

## Problems

Answers Appear in Appendix B

## EASY PROBLEMS 1-5

(7-1)  
DPS Calculation

Thress Industries just paid a dividend of \$1.50 a share (i.e.,  $D_0 = \$1.50$ ). The dividend is expected to grow 5% a year for the next 3 years and then 10% a year thereafter. What is the expected dividend per share for each of the next 5 years?

(7-2)  
Constant Growth  
Valuation

Boehm Incorporated is expected to pay a \$1.50 per share dividend at the end of this year (i.e.,  $D_1 = \$1.50$ ). The dividend is expected to grow at a constant rate of 7% a year. The required rate of return on the stock,  $r_s$ , is 15%. What is the value per share of Boehm's stock?

(7-3)  
Constant Growth  
Valuation

Woidtke Manufacturing's stock currently sells for \$20 a share. The stock just paid a dividend of \$1.00 a share (i.e.,  $D_0 = \$1.00$ ), and the dividend is expected to grow forever at a constant rate of 10% a year. What stock price is expected 1 year from now? What is the required rate of return on Woidtke's stock?

(7-4)  
Preferred Stock  
Valuation

Nick's Enchiladas Incorporated has preferred stock outstanding that pays a dividend of \$5 at the end of each year. The preferred sells for \$50 a share. What is the stock's required rate of return?

(7-5)  
Nonconstant Growth  
Valuation

A company currently pays a dividend of \$2 per share ( $D_0 = \$2$ ). It is estimated that the company's dividend will grow at a rate of 20% per year for the next 2 years, then at a constant rate of 7% thereafter. The company's stock has a beta of 1.2, the risk-free rate is 7.5%, and the market risk premium is 4%. What is your estimate of the stock's current price?

INTERMEDIATE  
PROBLEMS 6-16(7-6)  
Constant Growth  
Rate,  $g$ 

A stock is trading at \$80 per share. The stock is expected to have a year-end dividend of \$4 per share ( $D_1 = \$4$ ), and it is expected to grow at some constant rate  $g$  throughout time. The stock's required rate of return is 14%. If markets are efficient, what is your forecast of  $g$ ?

(7-7)  
Constant Growth  
Valuation

You are considering an investment in Crisp Cookware's common stock. The stock is expected to pay a dividend of \$2 a share at the end of this year ( $D_1 = \$2.00$ ); its beta is 0.9; the risk-free rate is 5.6%; and the market risk premium is 6%. The dividend is expected to grow at some constant rate  $g$ , and the stock currently sells for \$25 a share. Assuming the market is in equilibrium, what does the market believe will be the stock's price at the end of 3 years (i.e., what is  $\hat{P}_3$ )?

(7-8)  
Preferred Stock  
Rate of Return

What is the nominal rate of return on a preferred stock with a \$100 par value, a stated dividend of 8% of par, and a current market price of (a) \$60, (b) \$80, (c) \$100, and (d) \$140?

(7-9)  
Declining Growth  
Stock Valuation

Brushy Mountain Mining Company's ore reserves are being depleted, so its sales are falling. Also, its pit is getting deeper each year, so its costs are rising. As a result, the company's earnings and dividends are declining at the constant rate of 4% per year. If  $D_0 = \$5$  and  $r_s = 15\%$ , what is the value of Brushy Mountain's stock?

(7-10)  
Rates of Return and  
Equilibrium

The beta coefficient for Stock C is  $b_C = 0.4$  and that for Stock D is  $b_D = -0.5$ . (Stock D's beta is negative, indicating that its rate of return rises whenever returns on most other stocks fall. There are very few negative-beta stocks, although collection agency and gold mining stocks are sometimes cited as examples.)