Chapter 14

E14.7 Raisin-Kash

(i)

Capital employed is £1,900,000 [£1,000,000 + £900,000]

Current earnings are 7% of £1,900,000 that equals £133,000

Therefore, earnings per share (eps) $= \frac{£133,000}{1,000,000} = 13.3p$

After the rights issue earnings will be 7% of £2,404,000 that equals £168,280

Rights price **£**	**Number of new shares £504,000/ rights price**	**Total shares after rights issue**	**eps £168,280/ total shares pence**
2.25	224,000	1,224,000	13.7
1.90	265,263	1,265,263	13.3
1.80	280,000	1,280,000	13.1
1.60	315,000	1,315,000	12.8

We can see that at a high rights issue share price the earnings per share are increased. At lower issue prices eps are diluted. The 'break-even point', with no dilution, is where the rights price equals the capital employed per share £1,900,000/1,000,000 = £1.90.

(ii)

The market price will theoretically fall after the issue of 1 new share for every 4 existing shares.

1,000,000 shares x the cum rights price of £2.10	£2,100,000
250,000 shares x the issue price of £1.90	£475,000
Theoretical value of 1,250,000 shares	£2,575,000

Therefore, the theoretical ex rights price is

$$\frac{£2,575,000}{1,250,000} = £2.06 \text{ per share}$$

Or

Four shares at the cum rights value of £2.10	£8.40
One new share issued at £1.90	£1.90
	£10.30

Therefore, the theoretical ex rights price is $\frac{£10.30}{5} = £2.06$ per share

E14.8 Percival

(i)

This represents a major project for Percival plc and the method it chooses to finance it will impact considerably on the company's financial structure. Therefore the impact on the company's cost of capital must be considered. The additional cost of capital is not just the 9% of the debentures because the issue of the debentures will also affect the cost of the existing equity. The new overall cost of capital for Percival needs to be calculated to evaluate the project.

It may be assumed that the market value of the company's equity is determined by the level of dividends and the equity cost of capital and that the project should not be undertaken unless it increases shareholder wealth (the market value of the equity).

Cost of equity, assuming that the current level of dividends is maintained:

$$\frac{15p}{£1.20} = 0.125 \text{ or } 12.5\%$$

If the project goes ahead then the financial risk will increase and the cost of equity will increase to
12.5% + 3% = 15.5%

WACC

Current position

	Market value		
	£		**£**
Equity capital	10,000,000	12.5%	1,250,000
Debentures	1,000,000	9.0%	90,000
	11,000,000		1,340,000

$$\text{The current WACC} = \frac{1,340,000}{11,000,000} = 12.18\%$$

The new WACC (if the project goes ahead) can be calculated after the new market value of equity has been calculated - see part (ii).

New market value of equity

	£	£
Current annual earnings available for		
dividends, before interest		1,340,000
New project annual earnings before interest		200,000
		1,540,000
Interest		
Current debentures	90,000	
New debentures	135,000	225,000
Earnings per annum in perpetuity if		
the project goes ahead		
available for dividends		1,315,000

The new cost of equity is 15.5%

Therefore, the new market value of the equity is £1,315,000/15.5% =	£8,483,870
Less the current market value of equity	£10,000,000
Loss in shareholder wealth if project goes ahead	£1,516,130

Therefore the project should not be undertaken b Percival plc.

(ii)

The project may be unacceptable because it is fundamentally unprofitable, or because of the method of financing.

The project can be evaluated using the current WACC of 12.18% and we can also investigate how the method of financing and change in capital structure has affected the project.

Project evaluation using the WACC of 12.18%

Total earnings per annum before interest, from i) above, of £1,540,000 can be valued at £1,540,000/0.1218 = £12,643,678

If the market value of the total debentures £2,500,000 (£1,000,000 + £1,500,000) is deducted from this the result is the market value of equity of £10,143,678.

This is an increase of £143,678 in shareholders' wealth above the current value due to the project, and using the current WACC.

Impact of change in capital structure

	New market value £		£
Equity	8,483,870	15.5%	1,315,000
Current debentures	1,000,000	9.0%	90,000
New debentures	1,500,000	9.0%	135,000
	10,983,870		1,540,000

$$\text{New WACC} = \frac{£1{,}540{,}000}{£10{,}983{,}870} = 14\%$$

Market value at 12.18% if Percival plc had maintained its WACC	= £12,643,678
Market value at 14% new WACC	= £10,983,870
Decrease in shareholder wealth due to change in WACC	= £1,659,808

The two reasons for the total loss in shareholder wealth can be reconciled with the total calculated in (i) above.

	£
Project NPV at current WACC	143,678
Effect of method of financing	1,659,808
Loss in shareholder wealth	1,516,130