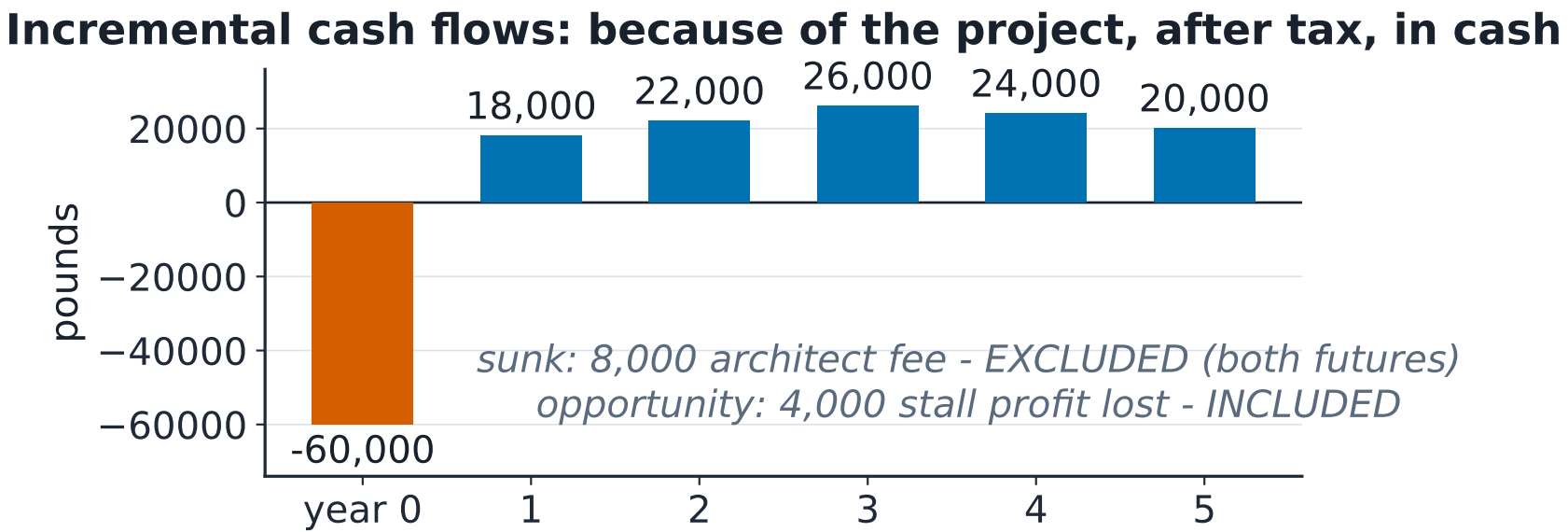
Exercise walk-through

9.5
Cost of capital

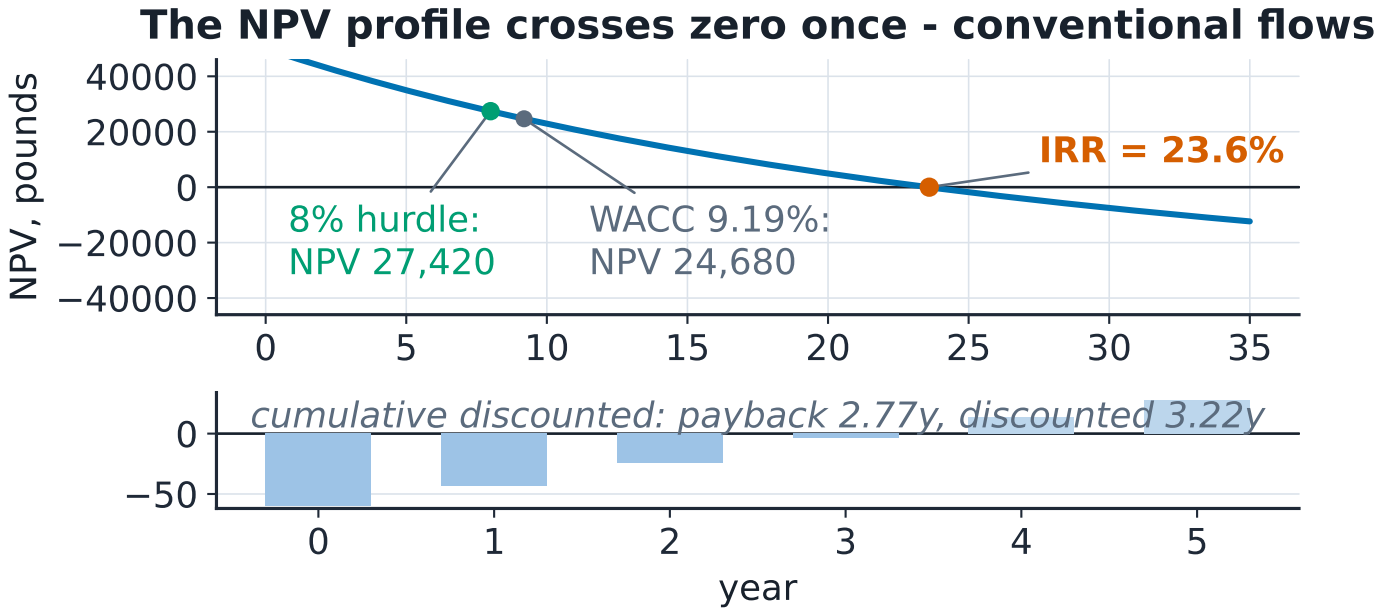
University Business

Cash flows: the list is the craft



Relevant flows: sunk fee out, **opportunity cost** in, working capital returned.

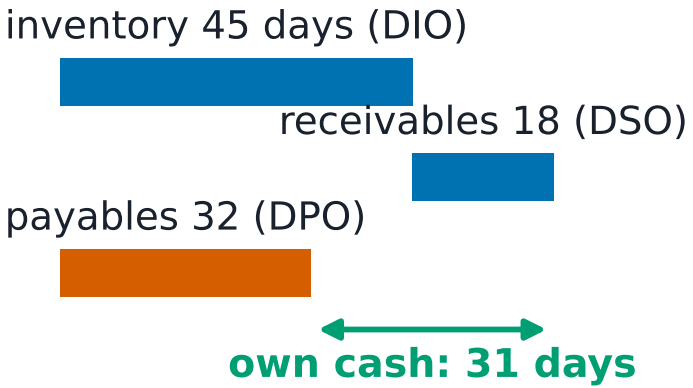
Appraisal: NPV is the referee



IRR 23.6%; NPV 27,420 at 8% and 24,680 at the 9.19% WACC.

Working capital: the cash the growth eats

The 31-day bridge of own cash



CCC = 45 + 18 - 32 = 31 days of sales tied up

Overtrading, one table

sales	100	**160**
NWC/sales	20%	**25%**
NWC	24,000	**48,000**

NWC DOUBLES
(1.6 x 1.25)

sales +60%, not +60% cash

A 31-day cash cycle; 60% growth doubles working capital.

Exercises 2.1·2.2

2.1 Compute E, V, the weights, and the WACC (two decimals). [4]

2.2 The studio's book shows equity at £0.50 par. What weight would the book method give, and why is it wrong? [2]

Exercises 2.1·2.2

2.1 Compute E, V, the weights, and the WACC (two decimals). [4]

2.1

- $E = 500{,}000 \times 1.80 = £900{,}000$; $V = 1{,}170{,}000$.
- Weights: 76.9% / 23.1%.
- $WACC = 0.769(13.5) + 0.231(7 \times 0.8) = 10.38 + 1.29 = 11.67\%$.

2.2 The studio's book shows equity at £0.50 par. What weight would the book method give, and why is it wrong? [2]

2.2

- Book: 250,000/520,000 = 48% equity weight – roughly the double-count of the market's.
- Investors require returns on what their stake is WORTH; the market price is the worth.

Exercises 2.3·2.4

2.3 k_e came from a proxy: quoted rival β 1.3, market 9.5%, risk-free 3%. Reconstruct the CAPM k_e and the implied private premium. [3]

2.4 Borrowing £150,000 more at 7% cuts the blend to 10.99%. In two lines: why will it stop cutting? [2]

Exercises 2.3·2.4

2.3 k_e came from a proxy: quoted rival β 1.3, market 9.5%, risk-free 3%. Reconstruct the CAPM k_e and the implied private premium. [3]

2.3

- $k_e = 3 + 1.3(9.5 - 3) = 11.45\%$.
- Implied private premium $= 13.5 - 11.45 = 2.05$ points – a judgement, written down.

2.4 Borrowing £150,000 more at 7% cuts the blend to 10.99%. In two lines: why will it stop cutting? [2]

2.4

- Each tranche raises the equity beta (k_e climbs) and the new debt prices above 7% for the riskier borrower.
- The curve is U-shaped: the bottom is the right debt, not the most available.