Valuation: Measuring and Managing the Value of Companies

Frameworks for Valuation

Chapter 6 Problems

1. Exhibit 6.18 presents the income statement and reorganized balance sheet for BrandCo, an $800 million consumer products company. Using the methodology outlined in Exhibit 6.5, determine NOPLAT for Year 1. Assume an operating tax rate of 25 percent. Using the methodology outlined in Exhibit 6.6, determine free cash flow for Year 1.

2. BrandCo currently has 50 million shares outstanding. If the BrandCo's shares are trading at $17.88 per share, what is the company's market capitalization (value of equity)? Assuming the market value of debt equals today's book value of debt, what percentage of the company's value is attributable to debt, what percentage is attributable to equity? When is the market value of debt not equal to the book value? Using these weights, compute the weighted average cost of capital. Assume the pre-tax cost of debt is 8 percent, the cost of equity is 12 percent, and the marginal tax rate is 30 percent.

3. Using free cash flow computed in Question 1 and the weighted average cost of capital computed in Question 2, estimate BrandCo's enterprise value using the growing-perpetuity formula.

4. Assuming the market value of debt equals today's book value of debt, what is the intrinsic equity value for BrandCo? What is the value per share? Does it differ from the share price used to determine the cost of capital weightings?

5. What are the three components required to calculate economic profit? Determine BrandCo's economic profit in Year 1?

6. Using economic profit calculated in Question 5 and the weighted average cost of capital computed in Question 2, value BrandCo using the economic-profit-based key value driver model. Does the calculation generate enterprise value or equity value? Should discounted economic profit be greater than, equal to, or less than discounted free cash flow. Hint: remember, prior year invested capital must be used to determine ROIC and capital charge.

7. Using the methodology outlined in Exhibit 6.16, determine equity cash flow for Year 1. Use the growing-perpetuity formula (based on equity cash flow) to compute BrandCo's equity value. Assume the cost of equity is 12 percent and cash flows are growing at 5 percent.

EXHIBIT 6.18 **BrandCo: Income Statement and Reorganized Balance Sheet**

$ million

Income Statement	**Today**	**Year 1**
Revenues	800.0	840.0
Operating costs	(640.0)	(672.0)
Depreciation	(40.0)	(42.0)
Operating profits	120.0	126.0
Interest	(16.0)	(16.0)
Earnings before taxes	104.0	110.0
Taxes	(26.0)	(27.5)
Net Income	78.0	82.5

Reorganized balance sheet	**Today**	**Year 1**
Operating working capital[1]	70.1	73.6
Property and equipment	438.4	460.3
Invested capital	508.5	533.9
Debt	200.0	210.0
Shareholders' equity	308.5	323.9
Invested capital	508.5	533.9

[1] Accounts payable has been netted against inventory to determine operating working capital