perfumes Ltd. for both 2020 and 2021. [2 marks]

ROCE is calculated using the ‘profit before interest and tax’, because this allows businesses to better compare financial performance over time. Taking out the impact of interest rates and taxes, which are not in the business’s control, enables the business and stakeholders to see the performance of the business.

If a business is dissatisfied with the ROCE, there are a number of ways to improve it. These are listed in **Table 1**.

Table 1. Strategies to improve ROCE.

Strategy	Detail
Increase sales revenue to increase profit before interest and tax.	Special promotions, price changes, increasing distribution channels available to customers, and introducing new and improved products can all increase sales revenues (hopefully by less than costs increase with these strategies).
Reduce cost of sales and expenses to increase profit before interest and tax.	Using lower cost suppliers, improving stock control, seeking economies of scale, and improving quality management to reduce resource waste can lower cost of sales and expenses.
Sell unused and obsolete assets.	Selling unused, obsolete and underused assets will improve the business’s operational efficiency and reduce costs.
Reduce long-term liabilities.	Paying off debt or negotiating lower interest rates or more attractive repayment terms on loans.

Strategy	Detail
Reduce share capital and retained profit (equity).	This would reduce the denominator in the equation, but is not really desirable. Reducing retained profit, for example, would mean that there is less financial capital to invest in the business.

Making connections

In order to understand strategies to improve profitability ratios, you may be required to draw on previous learning. For example, you have previously learned about:

- economies of scale (Subtopic 1.5 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-36532))
- pricing and promotional strategies and distribution channels (Subtopic 4.5 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39004))

HL students will study how businesses can improve stock control in Subtopic 5.6 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39337), and how a business can improve its quality management and reduce waste in Subtopic 5.3 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39339).

Case study

Leading sports brands: Which is the fittest?

Figure 2. Competition is high between brands in the sportswear industry.
Credit: Peter Cade, Getty Images

Nike and Adidas are among the world's leading sports brands, earning billions of dollars in sales revenue. They are driven by aggressive marketing strategies, involving for example the endorsement of celebrity sports figures such as Christiano Ronaldo and Lionel Messi.
Does the popularity of the brand necessarily mean it is financially sound? Compare the sales revenue, profitability and efficiency ratios of Nike and Adidas in **Table 2** and then answer the questions below.

Table 2: Profitability ratios for Nike and Adidas for 2021.
Sources: Nike (https://investors.nike.com/investors/news-events-and-reports/default.aspx) and Adidas (https://report.adidas-group.com/2021/en/consolidated-financial-statements/consolidated-income-statement.html)

	Nike	**Adidas**
Sales revenue	46.31 billion USD	21.23 million euros
Gross profit margin	44.8%	50.7%
Profit margin	15.5%	15.45%

Questions

1. Define the term gross profit margin (GPM). [2 marks]
2. Define the term return on capital employed (ROCE). [2 marks]
3. Explain whether Adidas's shareholders should be satisfied with the company's GPM. [2 marks]