

Business management

Formula sheet

SL & HL, first assessment 2024

The formulae provided in the external assessment, covering ratio analysis and investment appraisal.

Provided in: Papers 1, 2 and 3 (HL)

Calculator: Scientific calculator, permitted in Papers 1, 2 and 3 (HL)

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Formulae for ratio analysis (SL/HL)

Profitability ratios (SL/HL)

- Gross profit margin

$$\text{Gross profit margin} = \frac{\text{gross profit}}{\text{sales revenue}} \times 100$$

- Profit margin

$$\text{Profit margin} = \frac{\text{profit before interest and tax}}{\text{sales revenue}} \times 100$$

- Return on capital employed (ROCE)

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

where

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

Liquidity ratios (SL/HL)

- Current ratio

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

- Acid test (quick) ratio

$$\text{Acid test ratio} = \frac{\text{current assets} - \text{stock}}{\text{current liabilities}}$$

Efficiency ratios (HL only)

- Stock turnover (number of times)

$$\text{Stock turnover (times)} = \frac{\text{cost of sales}}{\text{average stock}}$$

- Stock turnover (number of days)

$$\text{Stock turnover (days)} = \frac{\text{average stock}}{\text{cost of sales}} \times 365$$

where

$$\text{average stock} = \frac{\text{opening stock} + \text{closing stock}}{2}$$

- Debtor days ratio (number of days)

$$\text{Debtor days ratio} = \frac{\text{debtors}}{\text{total sales revenue}} \times 365$$

- Creditor days ratio (number of days)

$$\text{Creditor days ratio} = \frac{\text{creditors}}{\text{cost of sales}} \times 365$$

- Gearing ratio

$$\text{Gearing ratio} = \frac{\text{non-current liabilities}}{\text{capital employed}} \times 100$$

where

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

Other formulae (SL/HL)

Investment appraisal

- SL/HL: Average rate of return (ARR)

$$\text{ARR} = \frac{(\text{total returns} - \text{capital cost}) \div \text{years of use}}{\text{capital cost}} \times 100$$

- HL only: Net present value (NPV)

$$\text{NPV} = \sum (\text{present values of return}) - \text{original cost}$$

Capacity utilization and productivity (HL only)

- Capacity utilization rate

$$\text{Capacity utilization rate} = \frac{\text{actual output}}{\text{productive capacity}} \times 100$$

- Productivity rate

$$\text{Productivity rate} = \frac{\text{total output}}{\text{total input}} \times 100$$