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Ordinary equity: share price 30 June 2011 \times weighted number of shares issued
 $\$ 3.02 \times 437.1$ million shares = \$1320 million

Debt: interest-bearing loans at 30 June 2011, average cost of 9.8%

Estimate the weighted average cost of capital for Endymion Limited.

- 11-37 (Ethics problem)** The board of directors of Gemtex Limited is having long and protracted discussions about investment in new technology that could double their earnings. The technology is being developed by a newly listed company, LaserSmart Limited, and has direct applications to Gemtex's business. The management of both companies have held several secret meetings to discuss working closer with each other. As a finance manager to Gemtex you are asked to acquire a strategic shareholding in LaserSmart prior to making an official takeover offer. You notice that the directors of Gemtex have started buying shares in both Gemtex and LaserSmart. You wonder whether you should buy some too. What are the ethical issues involved?

learning goal 1

Case

Making Star Products' financing/investment decision

Star Products Limited is a growing manufacturer of motor vehicle accessories. During 2011 the company experienced sharp increases in both sales and earnings. Because of this recent growth, Melissa Jen, the company's treasurer, wants to make sure that available funds are being used to their fullest. Management policy is to maintain the current capital structure proportions of 30% long-term debt, 10% preference share capital and 60% ordinary share capital for at least the next three years. The firm is in the 30% tax bracket.

Star's division and product managers have presented several competing investment opportunities to Melissa. However, because funds are limited, choices of which projects to accept must be made. The investment opportunities schedule (IOS) is shown in the following table.

IOS for Star Products Limited

Investment opportunity	Internal rate of return (IRR)	Initial investment
A	15%	\$400 000
B	22	200 000
C	25	700 000
D	23	400 000
E	17	500 000
F	19	600 000
G	14	500 000

To estimate the firm's weighted average cost of capital (WACC), Melissa contacted a leading investment banking firm, which provided the financing cost data set out below.

Financing cost data: Star Products Limited

Long-term debt: The firm can raise \$450 000 of additional debt by selling 15-year, \$1000 par value, 9% coupon interest rate bonds that pay *annual interest*. It expects to net \$960 per bond after flotation costs. Any debt in excess of \$450 000 will have a before-tax cost, r_d , of 13%.

Preference share capital: Preference shares, regardless of the amount sold, can be issued with a \$70 par value, 14% annual dividend rate and will net \$65 per share after flotation costs.

Ordinary share equity: The firm expects dividends and earnings per share to be \$0.96 and \$3.20, respectively, in 2012, and to continue to grow at a constant rate of 11% per year. The firm's shares currently sell for \$12 per share. Star expects to have \$1.5 million of retained earnings available in the coming year. Once the retained earnings have been exhausted, the firm can raise additional funds by selling new ordinary shares, netting \$9 per share after underpricing and flotation costs.

Required

- 1 Calculate the cost of each source of financing, as specified:
 - a Long-term debt, first \$450 000.
 - b Long-term debt, greater than \$450 000
 - c Preference shares, all amounts
 - d Ordinary share capital, first \$1.5 million
 - e Ordinary share capital, greater than \$1.5 million.
- 2 Find the break points associated with each source of capital and use them to specify each of the ranges of total new financing over which the firm's WACC remains constant.
- 3 Calculate the WACC over each of the ranges of total new financing specified in question 2.
- 4 Using your findings in question 3 along with the IOS, draw the firm's weighted marginal cost of capital (WMCC) and IOS on the same set of axes (total new financing or investment on the *x*-axis and WACC and IRR on the *y*-axis).
- 5 Which, if any, of the available investments would you recommend that the firm accept? Explain your answer.

Spreadsheet exercise

Calculation of specific costs of capital and WACC for Nova Corporation

Nova Corporation Ltd is interested in measuring the cost of each specific type of capital as well as the weighted average cost of capital. Historically, the firm has raised capital in the following manner:

Source of capital	Weight %
Long-term debt	35
Preference shares	12
Ordinary shares	53

The tax rate of the firm is currently 30%. The needed financial information and data are as follows:

Debt: Nova can raise an unlimited amount of debt by selling \$1000 par (face) value, 6.5% coupon interest rate, 10-year bonds on which *annual* interest payments will be made. To sell the issue, an average discount of \$20 per bond needs to be given. There is an associated flotation cost of 2% of par value.



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