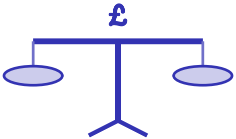
Finance & Accounting

A-Level Business ▪ Topic 10

A-Level Business



What we will cover

1. Financial statements
2. Depreciation
3. Profitability ratios
4. Liquidity & gearing
5. Investment appraisal
6. Recap

statements reveal performance

1 Financial statements

The income statement

Revenue − cost of sales = **gross profit** 毛利. Then subtract expenses to get operating profit, then interest and tax to get profit for the year.

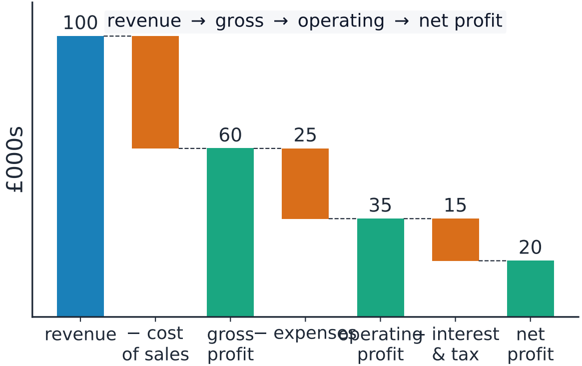
> It shows performance over a period. The statement of financial position is a snapshot of assets and liabilities on one day.

Reading down an income statement

revenue	the value of everything sold in the period
cost of sales 销售成本	the direct cost of the goods that were sold
gross profit	revenue minus cost of sales
expenses 费用	rent, wages, marketing – the indirect costs
operating profit	gross profit after taking off expenses
profit for the year	after interest and tax – what is available to shareholders

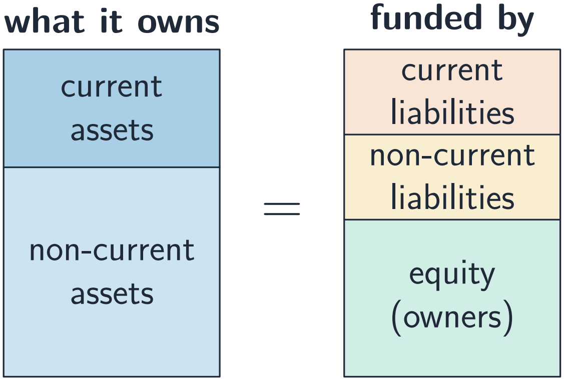
Each line answers a different question: gross profit tests the product, operating profit the running of the business, and profit for the year the whole financing structure.

The income statement, in detail



The income statement steps down from revenue to net profit

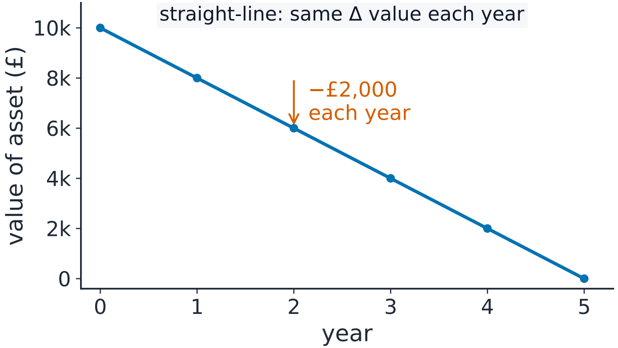
Statement of financial position



The **balance sheet** 资产负债表 is a photo of what the firm owns and owes on one day.

> **assets** 资产 = **liabilities** 负债 + **equity** 所有者权益 – the two sides always balance.

Depreciation



Depreciation 折旧 spreads a non-current asset's cost over the years it is used. A £10,000 machine over 5 years loses £2,000 a year – an expense each year, so profit is not overstated.

2 Ratio analysis

Profitability ratios

$$\text{ROCE} = \frac{\text{op. profit}}{\text{capital employed}} \times 100\%$$

Profitability 盈利能力: how well sales & capital turn into profit.

Worked example

rev £500k, gross £200k, op. £80k, capital £400k

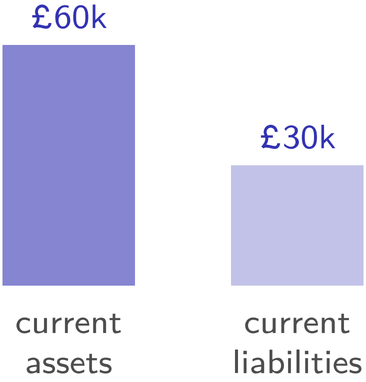
gross margin 毛利率 $= 40\%$; op. margin $= 16\%$; **ROCE** 资本回报率 $= 20\%$

The efficiency and gearing ratios, and what ratios cannot do

gross profit margin 毛利率	gross profit as a percentage of revenue
efficiency 效率 ratios	show how well the firm uses its resources – **inventory turnover 存货周转率**, receivable days, payable days
acid test ratio 速动比率	current assets minus inventory, over current liabilities – liquidity without relying on stock selling
gearing	long-term debt as a share of capital employed
high gearing	heavy borrowing – risky if interest rates rise, but it boosts returns when things go well
ARR 会计收益率	the accounting rate of return – average annual profit as a percentage of the initial investment

Ratios use past data, which may not predict the future, and they ignore non-financial factors – staff morale, brand, market change. Say so in any evaluation.

Liquidity and gearing



Liquidity 流动性 – can it pay short-term debts?

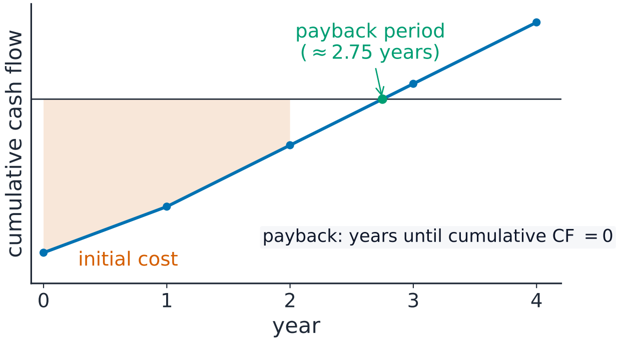
$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}} = 2.0$$

acid test 速动比率 (drop inventory) $= 1.2$.

Gearing 杠杆比率 $= \dfrac{\text{non-current liabilities}}{\text{capital employed}}$ – high $=$ heavy borrowing.

3 Investment appraisal

Payback and ARR



The **payback period** 回收期 is when cumulative cash flow climbs back to zero – shorter is safer.

$$\text{ARR} = \frac{\text{avg. annual profit}}{\text{initial investment}} \times 100\%$$

ARR 会计回报率: £25k profit on £100k $= 25\%$.

Finance and accounting strategy

At the top level, managers use financial data and budgets to choose between strategies.

> Before a big decision, they ask: can we afford it, how will it affect profit, cash flow and gearing, and what is the likely return?

Net present value and discounting

Discounting 折现 shrinks future cash to today's value – £100 next year is worth ∼£91 now.

> **NPV** 净现值 = discounted inflows − initial cost. A positive NPV adds value.

Payback, ARR and NPV: what each is good for

payback	how long until the investment is recovered
its strength	simple, and it focuses on risk – a short payback means less exposure
its weakness	it ignores everything after the payback point
ARR	shows profitability as a percentage, comparable with other returns
its weakness	it uses profit rather than cash, and ignores the timing of it
NPV	the most complete: it discounts future cash flows to today's value, so timing and the cost of capital both count

> Use all three and say where they disagree. A project with a fast payback and a negative NPV is telling you something the payback alone cannot.

Ratio analysis

profitability - profit from sales and capital

$$\text{margins} = \frac{\text{gross or operating profit}}{\text{revenue}} \times 100\%$$

$$\text{ROCE} = \frac{\text{operating profit}}{\text{capital employed}} \times 100\%$$

higher = more profit kept from each sale and from each dollar invested

liquidity - can it pay short-term debts?

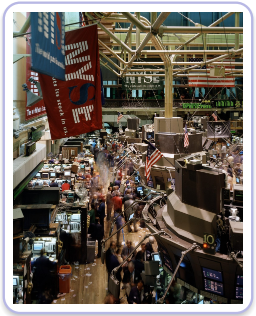
$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{acid test} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$$

about 1.5–2 is usually safe; the acid test is stricter - inventory can be slow to sell

The ratio toolbox: profitability and liquidity at a glance

Profitability ratios, continued



> Investors use profitability, liquidity and gearing ratios to judge a firm's financial health

Three ratios, and the numbers behind them

Operating profit margin

Operating profit margin 营业利润率 $= \dfrac{\text{operating profit}}{\text{revenue}} \times 100$ – profit from trading, before interest and tax.

Return on capital employed

Return on capital employed 资本回报率 (ROCE) $= \dfrac{\text{operating profit}}{\text{capital employed}} \times 100$: the return earned on all the long-term money in the business.

Non-current assets

Non-current assets 非流动资产 are the ones kept over a year – property, machinery, vehicles – and they sit above current assets on the statement of financial position.

A margin says how profitable each sale is; ROCE says whether the whole investment was worth making. A firm can be good at one and poor at the other.

How stakeholders use financial statements

financial statements

owners, investors	profit and the return on their money
lenders	can the firm repay its loans?
managers	decisions and budgets
government	the tax due
suppliers	will they be paid?

> Each stakeholder reads the statements for a different reason

Exam tips

- Calculate and interpret the key ratios – **gross/net profit margin, current ratio, gearing, ROCE** – always against a benchmark or a trend.
- For **investment appraisal** know **payback** (time to recover), **ARR** (average % return) and **NPV** (discounted; a positive NPV means accept).
- A **current ratio** of about 1.5–2 is healthy: too high wastes resources, too low risks liquidity problems.
- State the **limitations of ratios** (historical figures, no qualitative factors) in your evaluation.

4 Recap

Topic 10 – key takeaways

1 Statements

income statement & balance sheet

2 Profitability

margins & ROCE measure profit

3 Liquidity

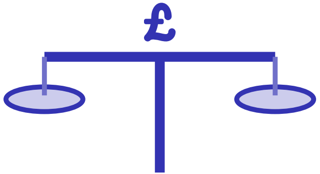
current & acid test; gearing = borrowing

4 Appraisal

payback, ARR, NPV judge projects

Check yourself

1. Revenue minus cost of sales gives what?
2. Assets equal liabilities plus what?
3. Acid test drops which current asset?
4. A positive NPV means a project does what?



Answers **1.** gross profit **2.** equity **3.** inventory **4.** adds value