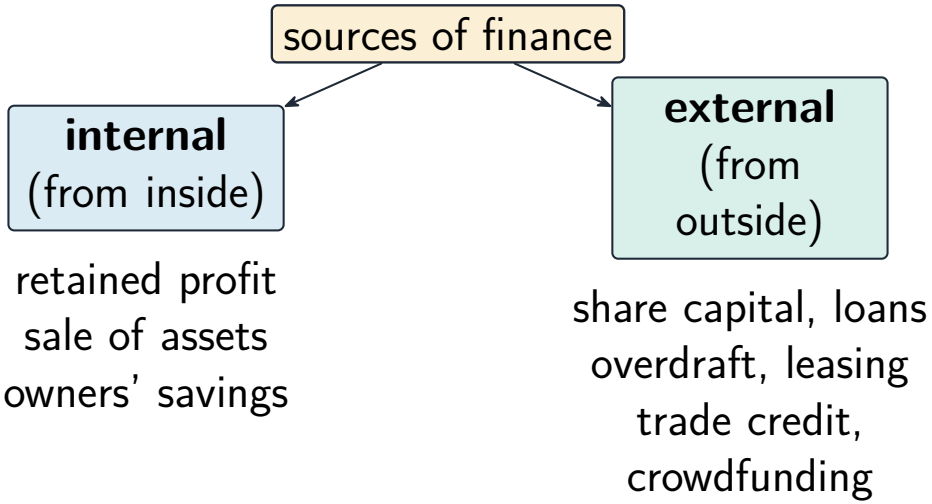
Exercise walk-through

3.1
Cash, finance and appraisal: supported rehearsal

International Baccalaureate · IB Diploma · Business Management · SL

Figure: Finance and its sources



- A tree splitting sources of finance into internal (**retained profit**, **sale of assets**, owners' savings) and external (**share capital**, loans, overdraft, leasing, trade credit, crowdfunding)
- Match each part of the diagram to the text.

Profitability and liquidity ratios

- **Ratio analysis** compares numbers from the **final accounts** so that a business can be compared with last year and with its rivals.
- **Profitability ratios** measure profit against sales or against the money invested.
- **Capital employed** is non-current **liabilities** plus **equity**: $160{,}000 + 200{,}000 = 360{,}000$.
- The **return on capital employed** (ROCE) of 25% is far above the roughly 6% interest on the bank loan, so borrowing to invest has paid off.

$$\text{gross profit margin} = \frac{\text{gross profit}}{\text{sales revenue}} \times 100 = \frac{240{,}000}{600{,}000} \times 100 = 40\%$$

Sources for this lesson

- International Baccalaureate, *Business Management guide* (first assessment 2024).
- Reports on ofo's growth and collapse in *Caixin* and the *Financial Times* (2017–2019).
- International Accounting Standards Board, IAS 1 *Presentation of Financial Statements* (the names of the **final accounts**).
- P. Atrill and E. McLaney, *Accounting and Finance for Non-Specialists* (12th edition, 2023).

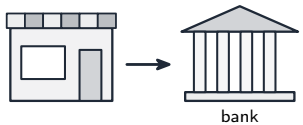
Exercises 2.1·2.2

2.1 Distinguish capital expenditure from revenue expenditure, giving one example of each for the repair business. [2]

capital expenditure

revenue expenditure

2.2 State two internal and two external sources of finance, with one reason a profitable company might still prefer an external loan. [3]



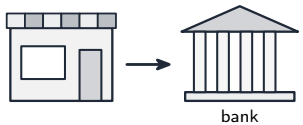
Exercises 2.1·2.2

2.1 Distinguish capital expenditure from revenue expenditure, giving one example of each for the repair business. [2]

capital expenditure | revenue expenditure

2.1 Capital expenditure buys non-current assets used for years – the third workshop building (1); revenue expenditure covers the day-to-day running costs – parts, wages, rent (1).

2.2 State two internal and two external sources of finance, with one reason a profitable company might still prefer an external loan. [3]



2.2 Internal: retained profit; sale of unwanted assets; owners' savings (any two, 2). External: share capital; loan capital; overdraft; trade credit; leasing; crowdfunding; microfinance; business angels (any two, but two of each required) (2 – 1 if only three correct). A company may prefer a loan because it keeps ownership and control undiluted and interest is tax-deductible, while retained profit may be too small for the project (1).

Exercises 2.3·2.4

2.3 A diagnostic machine costs 22 000, has a residual value of 2 000 and a four-year life. Calculate the annual straight-line depreciation charge. [2]

cost: 22 000
residual value: 2 000
useful life: 4 years

2.4 Revenue is 600 000, cost of sales 360 000 and expenses 150 000. Calculate gross profit, profit for the year, the gross profit margin and the profit margin. [4]

revenue: 600 000
cost of sales: 360 000
expenses: 150 000

Exercises 2.3·2.4

2.3 A diagnostic machine costs 22 000, has a residual value of 2 000 and a four-year life. Calculate the annual straight-line depreciation charge. [2]

cost: 22 000
residual value: 2 000
useful life: 4 years

2.3 Depreciation $= (22\,000 - 2\,000)/4 = 20\,000/4 = 5\,000$ a year (2).

2.4 Revenue is 600 000, cost of sales 360 000 and expenses 150 000. Calculate gross profit, profit for the year, the gross profit margin and the profit margin. [4]

revenue: 600 000
cost of sales: 360 000
expenses: 150 000

2.4 Gross profit $= 600\,000 - 360\,000 = 240\,000$ (1); profit $= 240\,000 - 150\,000 = 90\,000$ (1); GPM $= 240\,000/600\,000 \times 100 = 40\%$ (1); profit margin $= 90\,000/600\,000 \times 100 = 15\%$ (1).

Exercises 2.5·3.1

2.5 Current assets are 80 000 (inventory 30 000) and current liabilities 40 000. Calculate the current ratio and the acid test, and interpret the pair. [4]

current assets: 80 000
inventory: 30 000
current liabilities: 40 000

3.1 *(Original, Paper 2 style.)* The five-year loan of 160 000 carries 8% interest. Using the accounts above, calculate the return on capital employed and state, with a reason, whether the loan is earning its keep. [4]

loan: 160 000
interest: 8%

Exercises 2.5·3.1

2.5 Current assets are 80 000 (inventory 30 000) and current liabilities 40 000. Calculate the current ratio and the acid test, and interpret the pair. [4]

current assets: 80 000
inventory: 30 000
current liabilities: 40 000

2.5 Current ratio = 80 000/40 000 = 2.0 (1); acid test = (80 000 − 30 000)/40 000 = 1.25 (1). Both exceed 1, so short-term debts are covered (1); the gap between 2.0 and 1.25 is inventory – the acid test matters here because spare parts may be slow to sell (1).

3.1 *(Original, Paper 2 style.)* The five-year loan of 160 000 carries 8% interest. Using the accounts above, calculate the return on capital employed and state, with a reason, whether the loan is earning its keep. [4]

loan: 160 000
interest: 8%

3.1 Capital employed = non-current assets 320 000+ working capital 40 000 = 360 000 (1). ROCE = 90 000/360 000 × 100 = 25% (2). The loan earns its keep: the return on all capital employed (25%) is well above the 8% interest cost, so borrowing adds to shareholders' returns (1).

Exercise 3.2

3.2 *(Original, Paper 2 style.)* In March the repair business opens with 12 000, receives 42 000 and pays out 48 000; in April it opens with the March closing balance, receives 44 000 and pays out 55 000. Calculate the closing cash for each month and explain one action the forecast should trigger. [4]

opening: 12 000

receipts: 42 000

payments: 48 000

Exercise 3.2

3.2 *(Original, Paper 2 style.)* In March the repair business opens with 12 000, receives 42 000 and pays out 48 000; in April it opens with the March closing balance, receives 44 000 and pays out 55 000. Calculate the closing cash for each month and explain one action the forecast should trigger. [4]

opening: 12 000

receipts: 42 000

payments: 48 000

3.2 March: $12\,000 + 42\,000 - 48\,000 = 6\,000$ (1). April: $6\,000 + 44\,000 - 55\,000 = -5\,000$ (1) – an overdraft of 5 000 is needed. The forecast shows the shortfall TWO MONTHS EARLY (1), so the firm can arrange an overdraft limit in advance, move the insurance payment, delay non-urgent outflows or press receivables – acting on the forecast, not on the crisis (1).

Exercise 3.3

3.3 *(Original, Paper 2 style.)* The third workshop costs 120 000 and is expected to add net cash flows of 40 000 a year for four years. The cost of capital is 6% (discount factors 0.943, 0.890, 0.840, 0.792). Calculate the payback period, the average rate of return and the net present value, and comment on what each method shows. [6]

cost: 120 000

net cash flow: 40 000 a year

life: 4 years

Exercise 3.3

3.3 *(Original, Paper 2 style.)* The third workshop costs 120 000 and is expected to add net cash flows of 40 000 a year for four years. The cost of capital is 6% (discount factors 0.943, 0.890, 0.840, 0.792). Calculate the payback period, the average rate of return and the net present value, and comment on what each method shows. [6]

cost: 120 000

net cash flow: 40 000 a year

life: 4 years

3.3 Payback = 120 000/40 000 = 3 years (1). ARR: total return = $4 \times 40\,000 - 120\,000 = 40\,000$; average annual profit = 40 000/4 = 10 000; ARR = 10 000/120 000 × 100 = 8.3% (2). NPV: PVs = $40\,000 \times 0.943 + 40\,000 \times 0.890 + 40\,000 \times 0.840 + 40\,000 \times 0.792 = 37\,720 + 35\,600 + 33\,600 + 31\,680 = 138\,600$; NPV = $138\,600 - 120\,000 = +18\,600$ (2). Comment: payback is quick and risk-focused but blind to year 4; ARR is comparable with the 8% loan rate; NPV alone shows the project adds value in today's money after the 6% cost of capital (1).

Local review guidance: formula, substitution, answer with its sign and unit – every time, even when the arithmetic is easy; ratios interpreted against a benchmark, not left as decimals; (R1 3.3) the comment names what each method CANNOT see. This is authored classroom guidance.