Chapter 6

6-1. Due to its simplicity, the constant perpetual growth model can be usefully applied to any company.
A) True
B) False

6-2. The substantive growth rate refers to dividend growth that can be sustained by a company's earnings.
A) True
B) False

6-3. A firm's growth rate equals the retention ratio divided by its return on equity.
A) True
B) False

6-4. Unlike the constant growth rate model, the two-stage dividend discount model is suitable for companies that don't pay dividends.
A) True
B) False

6-5. Suppose a risky security has an equal probability of paying either $400 or $500 in one year. What is the present value of the expected future cash flow if the discount rate is equal to 5%?
A) $380.95
B) $428.57
C) $476.19
D) $452.38

6-6. An analyst would expect Starbucks to have a
A) low price/earnings ratio
B) high price/earnings ratio
C) low price/book ratio
D) high price/book ratio

6-7. A firm has a per share dividend of $4 and is expected to decrease by 15% per year for the next five years and then grow at a rate of 10%. Using the two stage model, determine the value of the stock. The discount rate is 8%.
A) $42.28
B) $10.35
C) $61.71
D) $52.35
6-8. Suppose that the dividend growth rate is 12 percent, the discount rate is 8 percent, there are 30 years of dividends to be paid, and the current dividend is $14. What is the value of the stock based on the constant growth model?
A) $558.23
B) $626.84
C) $708.93
D) $775.12

6-9. If the U.S T-bill rate is 4 percent and the stock market risk premium is 8 percent, then the CAPM discount rate for a security with a beta of 1.4 is
A) 12%.
B) 15.2%.
C) 5.6%.
D) 13.4%.

6-10. Under the constant growth version of the DDM,
A) D5 = D0(1 + g)
B) D5 = D0(1 + g)4
C) D5 = D3(1 + g)2
D) D5 = D4(1 + g)2

**Test Your Investment Quotient**

1. **Sustainable Growth** A company has a return on equity of ROE = 20 percent, and from earnings per share of EPS = $5, it pays a $2 dividend. What is the company’s sustainable growth rate?
   a. 8 percent
   b. 10 percent
   c. 12 percent
   d. 20 percent

2. **CFA. Sustainable Growth** If the return on equity for a firm is 15 percent and the retention ratio is 40 percent, the sustainable growth rate of earnings and dividends is which of the following?
   a. 6 percent
   b. 9 percent
   c. 15 percent
   d. 40 percent

3. **CFA. Dividend Discount Model A** common stock pays an annual dividend per share of $2.10. The risk-free rate is 7 percent and the risk premium for this stock is 4 percent. If the annual dividend is expected to remain at $2.10, the value of the stock is closest to:
   a. $19.09
   b. $30.00
   c. $52.50
   d. $70.00

4. **Dividend Discount Model** Suppose a security pays a current dividend of $5 and all future dividends will grow at a rate of 8 percent per year forever. Assuming the appropriate discount rate is 12 percent, what is the value of this security?
   a. $135
   b. $270
   c. $13.50
   d. $1,350
5. **CFA. Dividend Discount Model** The constant-growth dividend discount model will not produce a finite value if the dividend growth rate is which of the following?
   a. Above its historical average.
   b. Above the required rate of return.
   c. Below its historical average.
   d. Below the required rate of return.

6. **CFA. Dividend Discount Model** In applying the constant-growth dividend discount model, a stock’s intrinsic value will do which of the following when the required rate of return is lowered?
   a. Decrease.
   b. Increase.
   c. Remain unchanged.
   d. Decrease or increase, depending on other factors.

7. **CFA. Dividend Discount Model** The constant-growth dividend discount model would typically be most appropriate for valuing the stock of which of the following?
   a. New venture expected to retain all earnings for several years.
   b. Rapidly growing company.
   c. Moderate growth, mature company.
   d. Company with valuable assets not yet generating profits.

8. **CFA. Dividend Discount Model** A stock has a required return of 15 percent, a constant growth rate of 10 percent, and a dividend payout ratio of 50 percent. What should the stock’s P/E ratio be?
   a. 3.0
   b. 4.5
   c. 9.0
   d. 11.0

9. **CFA. Dividend Discount Model** Which of the following assumptions does the constant growth dividend discount model require?
   I. Dividends grow at a constant rate.
   II. The dividend growth rate continues indefinitely.
   III. The required rate of return is less than the dividend growth rate.
   a. I only
   b. III only
   c. I and II only
   d. I, II, and III

10. **CAPM Discount Rate** If the U.S. Treasury bill rate is 5 percent and the stock market risk premium is 8 percent, then the CAPM discount rate for a security with a beta of 1.25 is
    a. 12 percent
    b. 13 percent
    c. 14.25 percent
    d. 15 percent

11. **CAPM Discount Rate** If the U.S. Treasury bill rate is 5 percent and the stock market risk premium is 8 percent, then the CAPM discount rate for a security with a beta of .75 is
    a. 6 percent
    b. 8 percent
    c. 11 percent
    d. 13 percent
12. **CFA. Dividend Discount Model**  A stock will not pay dividends until three years from now. The dividend then will be $2.00 per share, the dividend payout ratio will be 40 percent, and return on equity will be 15 percent. If the required rate of return is 12 percent, which of the following is closest to the value of the stock?
   a. $27
   b. $33
   c. $53
   d. $67

13. **CFA. Dividend Discount Model**  Assume that at the end of the next year, Company A will pay a $2.00 dividend per share, an increase from the current dividend of $1.50 per share. After that, the dividend is expected to increase at a constant rate of 5 percent. If you require a 12 percent return on the stock, what is the value of the stock?
   a. $28.57
   b. $28.79
   c. $30.00
   d. $31.78

14. **CFA. Dividend Discount Model**  A share of stock will pay a dividend of $1.00 one year from now, with dividend growth of 5 percent thereafter. In the context of a dividend discount model, the stock is correctly priced at $10 today. According to the constant dividend growth model, if the required return is 15 percent, what should the value of the stock be two years from now?
   a. $11.03
   b. $12.10
   c. $13.23
   d. $14.40

15. **Cash Flow**  Which of the following implies the highest quality earnings?
   a. Cash flow less than earnings.
   b. Cash flow greater than depreciation.
   c. Cash flow less than earnings minus depreciation.
   d. Cash flow greater than earnings.

16. **Price Ratios**  Two similar companies have the same price-sales and price-earnings ratios. However, company A has a lower price-cash flow ratio than company B. This most likely indicates that
   a. A has lower quality earnings than B.
   b. A has lower quality cash flow than B.
   c. A uses straight-line depreciation, while B uses accelerated depreciation.
   d. A uses accelerated depreciation, while B uses straight-line depreciation.

17. **Price Ratios**  Two similar companies acquire substantial new production facilities, which they both will depreciate over a 10-year period. However, Company A uses accelerated depreciation while Company B uses straight-line depreciation. In the first year that the assets are depreciated, which of the following is most likely to occur?
   a. A’s P/CF ratio will be higher than B’s.
   b. A’s P/CF ratio will be lower than B’s.
   c. A’s PIE ratio will be higher than B’s.
   d. A’s P/E ratio will be lower than B’s.
18. CFA. Price Ratios An analyst estimates the earnings per share and price-to-earnings ratio for a stock market series to be $43.50 and 26 times, respectively. The dividend payout ratio for the series is 65 percent. The value of the stock market series is closest to
a. 396
b. 735
c. 1131
d. 1866

19. CFA. P/E Ratio An analyst gathered the following information about a stock market index:
Required rate of return: 16%
Expected dividend payout ratio: 30%
Expected return on equity investment: 20%
The expected price-earnings (PIE) ratio of the index is closest to
a. 3.5
b. 7.0
c. 15.0
d. 35.00

20. CFA. PIE Ratio A company’s return on equity is greater than its required return on equity. The earnings multiplier (PIE) for that company’s stock is most likely to be positively related to the
a. Risk-free rate.
b. Market risk premium.
c. Earnings retention ratio.
d. Stock’s capital asset pricing model beta.

Concept Questions

1. Dividend Discount Model What is the basic principle behind dividend discount models?
2. P/E Ratios Why do growth stocks tend to have higher P/B ratios than value stocks?
3. Earnings Yields What is the earnings yield on a stock?
4. Cash Flow In computing the price-cash flow ratio, how is cash flow per share usually measured?
5. Stock Valuation Why does the value of a share of stock depend on dividends?
6. Stock Valuation A substantial percentage of the companies listed on the NYSE and the Nasdaq don’t pay dividends, but investors are nonetheless willing to buy shares in them. How is this possible given your answer to the previous question?
7. Dividends Referring to the previous two questions, under what circumstances might a company choose not to pay dividends?
8. Constant Perpetual Growth Model Under what two assumptions can we use the constant perpetual growth model presented in the chapter to determine the value of a share of stock? Comment on the reasonableness of these assumptions.
9. Dividend Growth Models Based on the dividend growth models presented in the chapter, what are the two components of the total return of a share of stock? Which do you think is typically larger?
10. Constant Perpetual Growth Model In the context of the constant perpetual growth model, is it true that the growth rate in dividends and the growth rate in the price of the stock are identical?
Questions and Problems

1. Dividend Valuation  CJ Industries will pay a regular dividend of $4.00 per share for each of the next four years. At the end of the four years, the company will also pay out a $40 per share liquidating dividend, and the company will cease operations. If the discount rate is 11 percent, what is the current value of the company’s stock?

2. Dividend Valuation  In the previous problem, suppose the current share price is $50. If all other information remains the same, what must the liquidating dividend be?

3. Dividend Discount Model  Trust Bankers just paid an annual dividend of $3 per share. The expected dividend growth rate is 6 percent, the discount rate is 12 percent, and the dividends will last for 5 more years. What is the value of the stock? What if the dividends last for 10 more years? 30 years? 100 years?

4. Dividend Discount Model  Apple Grove, Inc., will pay dividends for the next 10 years. The expected dividend growth rate for this firm is 8 percent, the discount rate is 16 percent, and the stock currently sells for $30 per share. How much must the most recent dividend payment have been?

5. Dividend Growth Model  Suppose that Kojak, Inc., just paid a dividend of $3.50 per share. The company will continue to pay dividends for the next 25 years, and then go out of business. If the discount rate is 11 percent per year, what is the value of the stock for a dividend growth rate of 20 percent? 12 percent? 6 percent? 0 percent? —5 percent?

6. Perpetual Dividend Growth  A company just paid a dividend of $3.00. If the dividends will grow at 5.5 percent per year and you require a return of 11.8 percent, what is the most you should be willing to pay for the stock?

7. Perpetual Dividend Growth  Atlantis Seafood Company stock currently sells for $80 per share. The company is expected to pay a dividend of $4.10 per share next year, and analysts project that dividends should increase at 4 percent per year for the indefinite future. What must the relevant discount rate be for Atlantis stock?

8. Perpetual Dividend Growth  Xytex Products just paid a dividend of $1.80 per share, and the stock currently sells for $30. If the discount rate is 13 percent, what is the dividend growth rate?

9. Perpetual Dividend Growth  Star Light & Power increases its dividend 5 percent per year every year. This utility is valued using a discount rate of 9 percent, and the stock currently sells for $80 per share. If you buy a share of stock today and hold on to it for at least three years, what do you expect the value of your dividend check to be three years from today?

10. Sustainable Growth  Johnson Products earned $8.60 per share last year and paid a $3.20 per share dividend. If ROE was 20 percent, what is the sustainable growth rate?

11. Sustainable Growth  Caterwallar stock has a sustainable growth rate of 6 percent, ROE of 19 percent, and dividends per share of $2.20. If the PIE ratio is 21, what is the value of a share of stock?

12. Two-Stage Dividend Growth Model  Underwood Industries just paid a dividend of $2.16 per share. The dividends are expected to grow at a 25 percent rate for the next eight years and then level off to a 7 percent growth rate indefinitely, if the required return is 14 percent, what is the value of the stock today?
13. Two-Stage Dividend Growth Model  The dividend for Weaver, Inc., is expected to grow at 19 percent for the next 12 years before leveling off at a 6 percent rate indefinitely. If the firm just paid a dividend of $1.34 and you require a return of 12 percent on the stock, what is the most you should pay per share?

14. Multiple Growth Rates  Netscape Communications does not currently pay a dividend. You expect the company to begin paying a $4 per share dividend in 10 years, and you expect dividends to grow perpetually at 8 percent per year thereafter. If the discount rate is 15 percent, how much is the stock currently worth?

15. Multiple Growth Rates  PerfectlySoft Corp. is experiencing rapid growth. Dividends are expected to grow at 30 percent per year during the next three years, 20 percent over the following year, and then 6 percent per year thereafter indefinitely. The required return on this stock is 14 percent, and the stock currently sells for $56.20 per share. What is the projected dividend for the coming year?

16. Multiple Growth Rates  Callaway Corporation is expected to pay the following dividends over the next four years: $14.00, $10.00, $5.00, $2.00. Afterwards, the company pledges to maintain a constant 7 percent growth rate in dividends forever. If the required return on the stock is 15 percent, what is the current share price?

17. Multiple Required Returns  My Money, Inc., just paid a dividend of $3.00 per share on its stock. The growth rate in dividends is expected to be a constant 6.5 percent per year indefinitely. Investors require a 20 percent return on the stock for the first three years, then a 15 percent return for the next three years, and then a 10 percent return thereafter. What is the current share price for My Money?

18. Price Ratio Analysis  Given the information below for Cuchia Corporation, compute the expected share price at the end of 2004 using price ratio analysis.

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$38.00</td>
<td>$46.00</td>
<td>$55.00</td>
<td>$61.00</td>
<td>$68.00</td>
<td>$72.00</td>
</tr>
<tr>
<td>EPS</td>
<td>2.55</td>
<td>2.70</td>
<td>2.80</td>
<td>2.90</td>
<td>3.40</td>
<td>3.75</td>
</tr>
<tr>
<td>CFPS</td>
<td>6.00</td>
<td>7.20</td>
<td>7.60</td>
<td>7.71</td>
<td>7.83</td>
<td>8.20</td>
</tr>
<tr>
<td>SPS</td>
<td>53.00</td>
<td>57.50</td>
<td>59.25</td>
<td>64.75</td>
<td>69.00</td>
<td>74.05</td>
</tr>
</tbody>
</table>

19. Dividend Growth Analysis  In the previous problem, suppose the dividends per share over the same period were $.77, $.82, $.89, $.94, $1.01, and $1.09, respectively. Compute the expected share price for 2004 using the perpetual growth method. Assume the market risk premium is 8.5 percent, Treasury bills yield 5 percent, and the projected beta of the firm is .90.

20. Price Ratio Analysis for Internet Companies  Given the information below for HooYah! Corporation, compute the expected share price at the end of 2004 using price ratio analysis.

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$52.00</td>
<td>$244.00</td>
<td>$480.00</td>
<td>$620.00</td>
<td>$85.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>EPS</td>
<td>-5.00</td>
<td>-2.30</td>
<td>-0.80</td>
<td>0.05</td>
<td>0.03</td>
<td>0.12</td>
</tr>
<tr>
<td>CFPS</td>
<td>-9.00</td>
<td>-5.20</td>
<td>-3.20</td>
<td>-1.05</td>
<td>0.01</td>
<td>0.10</td>
</tr>
<tr>
<td>SPS</td>
<td>10.00</td>
<td>14.00</td>
<td>16.00</td>
<td>15.25</td>
<td>16.10</td>
<td>16.05</td>
</tr>
</tbody>
</table>
21. Price Ratio Analysis for Internet Companies Given the information below for StartUp.Com, compute the expected share price at the end of 2004 using price ratio analysis.

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>N/A</td>
<td>$89.25</td>
<td>$26.00</td>
<td>$4.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>N/A</td>
<td>-13.20</td>
<td>-11.65</td>
<td>-10.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFPS</td>
<td>N/A</td>
<td>-15.65</td>
<td>-14.20</td>
<td>-13.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS</td>
<td>N/A</td>
<td>4.80</td>
<td>9.10</td>
<td>21.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Price Ratio Analysis for Internet Companies Given the information below for Rockn-Roll.Com, compute the expected share price at the end of 2004 using price ratio analysis.

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$280.00</td>
<td>$320.00</td>
<td>$140.00</td>
<td>$68.00</td>
<td>$28.00</td>
<td>$12.00</td>
</tr>
<tr>
<td>EPS</td>
<td>-14.00</td>
<td>-11.80</td>
<td>-6.25</td>
<td>1.05</td>
<td>1.30</td>
<td>-4.10</td>
</tr>
<tr>
<td>CFPS</td>
<td>-18.00</td>
<td>-12.10</td>
<td>-5.00</td>
<td>0.10</td>
<td>1.20</td>
<td>-4.90</td>
</tr>
<tr>
<td>SPS</td>
<td>21.00</td>
<td>28.75</td>
<td>32.10</td>
<td>34.50</td>
<td>37.20</td>
<td>23.25</td>
</tr>
</tbody>
</table>

23. Price Ratio Analysis The current price of Parador Industries stock is $60 per share. Current earnings per share are $4.50, the earnings growth rate is 10 percent, and Parador does not pay a dividend. The expected return on Parador stock is 15 percent. What one-year ahead P/E ratio is consistent with Parador’s expected return and earnings growth rate?

24. Price Ratio Analysis The current price of Parador Industries stock is $60 per share. Current sales per share are $23, the sales growth rate is 12 percent, and Parador does not pay a dividend. The expected return on Parador stock is 15 percent. What one-year ahead P/S ratio is consistent with Parador’s expected return and sales growth rate?

Use the following information for Problems 25—28. Oxford Industries (OXM) is a leading clothing manufacturer. Its major brands include Lanier Clothes, Lands’ End, Tommy Hilfiger shirts and golf apparel, Slates, Geoffrey Beene, and Oscar De La Renta. Below you will find selected information from the February 2003 Value Line report on Oxford Industries. The beta reported in Value Line was .80, and the risk-free rate was 1.06 percent. Assume a market risk premium of 9 percent.
25. **Constant Perpetual Growth Model**  What is the sustainable growth rate and required return for Oxford Industries in 2002? Using these values, calculate the 2002 share price of Oxford Industries stock.


27. **Stock Valuation**  Given your answers in the previous two problems, do you feel Oxford Industries is overvalued or undervalued at its current price? What price do you feel the stock should sell?

28. **Growth Rates**  As we mentioned, Oxford Industries manufactures clothes for Lands’ End. Soon after the end of Oxford’s fiscal year, Sears purchased Lands’ End and started to put clothing with the Lands’ End label in its department stores. Does this information affect your analysis? How would it affect your estimate of the stock price?

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**CFA. The following questions are from the 2000 Level H CFA® Exam. Use this information to answer Problems 29—34.**

The management of Telluride, an international diversified conglomerate based in the United States, believes the recent strong performance of its wholly owned medical supply subsidiary, Sundanci, has gone unnoticed. In order to realize Sundanci’s full value, Telluride has announced that it will divest Sundanci in a tax-free spinoff.

Sue Carroll, CFA, is the Director of Research at Kesson and Associates. In developing an investment recommendation for Sundanci, Carroll has directed her analysts to determine a valuation of Sundanci using various disciplines. To assist her analysts, Carroll has gathered the information shown below. ;

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**Sundanci Actual 1999 and 2000 Financial Statements for Fiscal Years Ending May 31 ($ in millions except per share data);0)**

<table>
<thead>
<tr>
<th>Current liabilities</th>
<th>57 141</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term debt</td>
<td>0 0</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>57 141</td>
</tr>
<tr>
<td>Shareholder equity</td>
<td>618 674</td>
</tr>
<tr>
<td>Total liabilities and equity</td>
<td>675 815</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>34 38</td>
</tr>
</tbody>
</table>

Selected Financial Information
29. **CFA Sustainable Growth Rate** Calculate the ROE for 2000. What is the sustainable growth rate?

30. **CFA Sustainable Growth Rate** Carroll learns that Sundanci’s Board of Directors is considering the following policy changes that will affect Sundanci’s sustainable growth rate:
   - Director A proposes an increase in the quarterly dividend to $.15 per share. This would increase the annual dividend to $.60.
   - Director B proposes a two-for-one stock split.
Would each of these changes increase, decrease, or not affect Sundanci’s sustainable growth rate, given that the other factors remain unchanged? Identify which component of the sustainable growth rate model, if any, is affected by each proposal.

31. **CFA Two-State Dividend Growth Model** Helen Morgan, CFA, has been asked by Carroll to determine the potential valuation for Sundanci using the dividend discount model. Morgan anticipates that Sundanci’s earnings and dividends will grow at 32 percent for two years and 13 percent thereafter. Calculate the current value of a share of Sundanci stock using the two-stage dividend discount model.

32. **CFA PIE Ratio Valuation** Christie Johnson, CFA, has been assigned by Carroll to analyze Sundanci using the constant dividend growth price-earnings ratio model. Johnson assumes that Sundanci’s earnings and dividends will grow at a constant rate of 13 percent. Note: The constant dividend growth price-earnings ratio using next year’s earnings is PIE ratio = Payout ratio/(k — g). Calculate the P/E ratio based on the information given and Johnson’s assumptions.

33. **CFA P/E Ratio** Identify, within the context of the constant dividend growth model, how each of the following factors will affect the P/E ratio of Sundanci. In other words, will each of the following factors increase, decrease, or possibly increase or decrease the P/E ratio? Assume all other factors remain constant.
   - a. The beta of Sundanci increases substantially.
   - b. The estimated growth rate of Sundanci’s earnings and dividends increases.
   - c. The dividend payout ratio of Sundanci increases.
   - d. The market risk premium increases.

34. **Payout Ratio and P/E** Explain why an increase in the dividend payout ratio may not have the effect that the constant dividend growth P/E model suggests.

### Answers to Questions and Problems

1. \( V(0) = $38.76 \)

2. \( V(0) = $50.00 \)
   \[
   \frac{37.59}{1 + .11}^4 = LD
   \]
   \( LD = $57.06 \)

3. \( V(0) = [\frac{3(1.06)/(1.12 - .06)][1 - (1.06/1.12)^5]}{1} = $12.75 \)
   \( V(0) = $22.44 \)
   \( V(0) = $42.84 \)
   \( V(0) = $52.78 \)

4. \( D = $4.35 \)
5. \[ V(0) = \left[ \frac{3.50(1.20)}{(0.11 - 0.20)} \right] \left[ 1 - \left( \frac{1.20}{1.11} \right)^{25} \right] = 281.02 \]
   \[ V(0) = 98.53 \]
   \[ V(0) = 50.76 \]
   \[ V(0) = 29.48 \]
   \[ V(0) = 20.36 \]

6. \[ V(0) = 50.24 \]

7. \[ k = 9.125\% \]

8. \[ g = 6.60\% \]

9. \[ = 3.53 \]

10. Retention ratio = .6279
    Sustainable growth rate = 12.56\%

11. \[ = 67.52 \]

**Intermediate Questions**

12. \[ = 95.73 \]

13. \[ = 73.37 \]

14. \[ V(9) = 57.14 \]
    \[ V(0) = 16.24 \]

15. \[ D(1) = 2.79 \]

16. \[ V(4) = 26.75 \]
    \[ V(0) = 39.46 \]

17. \[ V(6) = 133.20 \]
    \[ V(3) = 96.92 \]
    \[ V(0) = 63.21 \]

18. Expected share price using P/E = 18.64(3.75)(1.0814) = 75.57
    Expected share price using P/CFPS = 8.20(7.56)(1.0666) = 66.08
    Expected share price using SPS = .891(74.05)(1.0694) = 70.55
    A reasonable price range would seem to be $66 to $76 per share.

19. \[ V(2004) = 23.00 \]

20. Expected share price using P/E = 5.094.44(0.12)(1.9709) = 1,204.90
    Expected share price using P/CFPS = 4,280.00(0.10)(3.2976) = 1,411.39
    Expected share price using P/S = 16.490(16.05)(1.1097) = 293.70
    This price range is huge, from $294 to $1,411! As long as the stellar growth continues, the stock should do well. But any stumble will likely tank the stock. Be careful out there!

21. This price is ridiculous, $320! Notice that sales have been exploding, but the company still can’t make money. Might be a buyout candidate, but at what price?
22. This stock is a classic bubble, and the price of $131 obtained by price-sales analysis is unrealistic. Profitable for two years before turning south, possibly the company can be rescued. The market price of $12 may be a fair price considering the risks involved.

23. Thus, Parador’s expected future P/E ratio is $69.00 / $4.95 = 13.94.

24. Thus, Parador’s expected future P/E ratio is $69.00 / $25.76 = 2.679.

25. P₀ = $14.68

P/CF price = 6.74(–.0706)($2.59) = $16.21
P/S price = 0.240(.0173)($90.12) = $21.96

27. A fair price seems to be $15 to $20 per share. It appears that Oxford may be overvalued according to this analysis.

28. This would almost definitely affect your valuation. With Lands’ End apparel in Sears stores, sales should increase. The current price is probably reflecting this additional growth potential.

29. CFA. ROE 11.87%; Retention ratio = .70
Sustainable growth = 8.3086%

30. CFA An increase in the quarterly dividend will decrease the growth rate as it will lower the retention ratio. A stock split affects none of the components, therefore will have no effect.

31. CFA V(0) =$44.04

32. CFA P/E = 30.00

33. CFA Using the following relationships:
P₀ = D₁ / k – g;  DPS₁ = EPS₁(1 – b);  g = ROE× b;  k = Rf + β(MRP)
The P/E ratio can be re-written as:
P/E = (1 – b) / {[(Rf + β(MRP)) – (ROE × b)]}

a. As the beta increases, the P/E ratio should decrease. The required return increases, decreasing the present value of the future dividends.
b. As the growth rate increases, the P/E ratio increases.
c. An increase in the payout ratio would increase the P/E ratio. Although b is in the numerator and the denominator, the effect is greater in the denominator
d. As the market risk premium increases, the P/E ratio decreases. The required return increases, decreasing the present value of the future dividends.