9.5 Cost of capital

Name: _____ Class: _____ Date: _____ **Total: 11 marks**

KEY WORDS weighted average cost of capital • tax shield

Objective

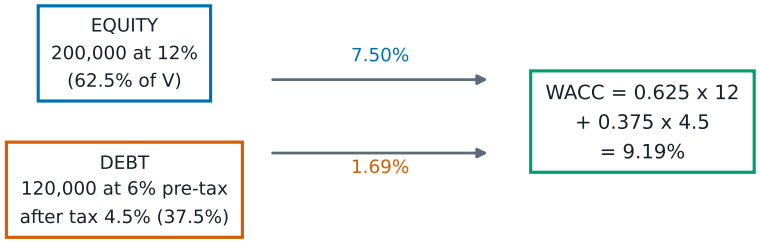
Compute WACC with market-value weights; source each input; read the debt U-curve honestly.

1 Key knowledge and worked examples

The blend

WACC = (E/V)k_e + (D/V)k_d(1−t) at market weights; private k_e by proxy with judgements written down.

The hurdle is a blend of market values



previously assumed 8%: every NPV was 2,735 too fat;
the proxy working: k_e = 4 + 1.1 x 6 + 1.4 private

A blend of market values

Worked example. Nimbus

E 200,000 (12%), D 120,000 (6% → 4.5%): WACC 9.19% ✓.

2 Practice

A design studio: 500,000 shares at £1.80; debt £270,000 at 7% pre-tax; tax 20%; k_e 13.5%.

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]

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]