Practice Questions – Valuation

1. Target company recently made a profit of £500,000 and had a payout ratio of 80% (which is higher than the average for this sector). The average P/E ratio for this sector is 9. The company's balance sheet shows Shareholder's Funds of £2.25 m for 1 m shares, but the buildings are worth £1 m more than their balance sheet value and stocks would be worth £250,000 less in a break-up of the company.

   Dividend growth in the sector is expected to be 4% per annum, the risk-free rate is 6%, the market return 11% and the company's beta estimated as 1.2. The average dividend yield for the sector is 6%.

   Find valuations of Target using

   (a) P/E ratio
   (b) Dividend yield
   (c) Dividend valuation model
   (d) Balance sheet book values
   (e) Net realisable value.

2. You are given the following information about Noruce plc.

The company has just paid an annual dividend of 15p per share and the next is due in one year. For the next three years dividends are expected to grow at 12 per cent per year. This rapid rate is caused by a number of favourable factors: for example an economic upturn, the fast acceleration stage of newly developed products and a large contract with a government department. After the third year the dividend will grow at only 7 per cent per annum, because the main boosts to growth will, by then, be absent. Shares in other companies with a similar level of systematic risk to Noruce produce an expected return of 16 per cent per annum. **What is the value of one share in Noruce plc?**

3. May Stewart, CFA, a retail analyst, is performing a P/E - based comparison of two hypothetical jewelry stores as of early 2009. She has the following data for Hallwhite Stores (HS) and Ruffany (**RUF)**.

   - HS is priced at $ 44. RUF is priced at $ 22.50.
   - HS has a simple capital structure, earned $ 2.00 per share (basic and diluted) in 2008, and is expected to earn $ 2.20 (basic and diluted) in 2009.
   - RUF has a complex capital structure as a result of its outstanding stock options. Moreover, it had several unusual items that reduced its basic EPS in 2008 to $ 0.50 (versus the $ 0.75 that it earned in 2007).
   - For 2009, Stewart expects RUF to achieve net income of $ 30 million. RUF has 30 million shares outstanding and options outstanding for an additional 3,333,333 shares.

A. Which P/E (trailing or forward) should Stewart use to compare the two companies' valuation?
B. Which of the two stocks is relatively more attractive when valued on the basis of P/Es (assuming that all other factors are approximately the same for both stocks)?

4. Jorge Zaldys, CFA, is researching the relative valuation of two companies in the aerospace/defense industry, NCI Heavy Industries (NCI) and Relay Group International (RGI). He has gathered relevant information on the companies in the following table.

EBITDA Comparisons
(in € millions except for per-share)

Company	RGI	NCI
Price per share	150	100
Shares outstanding	5 million	2 million
Market value of debt	50	100
Book value of debt	52	112
Cash and investments	5	2
Net income	49.5	12
Net income from continuing operations	49.5	8
Interest expense	3	5
Depreciation and amortization	8	4
Taxes	2	3

Using the information in the above table, answer the following questions:

A. Calculate P/EBITDA for NCI and RGI.
B. Calculate EV/EBITDA for NCI and RGI.
C. Select NCI or RGI for recommendation as relatively undervalued. Justify your selection.

5. BP PLC (NYSE: BP) has a current stock price of $50 and current dividend of $1.50. The dividend is expected to grow at 5 percent annually. BP's beta is 0.85. The risk-free interest rate is 4.5 percent, and the market risk premium is 6.0 percent.

A. What is next year's projected dividend?
B. What is BP's required rate of return based on the CAPM?
C. Using the Gordon growth model, what is the value of BP?
D. Assuming the Gordon growth model is valid, what dividend growth rate would result in a model value of BP equal to its market price?

6. FPR is expected to pay a $0.60 dividend next year. The dividend is expected to grow at a 50 percent annual rate for Years 2 and 3, at 20 percent annually for Years 4 and 5, and at 5 percent annually for Year 6 and thereafter. If the required rate of return is 12 percent, **what is the value per share?**

7. Tom Smithfield is valuing the stock of a food processing business. He has projected earnings and dividends to four years (to t =4). Other information and estimates are

- Required rate of return = 0.09
- Average dividend payout rate for mature companies in the market=0.45
- Industry average ROE = 0.10
- E3 = $3.00
- Industry average P/E = 12

On the basis of the above, answer the following questions:

A. Compute terminal value based on comparables. **B.** Contrast your answer in Part A to an estimate of terminal value using the Gordon growth model.