Questions

1. What are the important differences between valuing a company and valuing a project?
2. Define the following terms: operating invested capital, NOPLAT, ROIC, net investment, and free cash flow
3. What are the key drivers of FCF?
4. Delineate the ROIC tree. How would you assess a company's financial health and capital structure?
5. What are the features of cost of capital?
6. What are the characteristics of steady state?
7. List the steps involved in developing financial forecasts.
8. What are the typical forecast drivers and forecast ratios for the most common line items in the profit and loss account?
9. What are the typical forecast drivers and forecast ratios for the most common line items on the assets side of the balance sheet?
10. Discuss the cash flow methods available for estimating the continuing value.
11. What are the common misconceptions about continuing value? What are the common pitfalls in estimating continuing value?
12. Discuss the cash flows methods for estimating the continuing value.

SOLVED PROBLEMS

2.1 The profit and loss account and balance sheet of Zenith Corporation for two years (year 1, year 2) are given below:

Profit and Loss Account

	in million	
Year	*1*	*2*
Net sales	5600	6440
Income from marketable securities	140	210
Non-operating income	70	140
Total income	5810	6790
Cost of goods sold	3220	3780
Selling and administrative expenses	700	770

Depreciation	350	420
Interest expenses	336	392
Total costs and expenses	4606	5362
PBT	1204	1428
Tax provision	364	448
PAT	840	980
Dividend	420	560
Retained earnings	420	420
Balance Sheet		
Equity capital	2100	2100
Reserves and surplus	1680	2100
Debt	2520	2940
	6300	7140
Fixed assets	4200	4550
Investments	1260	1400
Net current assets	840	1190
	6300	7140

Assume a tax rate of 40 percent.

(i) What is the EBIT for year 2?

(ii) What is the tax on EBIT for year 2?

(iii) What is the NOPLAT for year 2?

(iv) What is the free cash flow to the firm (FCFF) for year 2?

(v) Give the break up of the financing flow for year

Solution

(i) EBIT for Zenith Corporation for year 2 is calculated below:

Profit before tax	1428
+ Interest expense	+ 392
– Interest income	– 210
– Non-operating income	– 140
	1470

(ii) Taxes on EBIT for year 2 is calculated below:

Tax provisio n from income statement	448
+ Tax shield on interest expense	+156.8

	– Tax on interest income	– 84
	– Tax on non-operating income	– 56
		464.8
(iii)	NOPLAT for year 2 is :	
	EBIT	1470
	– Tax on EBIT	464.8
		1005.2
(iv)	FCFF for year 2 is :	
	NOPLAT	1005.2
	– Net investment	– 700.0
	+ Non-operating cash flow	+ 84.0
		389.2
(v)	The break-up of the financing flow is as follows:	
	After-tax interest expense	235.2
	+ Cash dividend	+ 560
	– Net borrowing	– 420
	+ Δ Excess marketable securities	+ 140
	– After-tax income on excess marketable securities	– 126
		389.2

2.2 You are looking at the valuation of a stable firm, Networks Limited, done by an investment analyst. Based on an expected free cash flow of 54 million for the following year and an expected growth rate of 9 per cent, the analyst has estimated the value of the firm to be 1800 million. However, he committed a mistake of using the book values of debt and equity. You do not know the book value weights employed by him but you know that the firm has a cost of equity of 20 per cent and a post-tax cost of debt of 10 per cent. The market value of equity is thrice its book value, whereas the market value of its debt is nine-tenths of its book value. What is the correct value of the firm?

Solution

$$1800 = \frac{54}{r - 0.09} \qquad \Rightarrow \quad r = 0.12 \text{ or } 12\%$$

$$0.12 = x \times 0.20 + (1 - x) \times 0.10 \Rightarrow \quad x = 0.20$$

x is the weight assigned to equity is 0.20

So $\qquad D/E = 0.8/0.2 = 4$

Since the market value of equity is thrice its book value and the market value of debt is nine-tenths of its book value, the market value weights of equity and debt are