

## Chapter 6

### Stock Valuation, cont.

1.

Hanson PLC (LSE: HNS) is selling for GBP 472. Hansen has a beta of 0.83 against the FTSE 100 index, and the current dividend is GBP 13.80. The risk-free rate of return is 4.66 percent, and the equity risk premium is 4.92 percent. An analyst covering this stock expects the Hanson dividend to grow initially at 14 percent but to decline linearly to 5 percent over a 10-year period. After that, the analyst expects the dividend to grow at 5 percent.

A. Compute the value of the Hanson dividend stream using the H-model. According to the H-model valuation, is Hanson overpriced or underpriced?

2.

(Adapted from 1995 CFA Level II exam) Your supervisor has asked you to evaluate the relative attractiveness of the stocks of two very similar chemical companies: Litchfield

Chemical Corp. (LCC) and Aminochem Company (AOC). AOC and LCC have June 30 fiscal year ends. You have compiled the data in Table 2-1 for this purpose. Use a one-year time horizon and assume the following:

- Real gross domestic product is expected to rise 5 percent;
- S&P 500 expected total return of 20 percent;
- U.S. Treasury bills yield 5 percent; and

TABLE 2-1 Selected Data for Litchfield and Aminochem

	Litchfield Chemical (LCC)	Aminochem (AOC)
Current stock price	\$50	\$30
Shares outstanding (millions)	10	20
Projected earnings per share (FY 1996)	\$4.00	\$3.20
Projected dividend per share (FY 1996)	\$0.90	\$1.60
Projected dividend growth rate	8%	7%
Stock beta	1.2	1.4
Investors' required rate of return	10%	11%
Balance sheet data (millions)		
Long-term debt	\$100	\$130
Stockholders' equity	\$300	\$320

- A. Calculate the value of the common stock of LCC and AOC using the constant-growth DDM. Show your work.
- B. Calculate the expected return over the next year of the common stock of LCC and AOC using the CAPM. Show your work.

D. Recommend LCC *or* AOC for investment.

3.

Watson Dunn is planning to value BHP Billiton Ltd. (NYSE: BHP) using a single-stage FCFE approach. BHP Billiton, headquartered in Melbourne, Australia, provides a variety of industrial metals and minerals. The financial information Dunn has assembled for his valuation is as follows:

- The company has 1,852 million shares outstanding.
- Market value of debt is \$3.192 billion.
- FCFE is currently \$1.1559 billion.
- Equity beta is 0.90, the equity risk premium is 5.5 percent, and the risk-free rate is 5.5 percent.
- The before-tax cost of debt is 7.0 percent.
- The tax rate is 40 percent.
- To calculate WACC, assume the company is financed 25 percent with debt.
- FCFE growth rate is 4 percent.

Using Dunn's information, calculate the following:

- A. WACC
- B. Value of the firm
- C. Total market value of equity
- D. Value per share