A stock has a required rate of return of 15%, a constant growth rate of 10%, and a dividend payout ratio of 45%. The stock's justified price-earnings ratio is *closest* to:

A) 4.5 times. ✗

B) 9.0 times. ✓

C) 3.0 times. ✗

Explanation

The constant growth dividend discount model can be stated in terms of a company's price-earnings ratio:

$$P_0/E_1 = (D_1/E_1) / (k - g)$$

where P_0/E_1 is the justified P/E ratio and D_1/E_1 is the expected dividend payout ratio.

Here, $D_1/E_1 = 0.45$, the required rate of return $k = 0.15$, and the constant growth rate of dividends $g = 0.10$.

$$P_0/E_1 = 0.45 / (0.15 - 0.10)$$

$$= 0.45 / 0.05 = 9.0$$

(Module 48.3, LOS 48.k)

When a company's return on equity (ROE) is 12% and the dividend payout ratio is 60%, what is the implied sustainable growth rate of earnings and dividends?

A) 4.0%. ✗

B) 4.8%. ✓

C) 7.8%. ✗

Explanation

g = ROE × retention ratio = ROE × (1 − payout ratio) = 12 (0.4) = 4.8%

(Module 48.2, LOS 48.h)

Which of the following statements concerning security valuation is *least* accurate?

A) A firm with a $1.50 dividend last year, a dividend payout ratio of 40%, a return on equity of 12%, and a 15% required return is worth $18.24. ✓

B) The best way to value a company with high and unsustainable growth that exceeds the required return is to use the temporary supernormal growth (multistage) model. ✗

C) The best way to value a company expecting to pay a constantly growing dividend as from the third year is to use the Gordon growth model. ✗

Explanation

A firm with a $1.50 dividend last year, a dividend payout ratio of 40%, a return on new investment of 12%, and a 15% required return is worth $20.64. The growth rate is (1 – 0.40) × 0.12 = 7.2%. The expected dividend is then ($1.50)(1.072) = $1.61. The value is then (1.61) / (0.15 – 0.072) = $20.64.

(Module 48.2, LOS 48.i)

Question #4 of 140

A company's payout ratio is 0.45 and its expected return on equity (ROE) is 23%. What is the company's implied growth rate in dividends?

A) 12.65%. ✓

B) 10.35%. ✗

C) 4.16%. ✗

Explanation

Growth Rate = (ROE)(1 – Payout Ratio) = (0.23)(0.55) = 12.65%

(Module 48.2, LOS 48.h)

Question #5 of 140

Rock, Inc. maintains a policy of paying 30% of earnings to its investors in the form of dividends. Rock is expected to generate a return on equity of 9.3%. Rock's beta is 1.5. The market risk premium is 6% and the risk-free rate is 3%. Rock's required rate of return is *closest* to:

A) 9.0%. ❌

B) 9.3%. ❌

C) 12.0%. ✅

Explanation

Required return = $R_f + \beta(R_M - R_f)$ = 0.03 + 1.5(0.06) = 0.12

(Module 48.2, LOS 48.h)

Question #6 of 140

If all other factors remain unchanged, which of the following would *most likely* reduce a company's price/earnings ratio?

A) The dividend payout ratio increases, and the dividend growth rate increases. ❌

B) The dividend growth rate increases, and the required rate of return decreases. ❌

C) The required rate of return increases, and the dividend payout ratio decreases. ✅

Explanation

$$P/E = \frac{\text{dividend payout ratio}}{k-g}$$

$$g = ROE \times \text{retention rate}$$

Increases in *k* reduce P/E. Increases in *g* or the dividend payout ratio increase P/E.

(Module 48.3, LOS 48.k)

Question #7 of 140

A stock is expected to pay a dividend of $1.50 at the end of each of the next three years. At the end of three years the stock price is expected to be $25. The equity discount rate is 16 percent. What is the current stock price?

A) $24.92. ✗

B) $19.39. ✓

C) $17.18. ✗

Explanation

The value of the stock today is the present value of the dividends and the expected stock price, discounted at the equity discount rate:

$$\$1.50/1.16 + \$1.50/1.16^2 + \$1.50/1.16^3 + \$25.00/1.16^3 = \$19.39$$

(Module 48.2, LOS 48.h)

Question #8 of 140

Assume that a stock paid a dividend of $1.50 last year. Next year, an investor believes that the dividend will be 20% higher and that the stock will be selling for $50 at year-end. Assume a beta of 2.0, a risk-free rate of 6%, and an expected market return of 15%. What is the value of the stock?

A) $40.32. ✗

B) $41.77. ✓

C) $45.00. ✗

Explanation

Using the Capital Asset Pricing Model, we can determine the discount rate equal to 0.06 + 2(0.15 – 0.06) = 0.24. The dividends next year are expected to be $1.50 × 1.2 = $1.80. The present value of the future stock price and the future dividend are determined by discounting the expected cash flows at the discount rate of 24%: (50 + 1.8) / 1.24 = $41.77.

(Module 48.2, LOS 48.h)

Question #9 of 140

All else equal, the price-to-earnings (P/E) ratio of a stable firm will increase if the:

A) dividend payout is decreased. ❌

B) long-term growth rate is decreased. ❌

C) ROE is increased. ✅

Explanation

The increase in growth rate will increase the P/E ratio of a stable firm and growth rate can be calculated by the formula g = ROE × retention ratio. All else being equal an increase in ROE will therefore increase the P/E ratio. Note that decreasing the dividend payout ratio and decreasing the long term growth rate will both serve to decrease the P/E ratio.

(Module 48.3, LOS 48.k)

Question #10 of 140

Because of dividend displacement of earnings, the net effect on firm value of increasing the dividend payout ratio is:

A) indeterminate. ✅

B) to decrease firm value. ❌

C) to increase firm value. ❌

Explanation

The net effect on firm value of increasing the dividend payout ratio is ambiguous because the positive effect of larger dividends may be offset by a negative effect on the firm's sustainable growth rate. If increasing the payout ratio always increased firm value, all firms would have 100% payout ratios.

(Module 48.3, LOS 48.k)

Question #11 of 140

Holding all else equal, if the beta of a stock increases, the stock's price will:

A) be unaffected. ❌

B) decrease. ✅

C) increase. ❌

Explanation

When the beta of a stock increases, its required return will increase. This increases the discount rate investors use to estimate the present value of the stock's future cash flows, which decreases the value of the stock.

(Module 48.2, LOS 48.e)

Question #12 of 140

Question ID: 1574060

A company with a return on equity (ROE) of 27%, required return on equity (k_e) of 20%, and a dividend payout ratio of 40% has an implied sustainable growth rate *closest* to:

A) 10.80%. ✗

B) 12.00%. ✗

C) 16.20%. ✓

Explanation

g = (RR)(ROE)

= (.60)(.27)

= 0.162 or 16.2%

(Module 48.2, LOS 48.h)

Question #13 of 140

Question ID: 1574052

A company has just paid a $2.00 dividend per share and dividends are expected to grow at a rate of 6% indefinitely. If the required return is 13%, what is the value of the stock today?

A) $30.29. ✓

B) $34.16. ✗

C) $32.25. ✗

Explanation

The dividend just paid is D_0. To use the constant growth dividend discount model, we need the next period's dividend, D_1:

$D_1 = \$2.00 \times 0.06 = \$2.12$

$P_0 = D_1 / (k - g) = 2.12 / (0.13 - 0.06) = \$30.29$

(Module 48.2, LOS 48.h)

Question #14 of 140

Given the following information, compute the price/cash flow ratio for EAV Technology, a U.S. GAAP reporting firm.

- Net income per share = $6
- Price per share = $100
- Depreciation per share = $2
- Interest expense per share = $4
- Marginal tax rate = 25%

A) 12.5X. ✓

B) 8.3X. ✗

C) 9.1X. ✗

Explanation

Operating cash flow = Net income per share + Depreciation per share = $6 + $2 = $8

Price/cash flow = $100 / $8.0X = 12.5X

(Module 48.3, LOS 48.k)

Question #15 of 140

A firm is expected to have four years of growth with a retention ratio of 100%. Afterwards the firm's dividends are expected to grow 4% annually, and the dividend payout ratio will be set at 50%. If earnings per share (EPS) = $2.4 in year 5 and the required return on equity is 10%, what is the stock's value today?

A) $30.00. ✗

B) $13.66. ✓

C) $20.00. ✗

Explanation

Dividend in year 5 = (EPS)(payout ratio) = 2.4 × 0.5 = 1.2

P_4 = 1.2 / (0.1 − 0.04) = 1.2 / 0.06 = $20

P_0 = PV (P_4) = $20 / $(1.10)^4$ = $13.66

(Module 48.2, LOS 48.h)

Question #16 of 140

The free cash flow to equity model is *best* described as a(n):

A) enterprise value model. ✗

B) present value model. ✓

C) single-factor model. ✗

Explanation

The free cash flow to equity model is one type of present value model or discounted cash flow model. It estimates a stock's value as the present value of cash available to common shareholders. The enterprise value model is an example of a multiplier model.

(Module 48.1, LOS 48.b)

Question #17 of 140

The yield on a company's 7.5%, $50 par preferred stock is 6%. The value of the preferred stock is *closest* to:

A) $50.00. ✗

B) $62.50. ✓

C) $12.50. ✗

Explanation

The preferred dividend is 0.075($50) = $3.75. The value of the preferred = $3.75 / 0.06 = $62.50.

(Module 48.2, LOS 48.g)

Question #18 of 140

An analyst projects the following pro forma financial results for Magic Holdings, Inc., in the next year:

- Sales of $1,000,000
- Earnings of $200,000
- Total assets of $750,000
- Equity of $500,000
- Dividend payout ratio of 62.5%
- Shares outstanding of 50,000
- Risk free interest rate of 7.5%
- Expected market return of 13.0%
- Stock Beta at 1.8

If the analyst assumes Magic Holdings, Inc. will produce a constant rate of dividend growth, the value of the stock is *closest to:*

A) $104. ✓

B) $44. ✗

C) $19. ✗

Explanation

Infinite period DDM: $P_0 = D_1 / (k_e - g)$

D_1   = (Earnings × Payout ratio) / average number of shares outstanding

= ($200,000 × 0.625) / 50,000 = $2.50.

k_e   = risk free rate + [beta × (expected market return – risk free rate)]

k_e = 7.5% + [1.8 × (13.0% - 7.5%)] = 17.4%.

g   = (retention rate × ROE)

Retention = (1 – Payout) = 1 – 0.625 = 0.375.

ROE = net income/equity

= 200,000/500,000 = 0.4

g   = 0.375 × 0.4 = 0.15.

$P_0 = D_1 / (k_e - g)$ = $2.50 / (0.174 - 0.15) = 104.17.

(Module 48.2, LOS 48.h)

Question #19 of 140

Using an infinite period dividend discount model, find the value of a stock that last paid a dividend of $1.50. Dividends are expected to grow at 6 percent forever, the expected return on the market is 12 percent and the stock's beta is 0.8. The risk-free rate of return is 5 percent.

A) $26.50.   ✗

B) $32.61.   ✗

C) $34.57.   ✓

Explanation

First find the required rate of return using the CAPM equation.

k = 0.05 + 0.8(0.12 - 0.05) = 10.6%

$1.50(1.06) /(0.106 - 0.06) = $34.57

(Module 48.2, LOS 48.h)

According to the earnings multiplier model, which of the following factors is the least important in estimating a stock's price-to-earnings ratio? The:

A) historical dividend payout ratio. ✓

B) expected dividend payout ratio. ✗

C) estimated required rate of return on the stock. ✗

Explanation

P/E = $(D_1/E_1)/(k - g)$

where:

D_1/E_1 = the expected dividend payout ratio

k = estimated required rate of return on the stock

g = expected growth rate of dividends for the stock

The P/E is *most* sensitive to movements in the denominator.

(Module 48.3, LOS 48.k)

What is the value of a stock that paid a $0.25 dividend last year, if dividends are expected to grow at a rate of 6% forever? Assume that the risk-free rate is 5%, the expected return on the market is 10%, and the stock's beta is 0.5.

A) $17.67. ✓

B) $3.53. ✗

C) $16.67. ✗

Explanation

The discount rate is k_e = 0.05 + 0.5(0.10 – 0.05) = 0.075. Use the infinite period dividend discount model to value the stock. The stock value = $D_1 / (k_e – g)$ = (0.25 × 1.06) / (0.075 – 0.06) = $17.67.

(Module 48.2, LOS 48.h)

A firm has a return on equity (ROE) of 15% and a dividend payout rate of 80%. If last year's dividend was $0.80 and the required return on equity is 10%, the stock price today is *closest* to:

A) $11.77. ✓

B) $10.87. ✗

C) $9.96. ✗

Explanation

The expected growth rate of dividends is the retention rate (RR) times the return on the equity portion of new investments (ROE), g = (RR)(ROE). The retention rate is 1 minus the payout rate.

RR = 1 – 0.80 = 0.20.

g = (0.20)(0.15)= 3.0%.

The value of the stock will be the dividend paid next year divided by the required rate of return minus the growth rate. Next year's dividend is $0.80 × 1.03 = $0.824. So the value is 0.824 / (0.10 – 0.03) = 0.824 / 0.07 = $11.77.

(Module 48.2, LOS 48.h)

Question #23 of 140

Robert Higgins is estimating the price-earnings (P/E) ratio that will be appropriate for an index at the end of next year. He has estimated that:

- Expected annual dividends will increase by 10% compared to this year.
- Expected earnings per share will increase by 10% compared to this year.
- The expected growth rate of dividends will be the same as the current estimate of 5%.
- The required rate of return will rise from 8% to 11%.

Compared to the current P/E, the end-of-the-year P/E will be:

A) 50% lower. ✓

B) 2% higher. ✗

C) 10% higher. ✗

Explanation

The numerator of the formula for the P/E is the payout ratio, which is unchanged (both expected earnings and dividends increase by the same percentage). The denominator (k − g) doubles from 3% to 6%, which will decrease the P/E by half.

(Module 48.3, LOS 48.k)

Given the following estimated financial results for the next period, value the stock of FishnChips, Inc., using the infinite period dividend discount model (DDM).

- Sales of $1,000,000.
- Earnings of $150,000.
- Total assets of $800,000.
- Equity of $400,000.
- Dividend payout ratio of 60.0%.
- Average shares outstanding of 75,000.
- Real risk free interest rate of 4.0%.
- Expected inflation rate of 3.0%.
- Expected market return of 13.0%.
- Stock Beta at 2.1.

The per share value of FishnChips stock is approximately: *(Note: Carry calculations out to at least 3 decimal places.)*

A) $17.91. ✗

B) $26.86. ✓

C) $30.89. ✗

Explanation

Here, we are given all the inputs we need. Use the following steps to calculate the value of the stock:

First, expand the infinite period DDM:

DDM formula: $P_0 = D_1 / (k_e - g)$

D_1	= (Earnings × Payout ratio) / average number of shares outstanding
	= ($150,000 × 0.60) / 75,000 = $1.20

k_e	= nominal risk free rate + [beta × (expected market return – nominal risk free rate)]
Note: Nominal risk-free rate	= (1 + real risk free rate) × (1 + expected inflation) – 1
	= (1.04)×(1.03) – 1 = 0.0712, or 7.12%.

k_e	= 7.12% + [2.1 × (13.0% − 7.12%)] = 0.19468

g	= (retention rate × ROE)
Retention	= (1 – Payout) = 1 – 0.60 = 0.40.
ROE	= (net income / sales)(sales / total assets)(total assets / equity)
	= (150,000 / 1,000,000)(1,000,000 / 800,000)(800,000 / 400,000)
	= 0.375

g	= 0.375 × 0.40 = 0.15

Then, calculate: $P_0 = D_1 / (k_e - g)$ = $1.20 / (0.19468 – 0.15) = **26.86.**

(Module 48.2, LOS 48.h)

Question #25 of 140

Asset-based valuation models are *most appropriate* for a firm that:

A) has cyclical earnings.   ❌

B) has significant intangible assets.   ❌

C) is being liquidated.   ✅

Explanation

Asset-based valuation models are appropriate for a firm that is being liquidated because when a firm ceases to operate as a going concern, its value to equity owners depends on the difference between the fair value of its assets and liabilities. Asset-based models are unlikely to be reliable for estimating the value of firms that have significant intangible assets because fair values of such assets are often difficult to determine. Such a firm may or may not have cyclical earnings.

(Module 48.3, LOS 48.m)

Question #26 of 140

The required rate of return on equity used as an input to the dividend discount model is influenced by each of the following factors EXCEPT:

A) the stock's appropriate risk premium. ✗

B) the expected inflation rate. ✗

C) the stock's dividend payout ratio. ✓

Explanation

A stock's required rate of return is equal to the nominal risk-free rate plus a risk premium. The nominal risk-free rate is approximately equal the real risk-free rate plus expected inflation.

(Module 48.2, LOS 48.h)

Question #27 of 140

Use the following information to determine the value of River Gardens' common stock:

- Expected dividend payout ratio is 45%.
- Expected dividend growth rate is 6.5%.
- River Gardens' required return is 12.4%.
- Expected earnings per share next year are $3.25.

A) $24.80. ✓

B) $30.12. ✗

C) $27.25. ✗

Explanation

First, estimate the price to earnings (P/E) ratio as: (0.45) / (0.124 – 0.065) = 7.63. Then, multiply the expected earnings by the estimated P/E ratio: ($3.25)(7.63) = $24.80.

(Module 48.3, LOS 48.k)

Question #28 of 140

An analyst has gathered the following data for Webco, Inc:

- Retention = 40%
- ROE = 25%
- k = 14%

Using the infinite period, or constant growth, dividend discount model, calculate the price of Webco's stock assuming that next year's earnings will be $4.25.

A) $125.00. ❌

B) $55.00. ❌

C) $63.75. ✅

Explanation

g = (ROE)(RR) = (0.25)(0.4) = 10%

$V = D_1 / (k - g)$

D_1 = 4.25 (1 – 0.4) = 2.55

G = 0.10

K – g = 0.14 – 0.10 = 0.04

V = 2.55 / 0.04 = **63.75**

(Module 48.2, LOS 48.h)

Question #29 of 140

In its latest annual report, a company reported the following:

Net income	= $1,000,000
Total equity	= $5,000,000
Total assets	= $10,000,000
Dividend payout ratio	= 40%

Based on the sustainable growth model, the *most likely* forecast of the company's future earnings growth rate is:

A) 6%. ✗

B) 8%. ✗

C) 12%. ✓

Explanation

g = (RR)(ROE)

RR = 1 – dividend payout ratio = 1 – 0.4 = 0.6

ROE = NI / Total Equity = 1,000,000 / 5,000,000 = 1 / 5 = 0.2

Note: This is the "simple" calculation of ROE. Since we are only given these inputs, these are what you should use. Also, if given beginning and ending equity balances, use the average in the denominator.

g = (0.6)(0.2) = 0.12 or 12%

(Module 48.2, LOS 48.h)

Of the following types of firm, which is *most suitable* for P/B ratio analysis?

A) A service industry firm without significant fixed assets. ✗

B) A firm with accounting standards different from other firms. ✗

C) A firm with accounting standards consistent to other firms. ✓

Explanation

Assuming consistent accounting standards across firms, P/B ratios can reveal signs of misvaluation across firms.

(Module 48.3, LOS 48.j)

A firm will not pay dividends until four years from now. Starting in year four dividends will be $2.20 per share, the retention ratio will be 40%, and ROE will be 15%. If k = 10%, what should be the value of the stock?

A) $55.25. ✖

B) $41.32. ✔

C) $58.89. ✖

Explanation

g = ROE × retention ratio = ROE × b = 15 × 0.4 = 6%

Based on the growth rate we can calculate the expected price in year 3:

$P_3 = D_4 / (k - g) = 2.2 / (0.10 - 0.06) = \$55$

The stock value today is:

P_0 = PV (55) at 10% for 3 periods = $41.32

(Module 48.2, LOS 48.h)

What value would be placed on a stock that currently pays no dividend but is expected to start paying a $1 dividend five years from now? Once the stock starts paying dividends, the dividend is expected to grow at a 5 percent annual rate. The appropriate discount rate is 12 percent.

A) $8.11. ✖

B) $9.08. ✔

C) $14.29. ✖

Explanation

P_4 = D5/(k-g) = 1/(.12-.05) = 14.29

P_0 = [FV = 14.29; n = 4; i = 12] = $9.08.

(Module 48.2, LOS 48.h)

Calculate the value of a preferred stock that pays an annual dividend of $5.50 if the current market yield on AAA rated preferred stock is 75 basis points above the current T-Bond rate of 7%.

A) $42.63. ✖

B) $70.97. ✔

C) $78.57. ✖

Explanation

$k_{preferred}$ = base yield + risk premium = 0.07 + 0.0075 = 0.0775

$Value_{Preferred}$ = Dividend / $k_{preferred}$

Value = 5.50 / 0.0775 = $70.97

(Module 48.2, LOS 48.g)

Given the following information, compute price/book value.

- Book value of assets = $550,000
- Total sales = $200,000
- Net income = $20,000
- Dividend payout ratio = 30%
- Operating cash flow = $40,000
- Price per share = $100
- Shares outstanding = 1000
- Book value of liabilities = $500,000

A) 2.0X. ✔

B) 2.5X. ✖

C) 5.5X. ✖

Explanation

Book value of equity = $550,000 - $500,000 = $50,000

Market value of equity = ($100)(1000) = $100,000

Price/Book = $100,000/$50,000 = 2.0X

(Module 48.3, LOS 48.k)

Question #35 of 140

According to the earnings multiplier model, a stock's P/E ratio (P_0/E_1) is affected by all of the following EXCEPT the:

A) expected dividend payout ratio. ✗

B) expected stock price in one year. ✓

C) required return on equity. ✗

Explanation

According to the earnings multiplier model, the P/E ratio is equal to $P_0/E_1 = (D_1/E_1)/(k_e - g)$.

Thus, the P/E ratio is determined by:

- The expected dividend payout ratio (D_1/E_1).
- The required rate of return on the stock (k_e).
- The expected growth rate of dividends (g).

(Module 48.3, LOS 48.k)

Question #36 of 140

A company's growth rate in dividends and earnings can be estimated as the:

A) product of the retention ratio and the return on equity. ✓

B) product of the return on equity and the dividend payout ratio. ✗

C) difference between the retention ratio and the return on equity. ✗

Explanation

Assuming past investments are stable and earnings are calculated to allow for maintenance of past earnings power, then the firm's expected dividend growth rate (g) can be defined as the firm's earnings plowback or retention rate (RR) times the return on the equity (ROE) portion of new investments. This growth rate is also called the sustainable growth rate.

(Module 48.2, LOS 48.h)

Question #37 of 140

One advantage of using price-to-book value (PBV) multiples for stock valuation is that:

A) book value of a firm can never be negative. ❌

B) it is a stable and simple benchmark for comparison to the market price. ✅

C) most of the time it is close to the market value. ❌

Explanation

Book value provides a relatively stable measure of value that can be compared to the market price. For investors who mistrust the discounted cash flow estimates of value, it provides a much simpler benchmark for comparison. Book value may or may not be closer to the market value. A firm may have negative book value if it shows accounting losses consistently.

(Module 48.3, LOS 48.j)

Question #38 of 140

Day and Associates is experiencing a period of abnormal growth. The last dividend paid by Day was $0.75. Next year, they anticipate growth in dividends and earnings of 25% followed by negative 5% growth in the second year. The company will level off to a normal growth rate of 8% in year three and is expected to maintain an 8% growth rate for the foreseeable future. Investors require a 12% rate of return on Day. The value of Day stock today is *closest* to:

A) $24.05. ❌

B) $20.70. ✅

C) $18.65. ❌

Explanation

First find the abnormal dividends:

$$D_1 = \$0.75 \times 1.25 = \$0.9375$$

$$D_2 = \$0.9375 \times 0.95 = \$0.89$$

D_2 is the first dividend that will grow at a constant rate. We can use this dividend in the constant growth DDM to get a value for the stock in period 1:

$$\$0.89 / (0.12 - 0.08) = \$22.25$$

Value of the stock today = ($22.25 + $0.9375) / 1.12 = $20.70.

(Module 48.2, LOS 48.h)

Question #39 of 140

Utilizing the infinite period dividend discount model, all else held equal, if the required rate of return (K_e) decreases, the model yields a price that is:

A) increased, due to a smaller spread between required return and growth. ✓

B) reduced, due to increased spread between growth and required return. ✗

C) reduced, due to the reduction in discount rate. ✗

Explanation

The denominator of the single-stage DDM is the spread between required return K_e, and expected growth rate, g. The smaller the denominator, all else held equal, the larger the computed value.

(Module 48.2, LOS 48.h)

Question #40 of 140

Use the following information and the multi-period dividend discount model to find the value of Computech's common stock.

- Last year's dividend was $1.62.
- The dividend is expected to grow at 12% for three years.
- The growth rate of dividends after three years is expected to stabilize at 4%.
- The required return for Computech's common stock is 15%.

Which of the following statements about Computech's stock is *least* accurate?

A) At the end of two years, Computech's stock will sell for $20.69. ❌

B) Computech's stock is currently worth $17.46. ✅

C) The dividend at the end of year three is expected to be $2.28. ❌

Explanation

The dividends for years 1, 2, and 3 are expected to be ($1.62)(1.12) = $1.81; ($1.81)(1.12) = $2.03; and ($2.03)(1.12) = $2.27. At the end of year 2, the stock should sell for $2.27 / (0.15 – 0.04) = $20.64. The stock should sell currently for ($20.64 + $2.03) / (1.15)^2 + ($1.81) / (1.15) = $18.71.

(Module 48.2, LOS 48.h)

James Fry, CFA, is evaluating the potential investment merit of Cushing Corporation. Fry forecasts that Cushing's earnings next year will be $4.70 and it will pay a $1.65 dividend. Fry estimates Cushing's future growth rate will be 10%, with a required rate of return of 12%. Based on the information provided, Cushing's leading price to earnings (P/E) ratio is *closest* to:

A) 15.0. ❌

B) 15.9. ❌

C) 17.6. ✅

Explanation

$D_1 = 1.5 \times 1.1 = 1.65$

$$\frac{P_0}{E_1} = \frac{\left(\frac{D_1}{E_1}\right)}{(k-g)} = \left(\frac{\frac{1.65}{4.70}}{(0.12-0.10)}\right) = \left(\frac{0.351}{0.02}\right) = 17.6$$

(Module 48.3, LOS 48.k)

A company last paid a $1.00 dividend, the current market price of the stock is $20 per share and the dividends are expected to grow at 5 percent forever. What is the required rate of return on the stock?

A) 10.00%. ✗

B) 10.25%. ✓

C) 9.78%. ✗

Explanation

$D_0 (1 + g) / P_0 + g = k$

1.00 (1.05) / 20 + 0.05 = 10.25%.

(Module 48.2, LOS 48.h)

Question #43 of 140

An enterprise value multiple is typically calculated as the ratio of enterprise value to a measure of:

A) operating income. ✓

B) net income. ✗

C) pretax income. ✗

Explanation

An enterprise value multiple is typically calculated as the ratio of enterprise value to EBITDA or some other measure of operating income. Net income or pretax income are not typically used because they reflect a firm's current capital structure and non-cash charges, and because the ratio becomes meaningless when income is negative.

(Module 48.3, LOS 48.l)

Question #44 of 140

REM Corp.'s return on equity (ROE) is 19.5% and its dividend payout rate is 45%. What is the company's implied dividend growth rate?

A) 19.5%. ✗

B) 10.73%. ✓

C) 8.78%. ✗

Explanation

g = (ROE)(RR)

g = (19.5)(1 – 0.45)

g = (0.195)(0.55)

= 0.1073 or 10.73%

(Module 48.2, LOS 48.h)

Question #45 of 140

A payment to shareholders in the form of additional shares instead of cash is *most accurately* characterized as a:

A) private placement. ✗

B) stock dividend. ✓

C) stock split. ✗

Explanation

Stock dividends are dividends paid out in new shares of stock instead of cash. While a stock split has essentially the same effects as a stock dividend, it is carried out by declaring that each existing share will become some number of new shares (for example a 2-for-1 split). A private placement is an issuance of new shares to one or a group of investors in exchange for cash, when the issuance is not carried out as a public offering.

(Module 48.1, LOS 48.c)

Question #46 of 140

Baker Computer earned $6.00 per share last year, has a retention ratio of 55%, and a return on equity (ROE) of 20%. Assuming their required rate of return is 15%, how much would an investor pay for Baker on the basis of the earnings multiplier model?

A) $74.93. ✓

B) $40.00. ✗

C) $173.90. ✗

Explanation

g = Retention × ROE = (0.55) × (0.2) = 0.11

P_0/E_1 = 0.45 / (0.15 − 0.11) = 11.25

Next year's earnings $E_1 = E_0$ × (1 + g) = (6.00) × (1.11) = $6.66

P_0 = 11.25($6.66) = $74.93

(Module 48.3, LOS 48.k)

Question #47 of 140

An asset-based valuation model is *most appropriate* for a company that:

A) has a high proportion of intangible assets among its total assets. ✗

B) is likely to be liquidated. ✓

C) is expected to remain profitable for the foreseeable future. ✗

Explanation

For companies that are likely to be liquidated, the asset-based approach may be the most appropriate value as the assets may be worth more to another entity. Asset-based valuation models do not work well for companies that have large amounts of intangible assets. Because asset-based valuation is not forward-looking, an asset-based approach may underestimate the value of companies that are expected to be profitable.

(Module 48.3, LOS 48.m)

Question #48 of 140

Use the following information on Brown Partners, Inc. to compute the current stock price.

- Dividend just paid = $6.10
- Expected dividend growth rate = 4%
- Expected stock price in one year = $60
- Risk-free rate = 3%
- Risk premium on the stock = 12%

A) $59.55. ✗

B) $57.70. ✓

C) $57.48. ✗

Explanation

The current stock price is equal to $(D_1 + P_1) / (1 + k_e)$. D_1 equals $6.10(1.04) = \$6.34$. The equity discount rate is 3% + 12% = 15%. Therefore the current stock price is ($6.34 + $60)/(1.15) = $57.70

(Module 48.2, LOS 48.h)

Question #49 of 140

The current price of XYZ, Inc., is $40 per share with 1,000 shares of equity outstanding. Sales are $4,000 and the book value of the firm is $10,000. What is the price/sales ratio of XYZ, Inc.?

A) 10.000. ✓

B) 4.000. ✗

C) 0.010. ✗

Explanation

The price/sales ratio is (price per share)/(sales per share) = (40)/(4,000/1,000) = 10.0. Alternatively, the price/sales ratio may be thought of as the market value of the company divided by its sales, or (40 × 1,000)/4,000, or 10.0 again.

(Module 48.3, LOS 48.k)

Question #50 of 140

General, Inc., has net income of $650,000 and one million shares outstanding. The profit margin is 6 percent and General, Inc., is selling for $30.00. The price/sales ratio is equal to:

A) 0.65. ✗

B) 2.77. ✓

C) 10.83. ✗

Explanation

6% profit margin = $650,000/x; x (sales) = $10,833,333.

Sales per share = $10.83 M/1,000,000 = $10.83 per share.

P/Sales = $30.00/$10.83 = 2.77.

(Module 48.3, LOS 48.k)

Which of the following shows the dividend payment chronology in its proper sequence?

A) Declaration date, ex-dividend date, holder-of-record date, payment date. ✅

B) Declaration date, holder-of-record date, ex-dividend date, payment date. ❌

C) Ex-dividend date, holder-of-record date, declaration date, payment date. ❌

Explanation

The dividend payment chronology begins with the declaration of a dividend by the board of directors. The ex-dividend date occurs one or two business days before the holder-of-record date.

(Module 48.1, LOS 48.d)

Given the following information, compute price/sales.

- Book value of assets = $550,000.
- Total sales = $200,000.
- Net income = $20,000.
- Dividend payout ratio = 30%.
- Operating cash flow = $40,000.
- Price per share = $100.
- Shares outstanding = 1,000.
- Book value of liabilities = $500,000.

A) 2.50X. ❌

B) 0.50X. ✅

C) 2.00X. ❌

Explanation

Market value of equity = ($100)(1000) = $100,000

Price / Sales = $100,000 / $200,000 = 0.5X

(Module 48.3, LOS 48.k)

Assume that a firm has an expected dividend payout ratio of 20%, a required rate of return of 9%, and an expected dividend growth of 5%. What is the firm's estimated price-to-earnings (P/E) ratio?

A) 2.22. ✗

B) 5.00. ✓

C) 20.00. ✗

Explanation

The price-to-earnings (P/E) ratio is equal to $(D_1/E_1)/(k - g) = 0.2/(.09 - 0.05) = 5.00$.

(Module 48.3, LOS 48.k)

Question #54 of 140

A high growth rate of dividends is *most likely* to be consistent with:

A) a high dividend payout ratio. ✗

B) a high ROE. ✓

C) a low retention rate. ✗

Explanation

The growth rate of dividends can be estimated as retention rate × ROE, or (1 – payout ratio) × ROE. Thus high ROE is consistent with a high growth rate. A high dividend payout ratio (which is the same as a low retention rate) is more likely to be consistent with a *low* growth rate of dividends.

(Module 48.2, LOS 48.h)

Question #55 of 140

A stock has a steady 5% growth rate in dividends. The required rate of return for stocks of this risk class is 15%. The stock is expected to pay a $1 dividend this coming year. The expected value of the stock at the end of the fourth year is:

A) $12.16. ✓

B) $16.32. ✗

C) $14.21. ✗

Explanation

First solve for D_5: $D_5 = (D_1)(1 + g)^n = \$1(1.05)^4 = \$1.216$

$$P_4 = \frac{D_5}{(k-g)} = \frac{\$1.216}{(0.15-0.05)} = \$12.16$$

or

$$P_0 = \frac{1}{0.15-0.05} = 10$$

$$P_4 = 10(1.05)^4 = \$12.16$$

(Module 48.2, LOS 48.h)

Question #56 of 140

A company has 6% preferred stock outstanding with a par value of $100. The required return on the preferred is 8%. What is the value of the preferred stock?

A) $100.00. ✗

B) $75.00. ✓

C) $92.59. ✗

Explanation

The annual dividend on the preferred is $100(.06) = $6.00. The value of the preferred is $6.00/0.08 = $75.00.

(Module 48.2, LOS 48.g)

Question #57 of 140

A firm has an expected dividend payout ratio of 50%, a required rate of return of 12% and a constant growth rate of 6%. If earnings for the next year are expected to be $4.50, the value of the stock today is *closest to*:

A) $33.50. ✗

B) $37.50. ✅

C) $39.75. ❌

Explanation

Expected dividend = $4.50 × 0.50 = $2.25

Value today = $2.25 / (0.12 – 0.06) = $37.50

(Module 48.2, LOS 48.h)

Question #58 of 140

Which of the following statements concerning security valuation is *least accurate*?

A) A stock with a dividend last year of $3.25 per share, an expected dividend growth rate of 3.5%, and a required return of 12.5% is estimated to be worth $36.11. ✅

B) A stock to be held for two years with a year-end dividend of $2.20 per share, an estimated value of $20.00 at the end of two years, and a required return of 15% is estimated to be worth $18.70 currently. ❌

C) A stock with an expected dividend payout ratio of 30%, a required return of 8%, an expected dividend growth rate of 4%, and expected earnings of $4.15 per share is estimated to be worth $31.13 currently. ❌

Explanation

A stock with a dividend last year of $3.25 per share, an expected dividend growth rate of 3.5%, and a required return of 12.5% is estimated to be worth $37.33 using the DDM where $P_0 = D_1 / (k – g)$. We are given D_0 = $3.25, g = 3.5%, and k = 12.5%. What we need to find is D_1 which equals $D_0 × (1 + g)$ therefore D_1 = $3.25 × 1.035 = $3.36 thus P_0 = 3.36 / (0.125 – 0.035) = $37.33.

In the answer choice where the stock value is $18.70, discounting the future cash flows back to the present gives the present value of the stock. the future cash flows are the dividend in year 1 plus the dividend and value of the stock in year 2 thus the equation becomes: $V_0 = 2.2 / 1.15 + (2.2 + 20) / 1.15^2 = $18.70

For the answer choice where the stock value is $31.13 use the DDM which is $P_0 = D_1 / (k – g)$. We are given k = 0.08, g = 0.04, and what we need to find is next year's dividend or D_1. D_1 = Expected earnings × payout ratio = $4.15 × 0.3 = $1.245 thus P_0 = $1.245 / (0.08 – 0.04) = $31.13

(Module 48.2, LOS 48.h)

Bybee is expected to have a temporary supernormal growth period and then level off to a "normal," sustainable growth rate forever. The supernormal growth is expected to be 25 percent for 2 years, 20 percent for one year and then level off to a normal growth rate of 8 percent forever. The market requires a 14 percent return on the company and the company last paid a $2.00 dividend. What would the market be willing to pay for the stock today?

A) $52.68. ✓

B) $67.50. ✗

C) $47.09. ✗

Explanation

First, find the future dividends at the supernormal growth rate(s). Next, use the infinite period dividend discount model to find the expected price after the supernormal growth period ends. Third, find the present value of the cash flow stream.

D_1 = 2.00 (1.25) = 2.50 (1.25) = D_2 = 3.125 (1.20) = D_3 = 3.75

P_2 = 3.75/(0.14 - 0.08) = 62.50

N = 1; I/Y = 14; FV = 2.50; compute PV = 2.19.

N = 2; I/Y = 14; FV = 3.125; compute PV = 2.40.

N = 2; I/Y = 14; FV = 62.50; compute PV = 48.09.

Now sum the PV's: 2.19 + 2.40 + 48.09 = $52.68.

(Module 48.2, LOS 48.h)

Which type of cash dividend is *most likely* to be declared by a cyclical firm during good times?

A) Regular dividend. ✗

B) Special dividend. ✓

C) Stock dividend. ✗

Explanation

Special dividends are used when favorable circumstances allow the firm to make a one-time cash payment to shareholders, in addition to any regular dividends the firm pays. Many cyclical firms (e.g., automakers) will use a special dividend to share profits with shareholders when times are good but maintain the flexibility to conserve cash when profits are down.

(Module 48.1, LOS 48.c)

Question #61 of 140

The constant-growth dividend discount model would typically be most appropriate in valuing a stock of a:

A) new venture expected to retain all earnings for several years. ✗

B) company in a mature-stage industry. ✓

C) rapidly growing company. ✗

Explanation

Companies in the mature stage of the industry life cycle are the most likely to fit the assumptions of the constant growth dividend discount model.

The constant growth DDM has the following assumptions:

- The stock pays dividends that grow at a constant rate.
- The constant growth rate, g, continues for an infinite period.
- The required return on equity, k, must be greater than g.

The constant growth DDM is unlikely to be appropriate for valuing growth companies. A multistage dividend discount model that accounts for a supernormal growth period is likely to be more appropriate.

(Module 48.2, LOS 48.i)

Question #62 of 140

A preferred stock's dividend is $5 and the firm's bonds currently yield 6.25%. The preferred shares are priced to yield 75 basis points below the bond yield. The price of the preferred is *closest* to:

A) $80.00. ✗

B) $90.91. ✓

C) $5.00. ⊗

Explanation

Preferred stock yield (K_p) = bond yield – 0.75% = 6.25% – 0.75% = 5.5%

Value = dividend / K_p = $5 / 0.055 = $90.91.

(Module 48.2, LOS 48.g)

Question #63 of 140

A stock has the following elements: last year's dividend = $1, next year's dividend is 10% higher, the price will be $25 at year-end, the risk-free rate is 5%, the market risk premium is 5%, and the stock's beta is 1.5. The stock's price is *closest to*:

A) $20.20. ⊗

B) $23.20. ✓

C) $23.50. ⊗

Explanation

Cost of equity capital = 5% + 1.5(5%) = 12.5%

P_0 = (1.1 / 1.125) + (25 / 1.125) = $23.20.

(Module 48.2, LOS 48.h)

Question #64 of 140

An equity valuation model that values a firm based on the market value of its outstanding debt and equity securities, relative to a firm fundamental, is *best* described as:

A) a discounted cash flow model. ⊗

B) an enterprise value model. ✓

C) an asset-based model. ⊗

Explanation

An enterprise value model relates a firm's enterprise value (the market value of its outstanding equity and debt securities minus its cash and marketable securities holdings) to its EBITDA, operating earnings, or revenue.

(Module 48.1, LOS 48.b)

Question #65 of 140

An analyst gathered the following data for the Parker Corp. for the year ended December 31, 2005:

- EPS_{2005} = $1.75
- $Dividends_{2005}$ = $1.40
- $Beta_{Parker}$ = 1.17
- Long-term bond rate = 6.75%
- Rate of return S&P 500 = 12.00%

The firm is expected to continue their dividend policy in future. If the long-term growth rate in earnings and dividends is expected to be 6%, the forward P/E ratio for Parker Corp. will be:

A) 12.31. ✗

B) 21.54. ✗

C) 11.61. ✓

Explanation

The required rate of return on equity for Parker will be 12.89% = 6.75% + 1.17(12.00% – 6.75%) and the firm pays 80% (1.40 / 1.75) of its earnings as dividends.

Forward P/E ratio = 0.80 / (0.1289 - 0.0600) = 11.61

Where r = required rate of return on equity, g_n = growth rate in dividends (forever).

(Module 48.3, LOS 48.k)

Question #66 of 140

A stock has a required return of 14% percent, a constant growth rate of 5% and a retention rate of 60%. The firm's P/E ratio should be:

A) 4.44. ✓

B) 5.55. ⊗

C) 6.66. ⊗

Explanation

P/E = (1 - RR) / (k - g) = 0.4 / (0.14 - 0.05) = 4.44

(Module 48.3, LOS 48.k)

Question #67 of 140

Assume that the expected dividend growth rate (g) for a firm decreased from 5% to zero. Further, assume that the firm's cost of equity (k) and dividend payout ratio will maintain their historic levels. The firm's P/E ratio will *most likely:*

A) become undefined. ⊗

B) increase. ⊗

C) decrease. ✓

Explanation

The P/E ratio may be defined as: Payout ratio / (k - g), so if k is constant and g goes to zero, the P/E will decrease.

(Module 48.3, LOS 48.k)

Question #68 of 140

If a firm's growth rate is 12% and its dividend payout ratio is 30%, its current return on equity (ROE) is *closest* to:

A) 40.00%. ⊗

B) 36.00%. ⊗

C) 17.14%. ✓

Explanation

g = (RR)(ROE)

g / RR = ROE

0.12 / (1 - 0.30) = 0.12 / 0.70 = 0.1714 or 17.14%

(Module 48.2, LOS 48.h)

Question #69 of 140

If a stock sells for $50 that has an expected annual dividend of $2 and has a sustainable growth rate of 5%, what is the market discount rate for this stock?

A) 10.0%.   ❌

B) 7.5%.   ❌

C) 9.0%.   ✅

Explanation

k = [(D_1 / P) + g] = [(2/50) + 0.05] = 0.09, or 9.00%.

(Module 48.2, LOS 48.h)

Question #70 of 140

Which of the following is *least likely* an advantage of using price/sales (P/S) multiple to value an equity security, as compared to using price/earnings (P/E) multiples?

A) P/S multiples are more reliable than P/E multiples because sales data cannot be distorted by management.   ✅

B) P/S multiples are not as volatile as P/E multiples and hence may be more reliable in valuation analysis.   ❌

C) P/S multiples provide a meaningful framework for evaluating distressed firms when negative earnings prevent the use of P/E multiples.   ❌

Explanation

Because aggressive revenue recognition practices can influence reported sales, it is not the case that sales data cannot be distorted by management.

P/S multiples tend to me less volatile than P/E multiples and can be used to value the equity securities of firms with negative earnings.

(Module 48.3, LOS 48.f)

Question #71 of 140

An analyst gathered the following information about an industry. The industry beta is 0.9. The industry profit margin is 8%, the total asset turnover ratio is 1.5, and the leverage multiplier is 2. The dividend payout ratio of the industry is 50%. The risk-free rate is 7% and the expected market return is 15%. The industry P/E is *closest* to:

A) 14.20.   ✖

B) 12.00.   ✖

C) 22.73.   ✔

Explanation

Using the CAPM: k_i = 7% + 0.9(0.15 − 0.07) = 14.2%.

Using the DuPont equation: ROE = 8% × 1.5 × 2 = 24%.

g = retention ratio × ROE = 0.50 × 24% = 12%.

P/E = 0.5/(0.142 − 0.12) = 22.73.

(Module 48.3, LOS 48.k)

Question #72 of 140

An analyst studying Albion Industries determines that the average EV/EBITDA ratio for Albion's industry is 10. The analyst obtains the following information from Albion's financial statements:

EBITDA = £11,000,000

Market value of debt = £30,000,000

Cash = £1,000,000

Based on the industry's average enterprise value multiple, what is the equity value of Albion Industries?

A) £110,000,000.　　　❌

B) £80,000,000.　　　❌

C) £81,000,000.　　　✅

Explanation

Enterprise value = Average EV/EBITDA × company EBITDA = 10 × £11,000,000 = £110,000,000

Enterprise value = Equity value + debt – cash

Equity value = Enterprise value – debt + cash = £110,000,000 – £30,000,000 + £1,000,000 = £81,000,000

(Module 48.3, LOS 48.l)

Question #73 of 140

Enterprise value is *most accurately* described as a firm's:

A) market value of assets minus market value of liabilities, plus cash and short-term investments.　　　❌

B) market value of stock plus cash and short-term investments, minus market value of debt.　　　❌

C) market value of stock plus market value of debt, minus cash and short-term investments.　　　✅

Explanation

Enterprise value = market value of common and preferred stock + market value of debt – cash and short-term investments.

(Module 48.3, LOS 48.l)

Question #74 of 140

The preferred stock of the Delco Investments Company has a par value of $150 and a dividend of $11.50. A shareholder's required return on this stock is 14%. What is the maximum price he would pay?

A) $150.00.   ✗

B) $54.76.   ✗

C) $82.14.   ✓

Explanation

Value of preferred = D / kp = $11.50 / 0.14 = $82.14

(Module 48.2, LOS 48.g)

Question #75 of 140

A firm has a profit margin of 10%, an asset turnover of 1.2, an equity multiplier of 1.3, and an earnings retention ratio of 0.5. What is the firm's internal growth rate?

A) 4.5%.   ✗

B) 6.7%.   ✗

C) 7.8%.   ✓

Explanation

ROE = (Net Income / Sales)(Sales / Total Assets)(Total Assets / Total Equity)

ROE = (0.1)(1.2)(1.3) = 0.156

g = (retention ratio)(ROE) = 0.5(0.156) = 0.078 or 7.8%

(Module 48.2, LOS 48.h)

One advantage to using the price/book value (P/B) ratio over using the price/earnings (P/E) ratio is that P/B can be used when:

A) stock markets are volatile. ✗

B) the firm is in a slow growth phase. ✗

C) earnings are negative. ✓

Explanation

When earnings are negative, P/E ratios cannot be used but P/B ratios can be used. The firm's rate of growth and the volatility of markets do not suggest advantages of using P/B ratios rather than P/E ratios.

(Module 48.3, LOS 48.f)

A firm has a constant growth rate of 7% and just paid a dividend of $6.25. If the required rate of return is 12%, what will the stock sell for two years from now based on the dividend discount model?

A) $153.13. ✓

B) $149.80. ✗

C) $133.75. ✗

Explanation

$$\text{value @ t} = 2 = \frac{D_3}{k-g} = \frac{D_0(1+g)^3}{k-g} = \frac{\$6.25(1.07)^3}{0.12-0.07} = \$153.13$$

(Module 48.2, LOS 48.h)

An analyst gathered the following data for the Parker Corp. for the year ended December 31, 2005:

- EPS_{2005} = $1.75
- $Dividends_{2005}$ = $1.40
- $Beta_{Parker}$ = 1.17
- Long-term bond rate = 6.75%
- Rate of return $S\&P_{500}$ = 12.00%

The firm has changed its dividend policy and now plans to pay out 60% of its earnings as dividends in the future. If the long-term growth rate in earnings and dividends is expected to be 5%, the appropriate price to earnings (P/E) ratio for Parker will be:

A) 9.14. ✖

B) 7.98. ✖

C) 7.60. ✔

Explanation

Required rate of return on equity will be 12.89% = 6.75% + 1.17(12.00% - 6.75).

P/E Ratio = 0.60 / (0.1289 - 0.0500) = 7.60.

(Module 48.3, LOS 48.k)

Question #79 of 140

If the payout ratio increases, the justified P/E multiple will:

A) increase, if we assume that the growth rate remains constant. ✔

B) decrease, if we assume that the growth rate remains constant. ✖

C) always increase. ✖

Explanation

When payout ratio increases, the justified P/E multiple increases only if we assume that the growth rate will not change as a result.

(Module 48.3, LOS 48.k)

Question #80 of 140

Which of the following statements regarding price multiples is *most* accurate?

A) A disadvantage of the price/book value ratio is that it is not an appropriate measure for firms that primarily hold liquid assets. ✗

B) An advantage of the price/sales ratio is that it is meaningful even for distressed firms. ✓

C) A rationale for using the price/cash flow ratio is that there is only one clear definition of cash flow. ✗

Explanation

The P/S ratio is meaningful even for distressed firms, since sales revenue is always positive. This is not the case for the P/E and P/BV ratios, which can be negative.

In the P/BV ratio book value is an appropriate measure of net asset value for firms that primarily hold liquid assets.

Analysts use several different definitions of cash flow (CFO, adjusted CFO, FCFE, EBITDA, etc.) to calculate P/CF ratios.

When earnings are negative, the P/E ratio is meaningless.

(Module 48.3, LOS 48.j)

Question #81 of 140

A stock's price currently is $100. An analyst forecasts the following for the stock:

- The normalized trailing price earnings (P/E) ratio will be 12×.
- The stock is expected to pay a $5 dividend this coming year on projected earnings of $10 per share.

If the analyst were to buy and hold the stock for the year, the projected rate of return based on these forecasts is *closest* to:

A) 20%. ✗

B) 15%. ✗

C) 25%. ✓

Explanation

The forecast year-end price, *P*, is:

$$P = \text{EPS} \times (P/E) = 10\,(12) = 120$$

$$\text{expected return} = \frac{\text{dividend} + (\text{ending price} - \text{beginning price})}{\text{beginning price}}$$

$$= \frac{\$5 + \$120 - \$100}{\$100}$$

$$= 0.25 \text{ or } 25\%$$

(Module 48.3, LOS 48.k)

Question #82 of 140

Company B paid a $1.00 dividend per share last year and is expected to continue to pay out 40% of its earnings as dividends for the foreseeable future. If the firm is expected to earn a 10% return on equity in the future, and if an investor requires a 12% return on the stock, the stock's value is *closest* to:

A) $16.67. ❌

B) $12.50. ❌

C) $17.67. ✅

Explanation

P_0 = Value of the stock = D_1 / (k – g)

g = (RR)(ROE)

RR = 1 – dividend payout = 1 – 0.4 = 0.6

ROE = 0.1

g = (0.6)(0.1) = 0.06

D_1 = (D_0)(1 + g) = (1)(1 + 0.06) = $1.06

P_0 = 1.06 / (0.12 – 0.06) = 1.06 / 0.06 = $17.67

(Module 48.2, LOS 48.h)

Question #83 of 140

All of the following factors affects the firm's P/E ratio EXCEPT:

A) the expected interest rate on the bonds of the firm. ✓

B) the required rate of return. ✗

C) growth rates of dividends. ✗

Explanation

The factors that affect the P/E ratio are the same factors that affect the value of a firm in the infinite growth dividend discount model. The expected interest rate on the bonds is not a significant factor affecting the P/E ratio.

(Module 48.3, LOS 48.k)

Question #84 of 140

The purchaser of a stock will receive the next dividend if the order is filled before the:

A) ex-dividend date. ✓

B) holder-of-record date. ✗

C) payment date. ✗

Explanation

The ex-dividend date is the cutoff date for receiving the dividend and occurs one or two business days before the holder-of-record date. An investor who buys a share on or after the ex-dividend date will not receive the dividend.

(Module 48.1, LOS 48.d)

Question #85 of 140

The Sustainable Growth Rate is equal to:

A) (ROE) × (RR). ✓

B) (ROE) × (1-RR). ✗

C) (ROE) × (1+RR). ✗

Explanation

The Sustainable Growth Rate is equal to the return on the equity portion of new investments (ROE) multiplied by the firm's retention rate (RR).

(Module 48.2, LOS 48.h)

Which of the following is *least likely* an advantage of using price-to-book value (PBV) multiples in stock valuation?

  A) Book value is often positive, even when earnings are negative. ❌

  B) Book values are highly useful measures for firms in service industries. ✅

  C) PBV ratios can be compared across similar firms if accounting standards are consistent. ❌

Explanation

Book values tend not to be useful valuation measures for firms in service industries because they typically have fewer tangible assets on their balance sheets than firms in other industries.

Two of the advantages of using P/BV ratios for equity valuation are that P/BV ratios can be compared across similar firms if accounting standards are consistent, and that book value is typically positive even when earnings are negative and P/E ratios are not meaningful.

(Module 48.3, LOS 48.f)

Assume the Wansch Corporation is expected to pay a dividend of $2.25 per share this year. Sales and profit for Wansch are forecasted to grow at a rate of 20% for two years after that, then grow at 5% per year forever. Dividend and sales growth are expected to be equal. If Wansch's shareholders require a 15% return, the per-share value of Wansch's common stock based on the dividend discount model is *closest* to:

  A) $28.50. ✅

  B) $22.75. ❌

  C) $26.00. ❌

Explanation

$$P_2 = \frac{D_3}{k-g} = \frac{2.25(1.2)^2}{0.15-0.05} = 32.40$$

$$P_0 = \frac{\$2.25}{1.15} + \frac{2.70}{(1.15)^2} + \frac{32.40}{(1.15)^2} = \$28.50$$

(Module 48.2, LOS 48.h)

At the end of the last 12-month period, Romano's Italian Foods had net income of $16.68 million and equity of $115 million. Romano's declared a $7.5 million dividend for the year. Using internally generated funds, Romano's can grow its equity by approximately:

A) 8.0% per year. ✓

B) 14.5% per year. ✗

C) 10.0% per year. ✗

Explanation

g = ROE × retention rate = [16.68 / 115] × [1 − (7.5 / 16.68)] = 0.145 × (1 − 0.45) = 7.975%. This growth rate represents the rate at which a company can grow its equity using internally generated funds.

(Module 48.2, LOS 48.h)

Preferred stock *most likely* has a:

A) fixed dividend and no maturity. ✓

B) fixed dividend and maturity. ✗

C) variable dividend and no maturity. ✗

Explanation

Preferred stock typically pays a fixed dividend and does not mature.

(Module 48.2, LOS 48.g)

Assuming the risk-free rate is 5% and the expected return on the market is 12%, what is the value of a stock with a beta of 1.5 that paid a $2 dividend last year if dividends are expected to grow at a 5% rate forever?

A) $12.50. ✗

B) $17.50. ❌

C) $20.00. ✅

Explanation

$P_0 = D_1 / (k – g)$

$R_s = R_f + \beta(R_M – R_f) = 0.05 + 1.5(0.12 – 0.05) = 0.155$

$D_1 = D_0(1 + g) = 2 \times (1.05) = 2.10$

$P_0 = 2.10 / (0.155 – 0.05) = \textbf{\$20.00}$

(Module 48.2, LOS 48.h)

Question #91 of 140

Gwangwa Gold, a South African gold producer, has as its primary asset a mine which is shown on the balance sheet with a value of R100 million. An analyst estimates the market value of this mine to be 90% of book value. The company's balance sheet shows other assets of R20 million and liabilities of R40 million, and the analyst feels that the book value of these items reflects their market values. Using the asset-based valuation approach, what should the analyst estimate the value of the company to be?

A) R110 million. ❌

B) R70 million. ✅

C) R80 million. ❌

Explanation

Market value of assets = 0.9(R100 million) + R20 million = R110 million

Market value of liabilities = R40 million

Estimated net value of company = R110 million – R40 million = R70 million.

(Module 48.3, LOS 48.m)

Question #92 of 140

If a preferred stock that pays a $11.50 dividend is trading at $88.46, what is the market's required rate of return for this security?

A) 7.69%. ❌

B) 11.76%. ❌

C) 13.00%. ✅

Explanation

From the formula: Value$_{\text{Preferred Stock}}$ = D / k_p, we derive k_p = D / Value$_{\text{Preferred Stock}}$ = 11.50 / 88.46 = 0.1300, or 13.00%.

(Module 48.2, LOS 48.g)

Question #93 of 140

Beth Knight, CFA, and David Royal, CFA, are independently analyzing the value of Bishop, Inc., stock. Bishop paid a dividend of $1 last year. Knight expects the dividend to grow by 10% in each of the next three years, after which it will grow at a constant rate of 4% per year. Royal also expects a temporary growth rate of 10% followed by a constant growth rate of 4%, but he expects the supernormal growth to last for only two years. Knight estimates that the required return on Bishop stock is 9%, but Royal believes the required return is 10%. Royal's valuation of Bishop stock is approximately:

A) equal to Knight's valuation. ❌

B) $5 less than Knight's valuation. ✅

C) $5 greater than Knight's valuation. ❌

Explanation

You can select the correct answer without calculating the share values. Royal is using a shorter period of supernormal growth and a higher required rate of return on the stock. Both of these factors will contribute to a lower value using the multistage DDM.

$$\text{Knight: } \frac{\$1(1.10)}{1.09} + \frac{\$1(1.10)^2}{1.09^2} + \frac{\$1(1.10)^3/(0.09-0.04)}{1.09^2} = \$24.43$$

$$\text{Royal: } \frac{\$1(1.10)}{1.10} + \frac{\$1(1.10)^2/(0.10-0.04)}{1.10} = \$19.33$$

Royal's valuation is $5.10 less that Knight's valuation.

(Module 48.2, LOS 48.h)

If a company has a "0" earnings retention rate, the firm's P/E ratio will equal:

A) 1 / k. ✓

B) D/P + g. ✗

C) k + g. ✗

Explanation

P/E = div payout ratio / (k – g)

where g = (retention rate)(ROE) = (0)(ROE) = 0

Dividend payout = 1 – retention ratio = 1 – 0 = 1

P/E = 1 / (k – 0) = 1 / k

(Module 48.3, LOS 48.k)

If the expected dividend payout ratio of a firm is expected to rise from 50 percent to 55 percent, the cost of equity is expected to increase from 10 percent to 11 percent, and the firm's growth rate remains at 5 percent, what will happen to the firm's price-to-equity (P/E) ratio? It will:

A) be unchanged. ✗

B) increase. ✗

C) decline. ✓

Explanation

Payout increases from 50% to 55%, cost of equity increases from 10% to 11%, and dividend growth rate stays at 5%, the P/E will change from 10 to 9.16:

$$P/E = (D/E) / (k – g).$$

$$P/E_0 = 0.50 / (0.10 – 0.05) = 10.$$

$$P/E_1 = 0.55 / (0.11 – 0.05) = 9.16.$$

(Module 48.3, LOS 48.k)

Which of the following is *least likely* a reason the price to cash flow (P/CF) model has grown in popularity?

A) CFs are generally more difficult to manipulate than earnings. ❌

B) CFs are used extensively in valuation models. ❌

C) CFs are more easily estimated than future dividends. ✅

Explanation

CFs are not easier to estimate than dividends.

(Module 48.3, LOS 48.j)

A firm has an expected dividend payout ratio of 48 percent and an expected future growth rate of 8 percent. What should the firm's price to earnings ratio (P/E) be if the required rate of return on stocks of this type is 14 percent and what is the retention ratio of the firm?

	P/E ratio	Retention ratio	
A)	6.5	52%	❌
B)	6.5	48%	❌
C)	8.0	52%	✅

Explanation

P/E = (dividend payout ratio)/(k - g)

P/E = 0.48/(0.14 - 0.08) = 8

The retention ratio = (1 - dividend payout) = (1 - 0.48) = 52%

(Module 48.3, LOS 48.k)

An enterprise value model for equity valuation is *most accurately* described as a(n):

A) asset-based model. ❌

B) discounted cash flow model. ❌

C) multiplier model. ✅

Explanation

An enterprise value model is an example of a multiplier model. Enterprise value is analyzed as a multiple of revenue or earnings and compared among firms in a peer group.

(Module 48.1, LOS 48.b)

Question #99 of 140

Calculate the value of a common stock that last paid a $2.00 dividend if the required rate of return on the stock is 14 percent and the expected growth rate of dividends and earnings is 6 percent. What growth model is an example of this calculation?

	Value of stock	Growth model	
A)	$26.50	Gordon growth	✅
B)	$26.50	Supernormal growth	❌
C)	$25.00	Gordon growth	❌

Explanation

$2(1.06)/0.14 - 0.06 = $26.50.

This calculation is an example of the Gordon Growth Model also known as the constant growth model.

(Module 48.2, LOS 48.h)

Question #100 of 140

All else equal, an increase in a company's growth rate will *most likely* cause its P/E ratio to:

A) decrease. ❌

B) either increase or decrease. ❌

C) increase. ✅

Explanation

Increase in g: As g increases, the spread between k_e and g, or the P/E denominator, will decrease, and the P/E ratio will increase.

(Module 48.3, LOS 48.k)

Question #101 of 140

What is the value of a preferred stock that is expected to pay a $5.00 annual dividend per year forever if similar risk securities are now yielding 8%?

A) $60.00. ❌

B) $40.00. ❌

C) $62.50. ✅

Explanation

$5.00/0.08 = $62.50.

(Module 48.2, LOS 48.g)

Question #102 of 140

The capital asset pricing model can be used to estimate which of the following inputs to the dividend discount model?

A) The expected inflation rate. ❌

B) The required return on equity. ✅

C) The expected growth rate in dividends. ❌

Explanation

The capital asset pricing model is a rate of return model that can be used to estimate a stock's required rate of return, given the nominal risk-free rate, the market risk premium, and the stock's beta:

$$k = R_{nominal\ risk\ free\ rate} + (beta)(R_{market} - R_{nominal\ risk\ free\ rate}).$$

(Module 48.2, LOS 48.h)

Question #103 of 140

Use the following data to analyze a stock's price earnings ratio (P/E ratio):

- The stock's beta is 1.2.
- The dividend payout ratio is 60%.
- The stock's expected growth rate is 7%.
- The risk free rate is 6% and the expected rate of return on the market is 13%.

Using the dividend discount model, the expected P/E ratio of the stock is *closest* to:

A) 10.0.   ✗

B) 5.4.   ✗

C) 8.1.   ✓

Explanation

k = ER = Rf + Beta(RM – Rf) = 0.06 + (1.2)(0.13 – 0.06) = 0.144

Dividend payout ratio = 0.60

P/E = div payout / (k – g) = 0.6 / (0.144 – 0.07) = 8.1

(Module 48.3, LOS 48.k)

Question #104 of 140

The risk-free rate is 5%, and the expected return on the market index is 15%. A stock has a:

- Beta of 1.0.
- Dividend payout ratio of 40%.
- Return on equity (ROE) of 15%.

If the stock is expected to pay a $2.50 dividend, its intrinsic value using dividend discount model is *closest* to:

A) $27.77.   ✗

B) $41.67.   ✓

C) $53.33.   ✗

Explanation

$$E(R) = R_f + beta(R_M - R_f)$$

$$k = E(R) = 0.05 + 1(0.15 - 0.05) = 0.15$$

Retention (b) = (1 − dividend payout ratio) = 1 − 0.4 = 0.6

g = (ROE)(b) = (0.15)(0.6) = 0.09

$$\text{Value} = \frac{D_1}{k-g} = \frac{\$2.50}{0.15-0.09} = \$41.67$$

(Module 48.2, LOS 48.h)

Question #105 of 140

Question ID: 1574139

Which valuation method is *most appropriate* to estimate a floor value for a firm being liquidated?

A) Multiple based on fundamentals.   ✗

B) Asset-based.   ✓

C) Discounted cash flow.   ✗

Explanation

An asset-based model would likely be most appropriate to estimate a floor value for a firm entering liquidation. Future cash flows and firm fundamentals such as earnings or sales are not relevant for a firm that is not a going concern.

(Module 48.3, LOS 48.f)

Assuming a discount rate of 15%, the price of a preferred stock with a dividend of $10 is *closest* to:

A) $67. ✓

B) $150. ✗

C) $105. ✗

Explanation

The formula for the value of preferred stock with a perpetual dividend is: D / kp. In this case, 10.0 / 0.15 = $66.67.

(Module 48.2, LOS 48.g)

Yong Kim, CFA, buys a preferred stock that has a 6% dividend yield (defined as the ratio of the preferred dividend to the market price of the preferred stock). One year later, Kim sells the stock when it is selling at a 5% dividend yield. The preferred stock pays a fixed annual dividend, which Kim received right before selling. What rate of return did Kim realize on his investment?

A) 20%. ✗

B) 14%. ✗

C) 26%. ✓

Explanation

The dividend can be of any size. Suppose it is $1.00.

The purchase price is 1.00 / 0.06 = 16.667.

The sale price is 1.00 / 0.05 = 20.

Kim pays 16.667 and receives 20.00 plus a 1.00 dividend one year later. The rate of return is [(20 + 1)/16.667] − 1 = 26%.

(Module 48.2, LOS 48.g)

A firm has an expected dividend payout ratio of 50 percent, a required rate of return of 18 percent, and an expected dividend growth rate of 3 percent. The firm's price to earnings ratio (P/E) is:

A) 3.33. ✓

B) 6.66. ✗

C) 2.78. ✗

Explanation

P/E = .5 / (18%-3%) = 3.33.

(Module 48.3, LOS 48.k)

Question #109 of 140

An investor is considering acquiring a common stock that he would like to hold for one year. At the end of the year he expects to receive both $1.50 in dividends and $26 from the sale of the stock. What is the maximum price he should pay for the stock today to earn a 15 percent return?

A) $24.11. ✗

B) $27.30. ✗

C) $23.91. ✓

Explanation

With a required rate of return of 15%, the most the investor should pay for the stock today is (26 + 1.50) / 1.15 = $23.91.

(Module 48.2, LOS 48.h)

Question #110 of 140

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%. If an investor requires a 12% return on the stock, what is the value of the stock?

A) $28.57. ✓

B) $30.00. ❌

C) $31.78. ❌

Explanation

$P_0 = D_1 / k - g$

$D_1 = \$2$

$g = 0.05$

$k = 0.12$

$P_0 = 2 / 0.12 - 0.05 = 2 / 0.07 = \$28.57$

(Module 48.2, LOS 48.h)

Question #111 of 140

A company's required return on equity is 15% and its dividend payout ratio is 55%. If its return on equity (ROE) is 17% and its beta is 1.40, then its sustainable growth rate is *closest* to:

A) 6.75%. ❌

B) 7.65%. ✅

C) 9.35%. ❌

Explanation

Growth rate = (ROE)(Retention Ratio)

= (0.17)(0.45)

= 0.0765 or 7.65%

(Module 48.2, LOS 48.h)

Question #112 of 140

Use the following information and the dividend discount model to find the value of GoFlower, Inc.'s, common stock.

- Last year's dividend was $3.10 per share.
- The growth rate in dividends is estimated to be 10% forever.
- The return on the market is expected to be 12%.
- The risk-free rate is 4%.
- GoFlower's beta is 1.1.

A) $26.64.　　　　　　　　　　　　　　　　　　　　　　　❌

B) $34.95.　　　　　　　　　　　　　　　　　　　　　　　❌

C) $121.79.　　　　　　　　　　　　　　　　　　　　　　　✅

Explanation

The required return for GoFlower is 0.04 + 1.1(0.12 – 0.04) = 0.128 or 12.8%. The expect dividend is ($3.10)(1.10) = $3.41. GoFlower's common stock is then valued using the infinite period dividend discount model (DDM) as ($3.41) / (0.128 – 0.10) = $121.79.

(Module 48.2, LOS 48.h)

Question #113 of 140

Asset-based models are *most* appropriate when examining firms:

A) with the same stock prices.　　　　　　　　　　　　　　❌

B) that hold primarily liquid assets.　　　　　　　　　　　✅

C) with older assets compared to those with newer assets.　❌

Explanation

Asset-based analysis works best for firms that hold primarily tangible short-term assets and assets with readily available market values.

(Module 48.3, LOS 48.f)

Question #114 of 140

Donna Drake is interested in a stock that is expected to pay a dividend of $1.50 in one year, $1.75 in two years, and $2.05 in three years. Drake expects to sell the stock for $43.87 after three years, after which the dividend will grow at 7% annually. If Drake requires a 12% return on the stock, the price she is willing to pay today is *closest* to:

A) $34.   ✗

B) $36.   ✓

C) $38.   ✗

Explanation

Find the present values of the cash flows and add them together.

N = 1; I/Y = 12; FV = 1.50; CPT → PV = 1.34

N = 2; I/Y = 12; FV = 1.75; CPT → PV = 1.40

N = 3; I/Y = 12; FV = 2.05 + 43.87 = 45.92; CPT → PV = 32.68

stock price = $1.34 + $1.40 + $32.68 = $35.42

(Module 48.2, LOS 48.h)

Question #115 of 140

A firm pays an annual dividend of $1.15. The risk-free rate (RF) is 2.5%, and the total risk premium (RP) for the stock is 7%. What is the value of the stock, if the dividend is expected to remain constant?

A) $16.03.   ✗

B) $12.10.   ✓

C) $25.00.   ✗

Explanation

If the dividend remains constant, g = 0.

P = D_1 / (k-g) = 1.15 / (0.095 - 0) = $12.10

(Module 48.2, LOS 48.h)

Question #116 of 140

If the return on equity for a firm is 15% and the retention rate is 40%, the firm's sustainable growth rate is *closest* to:

A) 9%. ❌

B) 6%. ✅

C) 15%. ❌

Explanation

g = (RR)(ROE)

= (0.15)(0.40)

= 0.06 or 6%

(Module 48.2, LOS 48.h)

Question #117 of 140

Given the following information, compute the implied dividend growth rate.

- Profit margin = 10.0%
- Total asset turnover = 2.0 times
- Financial leverage = 1.5 times
- Dividend payout ratio = 40.0%

A) 12.0%. ❌

B) 18.0%. ✅

C) 4.5%. ❌

Explanation

Retention ratio equals 1 – 0.40, or 0.60.

Return on equity equals (10.0%)(2.0)(1.5) = 30.0%.

Dividend growth rate equals (0.60)(30.0%) = 18.0%.

(Module 48.2, LOS 48.h)

Question #118 of 140

Which of the following statements about the constant growth dividend discount model (DDM) in its application to investment analysis is *least* accurate? The model:

A) can't be applied when g > K. ❌

B) is best applied to young, rapidly growing firms. ✅

C) is inappropriate for firms with variable dividend growth. ❌

Explanation

The model is most appropriately used when the firm is mature, with a moderate growth rate, paying a constant stream of dividends. In order for the model to produce a finite result, the company's growth rate must not exceed the required rate of return.

(Module 48.2, LOS 48.i)

Question #119 of 140

Question ID: 1574011

Witronix is a rapidly growing U.S. company that has increased free cash flow to equity and dividends at an average rate of 25% per year for the last four years. The present value model that is *most* appropriate for estimating the value of this company is a:

A) Gordon growth model. ❌

B) multistage dividend discount model. ✅

C) single stage free cash flow to equity model. ❌

Explanation

A multistage model is the most appropriate model because the company is growing dividends at a higher rate than can be sustained in the long run. Though the company may be able to grow dividends at a higher-than-sustainable 25% annual rate for a finite period, at some point dividend growth will have to slow to a lower, more sustainable rate. The Gordon growth model is appropriate to use for mature companies that have a history of increasing their dividend at a steady and sustainable rate. A single stage free cash flow to equity model is similar to the Gordon growth model, but values future free cash flow to equity rather than dividends.

(Module 48.2, LOS 48.e)

Question #120 of 140

Question ID: 1574126

Gourmet and Company has the following information:

- Current market value = $250 million
- Current book value = $225 million
- Sales = $750 million
- Earnings = $75 million
- Cash flow = $125 million
- Stock price = $7.50

Which of the following statements regarding Gourmet and Company is *most* accurate?

A) The price/book ratio is 0.90. ❌

B) The price/sales ratio is 0.33. ✅

C) The price/earnings ratio is 33.3. ❌

Explanation

The price/sales ratio is $250/$750 = 0.33. Price/book = $250/$225 = 1.11.

Price/earnings = $250/$75 = 3.33.

(Module 48.3, LOS 48.k)

Question #121 of 140

If an analyst estimates the intrinsic value for a security that is different from its market value, the analyst should *most likely* take an investment position based on this difference if:

A) many analysts independently evaluate the security. ❌

B) the model used is not highly sensitive to its input values. ✅

C) the security lacks a liquid market and trades infrequently. ❌

Explanation

In general, an analyst can be more confident about an estimate of intrinsic value if the model used is not highly sensitive to changes in its inputs. If a large number of analysts follow a security, its market value is more likely to be a reliable estimate of its intrinsic value. A security that does not trade frequently or in a liquid market may remain mispriced for an extended time, and thus may not result in a profit within the investment horizon even if the analyst's estimate of intrinsic value is correct.

(Module 48.1, LOS 48.a)

An analyst gathered the following data:

- An earnings retention rate of 40%.
- An ROE of 12%.
- The stock's beta is 1.2.
- The nominal risk free rate is 6%.
- The expected market return is 11%.

Assuming next year's earnings will be $4 per share, the stock's current value is *closest* to:

A) $26.67. ❌

B) $45.45. ❌

C) $33.32. ✅

Explanation

Dividend payout = 1 – earnings retention rate = 1 – 0.4 = 0.6

$R_S = R_f + β(R_M − R_f) = 0.06 + 1.2(0.11 − 0.06) = 0.12$

g = (retention rate)(ROE) = (0.4)(0.12) = 0.048

$D_1 = E_1 ×$ payout ratio = $4.00 × 0.60 = $2.40

Price = $D_1 / (k − g) = $2.40 / (0.12 − 0.048) = $33.32

(Module 48.3, LOS 48.k)

Shareholders selling shares between the ex-dividend date and holder-of-record date:

A) do not receive the dividend, which is paid to the share buyer. ❌

B) do not receive the dividend, which stays with the company. ❌

C) receive the dividend. ✅

Explanation

The holder-of-record date is the date on which the shareholders of record are designated to receive the dividend. Shares sold on or after the ex-dividend date are sold without claim to the dividend, even if they are sold prior to the date of record. The dividend would be paid to the holder as of the close of trading on the day prior to the ex-dividend date.

(Module 48.1, LOS 48.d)

Question #124 of 140

Other things equal, the effect of a stock split on shareholder wealth is to:

A) leave it unchanged. ✓

B) decrease it. ✗

C) increase it. ✗

Explanation

Stock splits divide each existing share into multiple shares. Other things equal, the price of each share decreases proportionately to the number of shares created, resulting in no change in the owner's wealth.

(Module 48.1, LOS 48.c)

Question #125 of 140

A valuation model based on the cash flows that a firm will have available to pay dividends in the future is *best* characterized as a(n):

A) free cash flow to equity model. ✓

B) free cash flow to the firm model. ✗

C) infinite period dividend discount model. ✗

Explanation

Free cash flow to equity represents a firm's capacity to pay future dividends. A free cash flow to equity model estimates the firm's FCFE for future periods and values the stock as the present value of the firm's future FCFE per share.

(Module 48.2, LOS 48.e)

Assume a company has earnings per share of $5 and pays out 40% in dividends. The earnings growth rate for the next 3 years will be 20%. At the end of the third year the company will start paying out 100% of earnings in dividends and earnings will increase at an annual rate of 5% thereafter. If a 12% rate of return is required, the value of the company is *closest* to:

A) $92.90. ⊗

B) $55.70. ⊗

C) $102.80. ✓

Explanation

First, calculate the dividends in years 0 through 3: (We need D_3 to calculate the value in Year 2)

$$D_0 = (0.4)(5) = 2$$

$$D_1 = (2)(1.2) = 2.40$$

$$D_2 = (2.4)(1.2) = 2.88$$

$$D_3 = E_3 = 5(1.2)^3 = 8.64$$

Because D_3 will grow at a constant rate, we can use it to estimate a terminal value for the stock at t = 2:

$$P_2 = D_3 / (k - g) = 8.64 / (0.12 - 0.05) = \$123.43$$

Present value of the cash flows = value of stock = $2.4 / (1.12)^1 + 2.88 / (1.12)^2 + 123.43 / (1.12)^2 = 102.83$

(Module 48.2, LOS 48.h)

Which of the following is NOT an assumption of the constant growth dividend discount model (DDM)?

A) Dividend payout is constant. ⊗

B) ROE is constant. ⊗

C) The growth rate of the firm is higher than the overall growth rate of the economy. ✓

Explanation

Other assumptions of the DDM are: dividends grow at a constant rate and the growth rate continues for an infinite period.

(Module 48.2, LOS 48.i)

Question #128 of 140

Jaylin Company declares a dividend that will be paid on August 28. The holder-of-record date is August 16. Will an investor who buys Jaylin stock on August 15 receive this dividend?

A) No. ✓

B) Yes, because the purchase occurs before the payment date. ✗

C) Yes, because the purchase occurs before the holder-of-record date. ✗

Explanation

The stock will trade ex-dividend one or two business days before the holder-of-record date.

(Module 48.1, LOS 48.d)

Question #129 of 140

According to the earnings multiplier model, all else equal, as the required rate of return on a stock increases, the:

A) earnings per share will increase. ✗

B) P/E ratio will increase. ✗

C) P/E ratio will decrease. ✓

Explanation

According to the earnings multiplier model, the P/E ratio is equal to $P_0/E_1 = (D_1/E_1)/(k_e - g)$. As k_e increases, P_0/E_1 will decrease, all else equal.

(Module 48.3, LOS 48.k)

Question #130 of 140

Assuming all other factors remain unchanged, which of the following would *most likely* lead to a decrease in the market P/E ratio?

 A) An increase in the dividend payout ratio. ✖

 B) A rise in the stock risk premium. ✔

 C) A decline in the risk-free rate. ✖

Explanation

> P/E = (1 - RR)/(k - g)

To lower P/E: RR increases, g decreases and or k increases. Both a decline in the RF rate and a decline in the rate of inflation will reduce k. An increase in the stock's risk premium will increase k.

(Module 48.3, LOS 48.k)

Question #131 of 140

A company has 8 percent preferred stock outstanding with a par value of $100. The required return on the preferred is 5 percent. What is the value of the preferred stock?

 A) $100.00. ✖

 B) $152.81. ✖

 C) $160.00. ✔

Explanation

The annual dividend on the preferred is $100(.08) = $8.00. The value of the preferred is $8.00/0.05 = $160.00.

(Module 48.2, LOS 48.g)

The following data pertains to a common stock:

- It will pay no dividends for two years.
- The dividend three years from now is expected to be $1.
- Dividends are expected to grow at a 7% rate from that point onward.

If an investor requires a 17% return on this stock, what will they be willing to pay for this stock now?

A) $ 6.24. ❌

B) $ 7.30. ✅

C) $10.00. ❌

Explanation

> time line = $0 now; $0 in yr 1; $0 in yr 2; $1 in yr 3.

> $P_2 = D_3/(k - g) = 1/(.17 - .07) = \$10$

Note the math. The price is always one year before the dividend date.

Solve for the PV of $10 to be received in two years.

> FV = 10; n = 2; i = 17; compute PV = $7.30

(Module 48.2, LOS 48.h)

All else equal, if a firm's return on equity (ROE) increases, the stock's value as estimated by the constant growth dividend discount model (DDM) will *most likely*:

A) decrease. ❌

B) increase. ✅

C) not change. ❌

Explanation

Increase in ROE: ROE is a component of g. As g increases, the spread between k_e and g, or the P/E denominator, will decrease, and the P/E ratio will increase.

(Module 48.3, LOS 48.k)

The rationale for using dividend discount models to value equity is that the:

A) inputs are easily estimated and the model's estimates are robust. ✖

B) intrinsic value of a stock is the present value of its future dividends. ✔

C) model works well for the finite period of time over which dividends are paid. ✖

Explanation

The rationale for dividend discount models is that the fundamental or intrinsic value of a stock is the present value of all its future dividends. Dividend discount models can be applied to either a finite or infinite stream of dividends. There are many ways to calculate the inputs and the estimated stock values may vary significantly with small changes in the inputs.

(Module 48.2, LOS 48.e)

A stock has the following data associated with it:

- A required rate of return of 14%.
- A return on equity of 15%.
- An earnings retention rate of 40%.

The stock's justified price-to-earnings ratio is *closest* to:

A) 5.0. ✖

B) 6.7. ✖

C) 7.5. ✔

Explanation

$$P/E = \frac{\text{dividend payout ratio}}{k-g}$$

dividend payout ratio = 1 − retention ratio = 1 − 0.4 = 0.6

growth rate (g) = retention rate × ROE = 0.4 × 15% = 6%

$$P/E = \frac{0.6}{0.14-0.06} = 7.5$$

(Module 48.3, LOS 48.k)

Question #136 of 140

Using the one-year holding period and multiple-year holding period dividend discount model (DDM), calculate the change in value of the stock of Monster Burger Place under the following scenarios. First, assume that an investor holds the stock for only one year. Second, assume that the investor intends to hold the stock for two years. Information on the stock is as follows:

- Last year's dividend was $2.50 per share.
- Dividends are projected to grow at a rate of 10.0% for each of the next two years.
- Estimated stock price at the end of year 1 is $25 and at the end of year 2 is $30.
- Nominal risk-free rate is 4.5%.
- The required market return is 10.0%.
- Beta is estimated at 1.0.

The value of the stock if held for one year and the value if held for two years are:

	Year one	Year two
A)	$25.23	$29.79	✅
B)	$25.23	$35.25	❌
C)	$27.50	$35.25	❌

Explanation

First, we need to calculate the required rate of return. When a stock's beta equals 1, the required return is equal to the market return, or 10.0%. Thus, k_e = 0.10. *Alternative:* Using the capital asset pricing model (CAPM), k_e = R_f + Beta * (R_m – R_f) = 4.5% + 1 * (10.0% - 4.5%) = 4.5% + 5.5% = 10.0%.

Next, we need to calculate the dividends for years 1 and 2.

- D_1 = D_0 × (1 + g) = 2.50 × (1.10) = 2.75
- D_2 = D_1 × (1 + g) = 2.75 × (1.10) = 3.03

Then, we use the one-year holding period DDM to calculate the present value of the expected stock cash flows (assuming the one-year hold).

- P_0 = [D_1/ (1 + k_e)] + [P_1 / (1 + k_e)] = [$2.75 / (1.10)] + [$25.0 / (1.10)] = **$25.23.** *Shortcut:* since the growth rate in dividends, g, was equal to k_e, the present value of next year's dividend is equal to last year's dividend.

Finally, we use the multi-period DDM to calculate the return for the stock if held for two years.

- P_0 = [D_1/ (1 + k_e)] + [D_2/ (1 + k_e)^2] + [P_2 / (1 + k_e)^2] = [$2.75 / (1.10)] + [$3.03 / (1.10)^2] + [$30.0 / (1.10)^2] = **$29.79.** *Note:* since the growth rate in dividends, g, was equal to k_e, the present value of next year's dividend is equal to last year's dividend (for periods 1 and 2). Thus, a quick calculation would be 2.5 × 2 + $30.00 / (1.10)^2 = 29.79.

(Module 48.2, LOS 48.h)

Question #137 of 140

The last dividend paid on a common stock was $2.00, the growth rate is 5% and investors require a 10% return. Using the infinite period dividend discount model, calculate the value of the stock.

A) $42.00. ✅

B) $40.00. ❌

C) $13.33. ❌

Explanation

2(1.05) / (0.10 - 0.05) = $42.00

(Module 48.2, LOS 48.h)

The earnings multiplier model, derived from the dividend discount model, expresses a stock's P/E ratio (P_0/E_1) as the :

A) expected dividend in one year divided by the difference between the required return on equity and the expected dividend growth rate. ✗

B) expected dividend payout ratio divided by the difference between the required return on equity and the expected dividend growth rate. ✓

C) expected dividend payout ratio divided by the sum of the expected dividend growth rate and the required return on equity. ✗

Explanation

Starting with the dividend discount model $P_0 = D_1/(k_e - g)$, and dividing both sides by E_1 yields: $P_0/E_1 = (D_1/E_1)/(k_e - g)$

Thus, the P/E ratio is determined by:

- The expected dividend payout ratio (D_1/E_1).
- The required rate of return on the stock (k_e).
- The expected growth rate of dividends (g).

(Module 48.3, LOS 48.k)

Assume the following information for a stock:

Beta coefficient	= 1.50
Risk-free rate	= 6%
Expected rate of return on market	= 14%
Dividend payout ratio	= 30%
Expected dividend growth rate	= 11%

The estimated earnings multiplier (P/E ratio) is *closest* to:

A) 3.33. ✗

B) 4.29. ✓

C) 10.00. ✗

Explanation

P/E = D/E1 / (k – g)

D/E1 = Dividend payout ratio = 0.3

g = 0.11

k = 6 + (1.5)(14 – 6) = 18%

P/E = 0.3 / (0.18 – 0.11) = 0.3 / 0.07 = 4.29

(Module 48.3, LOS 48.k)

Question #140 of 140

An analyst gathered the following information about a company:

- The stock is currently trading at $31.00 per share.
- Estimated growth rate for the next three years is 25%.
- Beginning in the year 4, the growth rate is expected to decline and stabilize at 8%.
- The required return for this type of company is estimated at 15%.
- The dividend in year 1 is estimated at $2.00.

The stock is undervalued by approximately:

A) $0.00. ✖

B) $15.70. ✖

C) $6.40. ✔

Explanation

The high "supernormal" growth in the first three years and the decrease in growth thereafter signals that we should use a combination of the multi-period and finite dividend growth models (DDM) to value the stock.

Step 1: Determine the dividend stream through year 4

- D_1 = $2.00 (given)
- D_2 = $D_1 \times (1 + g)$ = 2.00 × (1.25) = $2.50
- D_3 = $D_2 \times (1 + g)$ = $2.50 × (1.25) = $3.13
- D_4 = $D_3 \times (1 + g)$ = $3.13 × (1.08) = $3.38

Step 2: Calculate the value of the stock at the end of year 3 (using D_4)

- P_3 = $D_4 / (k_e - g)$ = $3.38 / (0.15 – 0.08) = $48.29

Step 3: Calculate the PV of each cash flow stream at k_e = 15%, and sum the cash flows.
Note: We suggest you clear the financial calculator memory registers before calculating the value. The present value of:

- D_1 = **1.74** = 2.00 / $(1.15)^1$, or FV = -2.00, N = 1, I/Y = 15, PV = 1.74

- D_2 = **1.89** = 2.50 / $(1.15)^2$, or FV = -2.50, N = 2, I/Y = 15, PV = 1.89

- D_3 = **2.06** = 3.13 / $(1.15)^3$, or FV = -3.13, N = 3, I/Y = 15, PV = 2.06

- P_3 = **31.75** = 48.29 / $(1.15)^3$, or FV = -48.29, N = 3, I/Y = 15, PV = 31.75
- Sum of cash flows = 37.44.
- Thus, the stock is undervalued by 37.44 – 31.00 = approximately **6.40.**

Note: Future values are entered in a financial calculator as negatives to ensure that the PV result is positive. It does not mean that the cash flows are negative. Also, your calculations may differ slightly due to rounding. Remember that the question asks you to select the *closest* answer.

(Module 48.2, LOS 48.h)