1. A 16-year, 4.5 percent coupon bond pays interest annually. The bond has a face value of $1,000. What is the percentage change in the price of this bond if the market yield to maturity rises to 5.7 percent from the current rate of 5.5 percent?

A. 2.14 percent decrease
B. 1.97 percent decrease
C. 0.21 percent increase
D. 1.97 percent increase
E. 2.14 percent increase

\[
P = (0.045 \times 1,000) \left( \frac{1 - \frac{1}{(1 + 0.055)^{16}}}{0.055} \right) + \frac{1,000}{(1 + 0.055)^{16}} = 895.38
\]

Enter

<table>
<thead>
<tr>
<th>16</th>
<th>5.5</th>
<th>45</th>
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<tbody>
<tr>
<td>N</td>
<td>I/Y</td>
<td>PV</td>
<td>PMT</td>
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<td>- 895.38</td>
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\[
P = (0.045 \times 1,000) \left( \frac{1 - \frac{1}{(1 + 0.057)^{16}}}{0.057} \right) + \frac{1,000}{(1 + 0.057)^{16}} = 876.19
\]

Enter

<table>
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<th>16</th>
<th>5.7</th>
<th>45</th>
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<tr>
<td>N</td>
<td>I/Y</td>
<td>PV</td>
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<td>-876.19</td>
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</tbody>
</table>

Change in price = \[
\frac{876.19 - 895.38}{895.38} = -2.14\text{ percent}
\]
2. The liquidity premium is compensation to investors for:
   A. purchasing a bond in the secondary market.
   **B.** the lack of an active market wherein a bond can be sold for its actual value.
   C. acquiring a bond with an unfavorable tax status.
   D. redeeming a bond prior to maturity.
   E. purchasing a bond that has defaulted on its coupon payments.

Refer to section 7.7

3. Winter Time Adventures is going to pay an annual dividend of $2.86 a share on its common stock next year. This year, the company paid a dividend of $2.75 a share. The company adheres to a constant rate of growth dividend policy. What will one share of this common stock be worth five years from now if the applicable discount rate is 11.7 percent?

   A. $43.45
   B. $43.87
   C. $44.15
   **D.** $45.19
   E. $47.00

\[ g = \frac{2.86 - 2.75}{2.75} = .04 \]

\[ P_5 = \frac{2.86 \times (1 + .04)^5}{0.117 - 0.04} = \$45.19 \]
4. An increase in which of the following will increase the current value of a stock according to the dividend growth model?
I. dividend amount
II. number of future dividends, provided the current number is less than infinite
III. discount rate
IV. dividend growth rate
A. I and II only
B. III and IV only
C. I, II, and III only
D. I, II, and IV only
E. I, II, III, and IV

Refer to section 8.1

5. Kaiser Industries has bonds on the market making annual payments, with 14 years to maturity, and selling for $1,382.01. At this price, the bonds yield 7.5 percent. What is the coupon rate?
A. 8.00 percent
B. 8.50 percent
C. 9.00 percent
D. 10.50 percent
E. 12.00 percent

\[ $1,382.01 = C \left[ \frac{1 - \left( \frac{1}{1 + 0.075} \right)^{14}}{0.075} \right] + \frac{\$1,000}{(1 + 0.075)^{14}} ; \quad C = \$120 \]

Enter 14 7.5 -1,382.01 1,000
N I/Y PV PMT FV
Solve for 120

Coupon rate = $120/$1,000 = 12 percent
6. KL Airlines paid an annual dividend of $1.42 a share last month. The company is planning on paying $1.50, $1.75, and $1.80 a share over the next 3 years, respectively. After that, the dividend will be constant at $2 per share per year. What is the market price of this stock if the market rate of return is 10.5 percent?
A. $15.98
B. $16.07
C. $18.24
D. $21.16
E. $24.10

\[ P_0 = \frac{D_1}{r} = \frac{2}{0.105} = 19.05 \]

\[ P_0 = \frac{1.50}{(1 + 0.105)^1} + \frac{1.75}{(1 + 0.105)^2} + \frac{1.80 + 19.05}{(1 + 0.105)^3} = 18.24 \]

AACSB: Analytic
Bloom's: Analysis
Difficulty: Intermediate
Learning Objective: 8.1
Ross - Chapter 08 #6
Section: 8.1
Topic: Nonconstant dividends

7. The current dividend yield on Clayton's Metals common stock is 2.5 percent. The company just paid a $1.48 annual dividend and announced plans to pay $1.54 next year. The dividend growth rate is expected to remain constant at the current level. What is the required rate of return on this stock?
A. 6.55 percent
B. 6.82 percent
C. 7.08 percent
D. 7.39 percent
E. 7.75 percent

\[ P_0 = \frac{D_1}{r} = \frac{1.54}{0.025} = 61.60 \]

\[ g = \frac{1.54 - 1.48}{1.48} = 0.04054 \]

\[ \frac{61.60 = \frac{1.54}{R - 0.04054}}; R = 6.55\text{ percent} \]

AACSB: Analytic
Bloom's: Analysis
Difficulty: Intermediate
Learning Objective: 8.1
Ross - Chapter 08 #65
Section: 8.1
Topic: Required return
8. High Country Builders currently pays an annual dividend of $1.35 and plans on increasing that amount by 2.5 percent each year. Valley High Builders currently pays an annual dividend of $1.20 and plans on increasing its dividend by 3 percent annually. Given this information, you know for certain that the stock of High Country Builders has a higher _______ than the stock of Valley High Builders.
A. market price
B. dividend yield
C. capital gains yield
D. total return
E. The answer cannot be determined based on the information provided.

Refer to section 8.1

9. Combined Communications is a new firm in a rapidly growing industry. The company is planning on increasing its annual dividend by 15 percent a year for the next 4 years and then decreasing the growth rate to 3.5 percent per year. The company just paid its annual dividend in the amount of $0.20 per share. What is the current value of one share of this stock if the required rate of return is 15.5 percent?
A. $1.82
B. $2.04
C. $2.49
D. $2.71
E. $3.05

\[
P_4 = \frac{0.20 \times (1 + 0.15)^4 \times (1 + 0.035)}{0.155 - 0.035} = 3.017
\]

\[
P_5 = \frac{0.20 \times (1 + 0.15)}{0.155 - 0.15} \times \left[ 1 - \left( \frac{(1 + 0.15)}{(1 + 0.155)} \right)^4 \right] + \frac{3.017}{(1 + 0.155)^4} = 2.49
\]

AACSB: Analytic
Bloom's: Analysis
Difficulty: Intermediate
Learning Objective: 8-1
Ross - Chapter 08 #80
Section: 8.1
Topic: Two-stage growth
10. The Fisher effect is defined as the relationship between which of the following variables?
A. default risk premium, inflation risk premium, and real rates
B. nominal rates, real rates, and interest rate risk premium
C. interest rate risk premium, real rates, and default risk premium
D. real rates, inflation rates, and nominal rates
E. real rates, interest rate risk premium, and nominal rates

Refer to section 7.6

11. You expect interest rates to decline in the near future even though the bond market is not indicating any sign of this change. Which one of the following bonds should you purchase now to maximize your gains if the rate decline does occur?
A. short-term; low coupon
B. short-term; high coupon
C. long-term; zero coupon
D. long-term; low coupon
E. long-term; high coupon

Refer to section 7.1
12. Which of the following are characteristics of a premium bond?
I. coupon rate < yield-to-maturity
II. coupon rate > yield-to-maturity
III. coupon rate < current yield
IV. coupon rate > current yield
A. I only
B. I and III only
C. I and IV only
D. II and III only
E. II and IV only

Refer to section 7.1

13. A zero coupon bond with a face value of $1,000 is issued with an initial price of $212.56. The bond matures in 25 years. What is the implicit interest, in dollars, for the first year of the bond's life?
A. $12.72
B. $13.58
C. $13.90
D. $15.63
E. $15.89

\[
\begin{align*}
$212.56 &= \frac{\$1,000}{\left(1 + \frac{r}{2}\right)^{25 \times 2}}; r &= 6.29104 \text{ percent} \\
PV_f &= \frac{\$1,000}{\left(1 + \frac{0.0629104}{2}\right)^{25}} = \$226.14
\end{align*}
\]
Implicit interest = $226.14 - $212.56 = $13.58

AACSB: Analytic
Bloom's: Application
Difficulty: Intermediate
Learning Objective: 7-1
Ross - Chapter 07 #108
Section: 7.4
Topic: Implicit interest
14. Miller Brothers Hardware paid an annual dividend of $1.15 per share last month. Today, the company announced that future dividends will be increasing by 2.6 percent annually. If you require a 12 percent rate of return, how much are you willing to pay to purchase one share of this stock today?

A. $12.23
B. $12.55
C. $12.67
D. $12.72
E. $12.88

\[
P_0 = \frac{1.15 \times (1 + 0.026)}{0.12 - 0.026} = $12.55
\]

AACSB: Analytic
Bloom's: Application
Difficulty: Basic
Learning Objective: 8-1
Ross - Chapter 08 #57
Section: 8.1
Topic: Stock price

15. You have won a contest and will receive $2,500 a year in real terms for the next 3 years. Each payment will be received at the end of the period with the first payment occurring one year from today. The relevant nominal discount rate is 6.3 percent and the inflation rate is 4.5 percent. What are your winnings worth today?

A. $7,249
B. $7,367
C. $7,401
D. $7,500
E. $7,838

\[
r = \frac{1 + 0.063}{1 + 0.045} - 1 = 0.01722488
\]

\[
PV = \frac{2,500}{1.01722488} + \frac{2,500}{1.01722488^2} + \frac{2,500}{1.01722488^3} = $7,249
\]

Enter

\[\begin{array}{ccccc}
3 & 1.722488 & 2,500 \\
N & I/Y & PV & PMT & FV
\end{array}\]

Solve for -7,249

AACSB: Analytic
Bloom's: Application
Difficulty: Intermediate
Learning Objective: 7-4
Ross - Chapter 07 #110
Section: 7.9
Topic: Real cash flows
16. Which one of the following is an underlying assumption of the dividend growth model?
A. A stock has the same value to every investor.
B. A stock's value is equal to the discounted present value of the future cash flows which it generates.
C. A stock's value changes in direct relation to the required return.
D. Stocks that pay the same annual dividend have equal market values.
E. The dividend growth rate is inversely related to a stock's market price.

Refer to section 8.1

AACSB: N/A
Bloom’s: Application
Difficulty: Intermediate
Learning Objective: 8-1
Rao - Chapter 08 #28
Section: 8.1
Topic: Dividend growth model

17. The secondary market is best defined by which one of the following?
A. market in which subordinated shares are issued and resold
B. market conducted solely by brokers
C. market dominated by dealers
D. market where outstanding shares of stock are resold
E. market where warrants are offered and sold

Refer to section 8.3

AACSB: N/A
Bloom’s: Knowledge
Difficulty: Basic
Learning Objective: 8-3
Rao - Chapter 08 #11
Section: 8.3
Topic: Secondary market
18. Blackwell bonds have a face value of $1,000 and are currently quoted at 98.4. The bonds have a 5 percent coupon rate. What is the current yield on these bonds?
A. 4.67 percent  
B. 4.78 percent  
C. 5.08 percent  
D. 5.33 percent  
E. 5.54 percent

\[
\text{Current yield} = \frac{0.05 \times $1,000}{0.984 \times $1,000} = 5.08\text{ percent}
\]

AACSB: Analytic  
Bloom's: Application  
Difficulty: Basic  
Learning Objective: 7-2  
Ross - Chapter 07 #93  
Section: 7.1  
Topic: Current yield

19. The semiannual, 8-year bonds of Alto Music are selling at par and have an effective annual yield of 8.6285 percent. What is the amount of each interest payment if the face value of the bonds is $1,000?
A. $41.50  
B. $42.25  
C. $43.15  
D. $85.00  
E. $86.29

\[
0.086285 = \left(1 + \frac{r}{2}\right)^2 - 1; r = 0.0845.
\]

Because the bond is selling at par, the APR and the coupon rate are equal.

\[
\text{Semiannual interest payment} = \frac{0.0845 \times $1,000}{2} = $42.25
\]

AACSB: Analytic  
Bloom's: Analysis  
Difficulty: Intermediate  
Learning Objective: 7-1  
Ross - Chapter 07 #103  
Section: 7.1  
Topic: Bond yields and payments
20. Roy's Welding Supplies common stock sells for $38 a share and pays an annual dividend that increases by 3 percent annually. The market rate of return on this stock is 8.20 percent. What is the amount of the last dividend paid?

A. $1.80
B. $1.86
C. $1.92
D. $1.98
E. $2.10

\[
$38 = \frac{D_0 \cdot (1 + 0.03)}{0.082 - 0.03}; D_0 = $1.92
\]