Sample Problem—Stocks

1. Firm X needs to net $6,500,000 from the sale of common stock. Its investment banker has informed the firm that the retail price will be $22 per share, and that the firm will receive $19 per share. Out-of-pocket costs are $100,000. How many shares must be sold?

2. What would you pay for a stock which just paid a $5 dividend if the expected dividend growth rate is 4% and you require a 16% return on your investment?

3. Mack Industries just paid a dividend of $1.00 per share (i.e., D_0 = $1.00). Analysts expect the company's dividend to grow 20 percent this year, and 15 percent next year. After two years the dividend is expected to grow at a constant rate of 5 percent. The required rate of return on the company's stock is 12 percent. What should be the current price of the company's stock?

4. ABC Company's preferred stock is selling for $45 a share. It is expected that the company will always pay its constant preferred dividend. If the required rate of return is 10%, what will be the dividend two years from now?

5. The Taussig Company, whose stock price now is $30, needs to raise $15 million in common stock. The company will price the new issue at $27.53 per share and will net $25.60 per share after underwriting costs. Taussig will incur additional floatation expenses in the amount of $360,000. How many shares must Taussig set to net $15

6. Ewald Company just paid a dividend of $0.68. Dividends have been growing at 6 percent and are expected to continue growing at that rate in the future. If investors require a 14 percent rate of return on similar investments, determine the present value of the company's stock.

7. Phillips Industries common stock is currently selling for $50 and is expected to pay a dividend of $3.00 at the end of the year. Determine the growth rate for Phillips Industries dividends assuming that investors' required rate of return on this stock is 14 percent.

8. An Allied Northern preferred stock pays a $3.84 annual dividend. What is the value of the stock to an investor who requires a 9.5 percent return?

9. The last dividend paid by Klein Company was $1.00. Klein's growth rate is expected to be 5 percent for 2 years, after which dividends are expected to grow at a rate of 10 percent forever. Klein's required rate of return on equity is 12 percent. What is the current price of Klein's common stock?

10. What would you pay for a stock which just paid a $5 dividend if the expected dividend growth rate is 4% and you require a 16% return on your investment?

11. The dividend on Soviet Motors common stock will be $6 in 1 year, $6.50 in 2 years, and $7.00 in 3 years. You know that you can sell the stock for $75 in 3 years and you require a 10% return on your investment. How much would you be willing to pay for a share of this stock?

12. Suppose No Growth, Inc. has just issued a dividend of $2.90 per share. Subsequent dividends will remain at $2.90 indefinitely. Returns on the stock of firms like No Growth are currently running at 10%. What is the value of one share of the firm's stock?

13. McGonigal's Meats, Inc. currently pays no dividends. You overhear the CFO tell the CEO that the plan is to begin paying dividends in 5 years. The first dividend will be $2.00 and dividends are expected to grow at 5% thereafter. Given a required return of 11%, what should the price of the stock be today?

14. Boomer Products, Inc. manufactures "no-inhale" cigarettes. As their target customers age and pass on, sales of the product are expected to decline. Thus, demographics suggest that earnings and dividends will decline at a rate of 8% forever. The firm just paid a dividend of $4.00. What is the company's stock price given a required return of 12%?

15. The stock of MTY's Golf World currently sells for $59.09 per share. The firm has a dividend growth rate of 4% and just paid a dividend of $6.25. If the required rate of return is fixed at 15%, what would you expect to receive when you sell the stock immediately after you receive the dividend one year from now?

16. A stock paid a dividend of $0.80 per share yesterday. These dividends are expected to grow at 6% per year forever. The current stock price is $23 per share. At what price would you expect the stock to sell for one year from today?

17. Bradley Broadcasting expects to pay dividends of $1.10, $1.21, and $1.331 in one, two, and three years, respectively. After that, dividends are expected to grow at a constant rate of 4% forever. The stock has a required rate of return of 10%. What is the value of Bradley Broadcasting stock today?

18. TOYSrWee's stock is currently selling for $50.00. The expected dividend at the end of the year is $1.50 and the required return is 10%. What is the firm's dividend growth rate assuming constant growth?

19. Boomer Products, Inc. manufacturers 'no-inhale' cigarettes. As their target customers age and pass on, sales of the product are expected to decline. Thus, demographics suggest that earnings and dividends will decline at a rate of 4% annually forever. The firm just paid a dividend of $2.50. Given a required return of 12%, what is the current price of the stock?

20. A share of perpetual preferred stock pays an annual dividend of $6 per share. If investors require a 12 percent rate of return, what should be the price of this preferred stock?

21. The current price of ABC Corporation stock is $50.00. Dividends are expected to grow at 7% indefinitely and the most recent dividend was $1. What is the required rate of return on ABC's stock?

22. Common stock shares of Calvin Co. are expected to pay a dividend of $3.00 per share one year from today, and a dividend of $4.00 per share two years from today. Thereafter, the per share dividends will grow at an annual rate of 5% per year forever. Assuming a required return of 20% per year, what is the value of each share of Calvin today?

23. What would you pay for a stock that expects to pay a dividend of $5.20 at the end of this year and has a growth rate of 4% if you require a 16% return on your investment?

24. You expect Macrohard Company to pay a dividend of $6 per share at the end of year one, $8 per share at the end of year two and then be sold for $136 per share. If the required rate on this stock is 20%, what is the current value of the stock?

25. The KPG Company just paid a dividend of $3.00 per share. The dividends are expected to grow at a rate of 3% per year for the foreseeable future. If the required rate of return on the stock is 10%, what is the price of a share of KPG common stock?

26. Motorheadache Corporation will pay a $4.00 per share dividend next year. The company pledges in to increase its dividend by 4 percent per year, indefinitely. If you require a 13 percent return on your investment, how much will you pay for the company's stock today?

27. What should be the price for a common stock paying $3.50 annually in dividends if the growth rate is zero and the required rate of return is 8%?

28. What is the constant growth rate in dividends is expected for a stock valued at $32.00 if next year's dividend is forecast at $2.00 and the required rate of return is 13%?

29. ABC common stock is expected to have extraordinary growth of 20% per year for two years, at which time the growth rate will settle into a constant 6%. If the required rate of return is 15% and the last dividend was $2.50, what should be the current share price?

30. Rebecca, Inc. has a new issue of preferred stock it calls 20/20 preferred. The stock will pay a $20 dividend per year, but the first dividend will not be paid for 20 years. If you require a 9 percent return on this stock, how much should you pay today?

31. BJG just paid a dividend of $2 per share. The dividends are anticipated to maintain a 6 percent growth rate, forever, If BJG stock currently sells for $35.00 per share, what is the required return? What is the dividend yield?

32. Clapper Corporation is expected to pay the following dividends over the next four years: $10, $14, $7, and $2. Afterwards, the company pledges to maintain a constant 5 percent growth rate in dividends, forever. If the required return on the stock is 14 percent, what is the current share price?

33. What would you pay today for a stock that is expected to make a $1.50 dividend in one year if the expected dividend growth rate is 3% and you require a 16% return on your investment?

34. Smashed Pumpkin Farm is expected to pay the following dividends over the next four years: $10, $14, $7, and $2. Afterwards, the company pledges to maintain a constant 5 percent growth rate in dividends forever. If the required return on the stock is 15 percent, what is the current share price?

35. The next dividend payment by Zombie, Inc., will be $2 per share. The dividends are anticipated to maintain a 7 percent growth rate, forever. If Zombie stock currently sells for $45.00 per share, what is the required return?

36. Evenflow Corporation will pay a $5 per share dividend next year. The company pledges to increase its dividend by 5 percent per year indefinitely. If you require a 12 percent return on your investment, how much will you pay for the company's stock today?

37. Finley Co. is growing quickly. Dividends are expected to grow at a 25 percent rate for the next three years, with the growth rate falling off to a constant 6 percent thereafter. If the required return is 14 percent and the company just paid a $2.50 dividend, what is the current share price?

38. The stock of Buckcherry Corp. currently sells for $90 per share. The firm has a constand dividend growth of 6% and just paid a dividend of $5.09. If the required rate of return is 12%, what will the stock sell for one year from now?

39. Suppose NoGro, Inc. has just paid a dividend of $3.25 per share. Subsequent dividends will remain at $3.25 indefinitely. Returns on the stock of firms like NoGro are currently running 10%. What is the value of one share of stock?

40. What would you pay today for a stock that is expected to make a $2 dividend at the end of the year if the expected dividend growth rate is 5% and you require a 12% return on your investment?

41. Suppose Oly Enterprises is expected to pay a dividend at the end of the year of $2.25 per share. Dividends are expected to grow at a rate of 20% for the following 2 years and then at 5 % per year thereafter. If the required rate of return is 15%, what is the value of a share of Oly Enterprises?