

22

MARKET-BASED VALUA...
ENTERPRISE VALUE MULTIPLES

1. An analyst is preparing a presentation on "Interpreting PE ratios" and has the following data:

	Portfolio %	Stock PE
Stock AAA	60%	10
Stock BBB	40%	15

Which of the following is closest to the weighted harmonic mean of these two PE ratios?

- (A) 11.54.
(B) 11.98.
(C) 12.49.
2. The average return on equity (ROE) earnings normalization method relies on:
(A) the earnings yield.
(B) average ROE over the most recent cycle.
(C) average earnings per share (EPS) over the most recent cycle.
3. Calculate free cash flow to equity during 2x09 using the data extracted from the 2x09 accounts:
(A) \$90.7 million.
(B) \$94.0 million.
(C) \$120.0 million.
4. The growth assumption Pedroia uses in calculating his "Best Case Scenario" valuation are most suitable if Iliot is:
(A) a stable firm in a mature industry with a required return on equity of 4%.
(B) a stable firm in a mature industry with a required return on equity of 14%.
(C) a growing firm in an infant industry with a required return on equity of 14%.
5. Calculate the value of equity to the nearest \$1 million using a FCFE model and the cash flows / assumptions that Pedroia uses in his "FCF Valuation Using Forecasted Cash Flows" valuation.
(A) \$1,457 million.
(B) \$2,171 million.
(C) \$1,620 million.

CFA[®]

6. Which of the following is the normalized earnings figure for 2x10, which will be calculated by Pedroia using the average return on equity method?
- (A) \$2.63.
 - (B) \$2.72.
 - (C) \$2.59.
7. Which of the following is least likely to be a limitation of the predicted P/E used by Pedroia to calculate the terminal value in his "FCF Valuation Using Forecasted Cash Flows" valuation?
- (A) The predictive power of the estimated regression for a different time period is uncertain.
 - (B) The relationship between P/E and the fundamental variables examined will be static.
 - (C) Multicollinearity is often a problem in time series regressions such as the one Pedroia has used.
8. Which of the following errors has Pedroia made in back testing his stock screen?
- (A) His results are subject to survivorship bias.
 - (B) His results are likely to suffer from multicollinearity.
 - (C) His results are likely to suffer from look ahead bias.
9. What is the appropriate price-to-sales (P/S) multiple of a stock that has a retention ratio of 45%, a return on equity (ROE) of 14%, an earnings per share (EPS) of \$5.25, sales per share of \$245.54, an expected growth rate in dividends and earnings of 6.5%, and shareholders require a return of 11% on their investment?
- (A) 0.158.
 - (B) 0.227.
 - (C) 0.278.
10. An increase in return on equity (ROE) will cause a price-to-book (P/B) multiple to:
- (A) decrease.
 - (B) there is insufficient information to tell.
 - (C) increase.
11. An argument against using the price-to-earnings (P/E) valuation approach is that:
- (A) research shows that P/E differences are significantly related to long-run average stock returns.
 - (B) earnings power is the primary determinant of investment value.
 - (C) earnings can be negative.

CFA®

12. An analyst has gathered the following data about Jackson inc.

- Payout ratio = 60%.
- Expected growth rate in dividends = 6.7%.
- Required rate of return = 12.5%.

What will be the appropriate price-to-book value (PBV) ratio for Jackson, based on fundamentals?

- (A) 0.58.
- (B) 1.73.
- (C) 1.38.

13. An analyst is preparing a presentation on "Interpreting PE ratios" and has the following data:

	Portfolio %	Stock PE
Stock AAA	60%	10
Stock BBB	40%	15

Which of the following is the most appropriate measure for calculating the portfolio P/E?

- (A) Arithmetic average of the P/E's.
- (B) Weighted harmonic mean of the P/E's.
- (C) Geometric mean of the P/E's.

14. Alpha Software (AS) recently reported annual earnings per share (EPS) of \$1.75, which included an extraordinary loss of \$0.19 and an expense of \$0.10 related to acquisition costs during the accounting period, neither of which are expected to recur. Given that the most recent share price is \$65.00, what is a useful AS's trailing price to earnings (P/E) for valuation purposes?

- (A) 31.86.
- (B) 37.14.
- (C) 44.52.

15. The goal of normalizing earnings is to adjust for:

- (A) non-cash charges.
- (B) cyclical elements.
- (C) seasonal elements.

16. What is the price-to-sales (P/S) multiple for Firm A in the high-margin, low-volume strategy?

- (A) 2.00.
- (B) 0.13.
- (C) 2.18.

CFA[®]

17. What is the P/S multiple for Firm B in the low-margin, high-volume strategy?
- (A) 2.00.
 - (B) 0.60.
 - (C) 0.43.
18. An increase in which of the following variables will least likely result in a corresponding increase in the price-to-book value (PBV) ratio for a high-growth firm?
- (A) Growth rates in earnings.
 - (B) Payout ratios.
 - (C) Required rate of return
19. Which of the following statements regarding the P/E to growth (PEG) valuation approach is least accurate? The P/E to growth (PEG) valuation approach assumes that:
- (A) stocks with higher PEGs are more attractive than stocks with lower PEGs.
 - (B) there is a linear relationship between price to earnings (P/E) and growth.
 - (C) there are no risk difference among stocks.
20. A common pitfall in interpreting earnings yields in valuation is:
- (A) using negative earnings.
 - (B) using underlying earnings.
 - (C) look-ahead bias.
21. What is the justified leading price-to-earnings (P/E) multiple of a stock that has a retention ratio of 60% if the shareholders require a return of 16% on their investment and the expected growth rate in dividends is 6%?
- (A) 6.36.
 - (B) 4.00.
 - (C) 4.24.
22. At a regional security analysts conference, Sandeep Singh made the following comment: "A PEG ratio is a very useful valuation metric because it generates meaningful results for all equities, regardless of the rate of dividend growth." Is Singh correct?
- (A) No, because the PEG ratio generates highly questionable results for low-growth companies.
 - (B) Yes, because the expected dividend growth rate is cancelled out in the computation of the PEG ratio.
 - (C) Yes, because the computation of the PEG ratio does include the rate of expected dividend growth.

CFA[®]

23. If cash flow from operations (CFO) embeds financing-related flows, it should be adjusted by:
- (A) subtracting capital expenditures.
 - (B) adding (net interest outflow) \times (1 – tax rate).
 - (C) subtracting (net interest outflow) \times (1 – tax rate).
24. A common justification for using earnings yields in valuation is that:
- (A) earnings are more stable than dividends.
 - (B) negative earnings render P/E ratios meaningless and prices are never negative.
 - (C) earnings are usually greater than free cash flows
25. Barnes is contemplating the use of a price/earnings ratio to value a start-up medical technology firm. Which of the following is the most compelling reason not to use the P/E ratio?
- (A) P/E ratios for medical-technology firms with different specialties are not comparable.
 - (B) The company is likely to be unprofitable.
 - (C) Earnings per share are not a good determinant of investment value for medical-technology companies.
26. Based on their responses to Powell, which of the analysts is most likely concerned about earnings volatility?
- (A) Lincoln.
 - (B) Barnes.
 - (C) Bosley.
27. Barnes would be least likely to use EV/EBITDA ratio, rather than the P/E ratio, when analyzing a company that:
- (A) pays a dividend, and is likely to deliver little earnings growth.
 - (B) reports a lot of depreciation expense.
 - (C) has a different capital structure than most of its peers.
28. Barnes is considering the four methods previously described to analyze the small-cap stocks provided to her by Powell. For which method does Barnes provide the weakest justification?
- (A) The price/sales ratio.
 - (B) The mean P/E of Russell 2000 companies.
 - (C) The PEG ratio.

CFA[®]

29. The relative valuation model known as the PEG ratio is equal to:
- (A) $P/E \times \text{earnings}$.
 - (B) $\text{earnings per share growth rate} / \text{price-to-earnings}$.
 - (C) $\text{price-to-earnings (P/E)} / \text{earnings per share (EPS) growth rate}$.
30. Analyst Ariel Cunningham likes using the price/earnings ratio for valuation purposes because studies have shown it is very effective at identifying undervalued stocks. However, she has one main problem with the statistic — it doesn't work when a company loses money. So Cunningham is considering switching to a different core valuation metric. Given Cunningham's rationale for using the price/earnings ratio, which option would be her best alternative?
- (A) Price/cash flow.
 - (B) Price/sales.
 - (C) Price/book.
31. The definition of a PEG ratio is price to earnings (P/E):
- (A) divided by average historical earnings growth rate.
 - (B) divided by the average growth rate of the peer group.
 - (C) divided by the expected earnings growth rate.
32. Enhanced Systems, Inc., has a price to book value (P/B) of five while the median P/B of a peer group of companies within the industry is five. Based on the method of comparables, an analyst would most likely conclude that ESI should be:
- (A) bought as an undervalued stock.
 - (B) sold or sold short as an overvalued stock.
 - (C) viewed as a properly valued stock.
33. Which of the following is a disadvantage to using EV/EBITDA?
- (A) Since FCFF captures the amount of capital expenditures, it is more strongly linked with valuation theory than EBITDA.
 - (B) EBITDA is useful for valuing capital-intensive businesses with high levels of depreciation and amortization.
 - (C) EBITDA is usually positive even when EPS is not.
34. Which of the following statements about cyclical firms is least accurate?
- (A) The problems encountered when using the price-to-earnings (P/E) multiples of cyclical firms can be completely eliminated by using average or normalized earnings.
 - (B) The price-to-earnings (P/E) multiple of a cyclical firm normally peaks at the depths of recession and bottoms out at the peak of economic boom.
 - (C) Cyclical firms have volatile earnings, and their price-to-earnings (P/E) multiple is not very useful for valuation.

CFA®

35. A decrease in the earnings retention rate will cause a price-to-sales (P/S) multiple to:
- (A) remain the same.
 - (B) increase.
 - (C) decrease.
36. Precision Tools is expected to have earnings per share (EPS) of \$5.00 per share in five years, a dividend per share of \$2.00, a cost of equity of 12%, and a long-term expected growth rate of 5%. What is the terminal trailing price-to-earnings (P/E) ratio in five years?
- (A) 7.14.
 - (B) 9.00.
 - (C) 6.00.
37. Which of the following price multiples is most severely damaged by international accounting differences?
- (A) Enterprise value to earnings before interest, taxes, depreciation, and amortization (EV/EBITDA).
 - (B) Price to free cash flow to equity (P/FCFE).
 - (C) Price to cash flow from operations (P/CFO).
38. A method commonly used to normalize earnings is the method of:
- (A) comparables.
 - (B) historical average earnings per share (EPS).
 - (C) average return on assets.
39. An analyst gathers the following information for ABC Industries:

Market Value of Debt	\$110 million
Market Value of Equity	\$90 million
Book Value of Debt	\$100 million
Book Value of Equity	\$50 million
EBITDA	\$75 million

The EV/EBITDA is closest to:

- (A) 2.67.
- (B) 2.13.
- (C) 2.00.

CFA[®]

40. Two security analysts, Ramon Long and Sri Beujeau, disagree about certain aspects of the PEG ratio. Long argues that: "unlike typical valuation metrics that incorporate dividend discounting, the PEG ratio is unique because it generates meaningful results for firms with negative expected earnings-growth." Is Long correct?
- (A) No, because the PEG ratio generates meaningless results for negative earnings-growth companies.
 - (B) Yes, because the computation of the PEG ratio does not use the rate of expected earnings growth.
 - (C) Yes, because the expected earnings-growth rate is cancelled out in the computation of the PEG ratio.
41. Shares of TKR Construction (TKR) are selling for \$50. Earnings for the last 12 months were \$4.00 per share. The average trailing P/E ratio for firms in TKR's industry is 15. The appropriate WACC is 12%, and the risk-free rate is 8%. Assume a growth rate of 0%. Using the method of comparables, what price is indicated for TKR?
- (A) \$50.00.
 - (B) \$60.00.
 - (C) \$33.33.
42. At a CFA society function, Robert Chan comments to Li Chiao that Xanedu Industries' expected dividend growth rate is 5.5%, dividend payout ratio (g) is 40%, and required return on equity (r) is 12%. Based on a justified leading P/E ratio compared to an actual P/E ratio of 8.0, Xanedu Industries is most likely:
- (A) overvalued.
 - (B) undervalued.
 - (C) correctly valued.
43. What is the justified trailing price-to-earnings (P/E) multiple of a stock that has a payout ratio of 40% if the shareholders require a return of 16% on their investment and the expected growth rate in dividends is 6%?
- (A) 4.24.
 - (B) 4.00.
 - (C) 6.36.

CFA®

44. Margin and Sales Trade-off for CVR, Inc. and Home, Inc., for Next Year

Firm	Strategy	Retention Rate	Profit Margin	Sales/Book Value (SBV) of Equity
CVR, Inc.	High Margin / Low Volume	20%	8%	1.25
CVR, Inc.	Low Margin / High Volume	20%	2%	4.00
Home, Inc.	High Margin / Low Volume	40%	9%	2.00
Home, Inc.	Low Margin / High Volume	40%	1%	20.0

Note: CVR, Inc., has a book value of equity of \$80 and a required rate of return of 10%. Home, Inc., has a book value of equity of \$100 and a required rate of return of 11%.

If Home, Inc., has a required return for shareholders of 11%, what is its appropriate leading price-to-sales (P_0 / S_1) multiple if the firm undertakes the low margin/high volume strategy?

- (A) 0.20.
- (B) 1.00.
- (C) 0.80.

45. In interpreting the standardized unexpected earnings (SUE) momentum measure, it can be concluded that a given size forecast error is:

- (A) scaled by the earnings surprise.
- (B) more meaningful the larger the historical size of forecast errors.
- (C) more meaningful the smaller the historical size of forecast errors.

46. Herb McClain tells Cammy Oren that Kline Industries' expected dividend growth rate is 4.0%, ROE is 14%, and required return on equity (r) is 10%. Based on a justified P/B ratio compared to a P/B ratio (based on market price per share) of 1.55, Kline Industries is most likely:

- (A) undervalued.
- (B) correctly valued.
- (C) overvalued.

47. Using the P/E ratio with normalized earnings, Yantra appears to be more attractively valued under:

- (A) Method 1.
- (B) Method 2.
- (C) Neither method as they result in the same conclusion.

CFA®

48. Using justified trailing price-to-sales and price-to-book ratios based on forecasted fundamentals, Yantra appears to be:
- (A) undervalued.
 - (B) overvalued.
 - (C) the results are mixed.
49. Using justified trailing price-to-cash flow ratio and dividend yield based on forecasted fundamentals, Yantra appears to be:
- (A) undervalued.
 - (B) overvalued.
 - (C) the results are mixed.
50. If the appropriate adjustments to the five justified ratios are implemented following the launch of the new product line at Yantra, then:
- (A) all five ratios will decline.
 - (B) four ratios will decline.
 - (C) three ratios will decline.
51. In relation to Arda, Struma, and Tundzha, Beyan should opt for:
- | Arda | Struma | Tundzha |
|---------|----------|---------|
| (A) P/B | norm P/E | P/E |
| (B) P/B | norm P/E | P/S |
| (C) P/E | P/S | P/E |
52. In relation to the companies in the marine navigation sector, Nunca is:
- (A) undervalued relative to Nanuk.
 - (B) overvalued relative to Nanuk.
 - (C) trading at premium due to its superior fundamentals.
53. Enhanced Systems, Inc., (ESI) has a price to book value (P/B) of four while the median P/B of the stock market overall is three, and the median P/B of companies within the industry is six. Based on the method of comparables, an analyst would most likely conclude that ESI:
- (A) is of indeterminate relative value, due to conflicting metrics.
 - (B) should be sold because it is an overvalued stock.
 - (C) should be purchased because it is an undervalued stock.

CFA®

54. An analyst begins an equity analysis of Company A by noting the following ratios from three companies in the same industry:

	EPS	PE
Company A	\$1.60	10.0
Company B	\$2.10	12.5
Company C	\$5.80	13.0

This analyst is most likely using:

- (A) the method of comparables.
 (B) technical analysis.
 (C) the method of forecasted fundamentals.
55. Glad Tidings Gifts (GTG) recently reported annual earnings per share (EPS) of \$2.25, which included an extraordinary loss of \$0.17 and an expense of \$0.12 related to acquisition costs during the accounting period, neither of which are expected to recur. Given that the most recent share price is \$50.00, what is a useful GTG's trailing price to earnings (P/E) for valuation purposes?
 (A) 22.22.
 (B) 19.69.
 (C) 25.51.
56. Which of the following factors is a source of differences in cross-border valuation comparisons?
 (A) Accounting methods.
 (B) Comparative advantage.
 (C) Intra-country market indicators.
57. Which of the following is NOT an advantage of using price-to-book value (PBV) multiples in stock valuation?
 (A) PBV ratios can be compared across similar firms if accounting standards are consistent.
 (B) Book values are very meaningful for firms in service industries.
 (C) Book value is often positive, even when earnings are negative.
58. An analyst has gathered the following data about the Garber Company.
- Payout Ratio = 60%.
 - Expected Return on Equity = 16.75%.
 - Required rate of return = 12.5%.
- What will be the appropriate price-to-book value (PBV) ratio for the Garber Company based on return differential?
 (A) 1.73.
 (B) 0.58.
 (C) 1.38.

CFA®

59. At a CFA society function, Andrew Caza comments to Nanda Dhople that the expected dividend growth rate (g) for Zeron Enterprises Inc (ZEI) is expected increase 0.5% from 6% to 6.5%. Caza claims that since ZEI will maintain their historic dividend payout ratio (g) of 50% and cost of equity (k) of 10%, ZEI's P/E ratio will also increase by 0.5%. Is Caza correct?
- (A) Yes, ZEI's P/E ratio will increase by approximately 0.5%.
 (B) No, ZEI's P/E ratio will increase by approximately 14.32%.
 (C) No, ZEI's P/E ratio will decrease by approximately 14.32%.
60. An increase in growth will cause a price to cash flow multiple to:
- (A) increase.
 (B) there is insufficient information to tell.
 (C) decrease.
61. Which of the following statements about the method of forecasted fundamentals in price multiple valuation is most accurate?
- (A) It relates multiples to company fundamentals using a discounted cash flow (DCF) model.
 (B) It relies on the Law of One Price.
 (C) It values an asset relative to a benchmark value of the multiple.
62. An analyst is valuing a company with a dividend payout ratio of 0.65, a beta of 0.72, and an expected earnings growth rate of 0.05. A regression on comparable companies produces the following equation:
 Predicted price to earnings (P/E) = 7.65 + (3.75 x dividend payout) + (15.35 x growth) – (0.70 x beta)
 What is the predicted P/E using the above regression?
- (A) 11.39.
 (B) 10.35.
 (C) 7.65.
63. Leslie Singer comments to Robert Chan that Dreamtime Industries' expected dividend growth rate is 5.0%, ROE is 14%, and required return on equity (r) is 10%. Based on a justified P/B ratio compared to a P/B ratio (based on market price per share) of 1.60, Dreamtime Industries is most likely:
- (A) undervalued.
 (B) overvalued.
 (C) correctly valued.
64. An increase in profit margin will cause a price-to-sales (P/S) multiple to increase if:
- (A) there is insufficient information to tell.
 (B) the growth rate in sales does not decrease proportionately.
 (C) the required rate of return increases.

CFA[®]

65. An analyst is calculating the weighted harmonic mean P/E ratio of a 2-stock portfolio. Stocks AAA and BBB have prices of \$12 and \$15, respectively, and EPS of \$1 and \$2, respectively. Which of the following is the weighted harmonic mean P/E of the portfolio closest to?
- (A) 9
(B) 9.75
(C) 9.23
66. Calculate free cash flow to equity (FCFE):
- (A) 37.
(B) 127.
(C) 57.
67. Using the cash flow statement approach calculate the aggregate accruals ratio:
- (A) 11.5%.
(B) 5.7%.
(C) 10.2%.
68. Using the leading P/E ratio of 4.29, determine whether Retro Inc. is most likely under/overvalued based on its PEG ratio:
- (A) Overvalued because its PEG ratio is 3.46.
(B) Undervalued because its PEG ratio is 0.29.
69. Regarding the Cery's comments on enterprise value multiples which are most likely correct:
- | | Comment 1 | Comment 2 |
|-----|-----------|-----------|
| (A) | Correct | Correct |
| (B) | Correct | Incorrect |
| (C) | Incorrect | Incorrect |
70. A firm has a payout ratio of 40%, a profit margin of 7%, an estimated growth rate of 10%, and its shareholders require a return of 14% on their investment. Based on these fundamentals, a reasonable estimate of the appropriate price-to-sales ratio for the firm (based on trailing sales) is:
- (A) 0.77.
(B) 0.56.
(C) 0.70.

CFA[®]

71. A justified price multiple is the:
- (A) warranted or intrinsic price multiple.
 - (B) multiple implied by the market price.
 - (C) multiple implied by historical growth.
72. At a CFA society function, Robert Chan comments to Li Chiao that the expected dividend growth rate for Xanadu Industries has decreased 0.5% from 6.0% to 5.5%. Chan claims that since Xanadu will maintain their historic dividend payout ratio of 40% and required return on equity (r) of 12%, Xanadu's justified leading P/E ratio based on forecasted fundamentals will also decrease by 0.5%. Is Chan correct?
- (A) No, Xanadu's justified leading P/E ratio will increase by approximately 7.8%.
 - (B) Yes, Xanadu's justified leading P/E ratio will increase by approximately 0.5%.
 - (C) No, Xanadu's justified leading P/E ratio will decrease by approximately 7.8%.
73. The following data was available for Morris, Inc., for the year ending Dec. 31, 2001:
- Sales per share = \$150.
 - Earnings per share = \$1.75.
 - Return on Equity (ROE) = 16%.
 - Required rate of return = 12%.
- If the expected growth rate in dividends and earning is 4%, what will the appropriate price-to-sales (P/S) multiple be for Morris?
- (A) 0.114.
 - (B) 0.109.
 - (C) 0.037.
74. The trailing price-to-earnings (P/E) ratio is defined as:
- (A) price to next period's expected earnings.
 - (B) price to most recent earnings.
 - (C) the average P/E over the last five years.
75. An analyst begins an equity analysis of Company A by estimating future cash flows, discounting them back to the present, and dividing the result by the outstanding number of shares. This analyst is most likely using the:
- (A) technical analysis.
 - (B) the method of forecasted fundamentals.
 - (C) the method of comparables.

CFA[®]

76. The price-to-book value (PBV) ratio for a high-growth firm will:
- (A) increase as the growth rate in either the high-growth or stable-growth period increases.
 - (B) increase as the growth rate in the high-growth period increases and decrease as the growth rate in the stable-growth period increases.
 - (C) increase as the growth rate in either the high-growth or stable-growth period decreases.
77. Proprietary Technologies, Inc., (PTI) has a leading price-to-earnings (P/E) ratio of 38 while the median leading P/E of a peer group of companies within the industry is 28. Based on the method of comparables, an analyst would most likely conclude that PTI should be:
- (A) sold or sold short as an overvalued stock.
 - (B) viewed as a properly valued stock.
 - (C) bought as an undervalued stock.
78. An analyst focusing mostly on financial stocks is likely to prefer valuing stocks via the:
- (A) price/book ratio.
 - (B) price/sales ratio.
 - (C) dividend yield.
79. Which of the following valuation approaches is based on the rationale that stock values differ due to differences in the expected values of variables such as sales, earnings, or related growth rates?
- (A) Method of comparables.
 - (B) Method of forecasted fundamentals.
 - (C) Free cash flow to the firm.
80. The Lewis Corp. had revenue per share of \$300 in 2001, earnings per share of \$4.50, and paid out 60% of its earnings as dividends. If the return on equity (ROE) and required rate of return of Lewis are 20% and 13% respectively, what is the appropriate price/sales (P/S) multiple for Lewis?
- (A) 0.12.
 - (B) 0.18.
 - (C) 0.19.
81. A firm is better valued using the discounted cash flow approach than the P/E multiples approach when:
- (A) expected growth rate is very high.
 - (B) dividend payout is low.
 - (C) earnings per share are negative.

CFA[®]

82. The observation that negative price to earnings (P/E) ratios are meaningless and prices are never negative is used to justify which valuation approach?
- (A) Dividend yield.
 - (B) Earnings yield.
 - (C) Dividend discount model.
83. The net impact of an increase in payout ratio on price-to-book value (PBV) ratio cannot be determined because it might also:
- (A) decrease the market value of the firm.
 - (B) decrease required rate of return.
 - (C) decrease expected growth.
84. The value of a firm, calculated using the discounted cash flow (DCF) method, will be closest to the valuation using P/E multiples when P/E multiples are estimated using:
- (A) P/E multiples of comparable firms.
 - (B) fundamental data.
 - (C) historical P/E multiples.
85. A common price to earnings (P/E) based method for estimating terminal value in multi-stage models is the:
- (A) fundamentals approach.
 - (B) P/E to growth (PEG) approach.
 - (C) dividend yield approach.
86. Which of the following are advantages of using EV/EBITDA?
- (A) EV/EBITDA ignores how different revenue recognition policies affect CFO.
 - (B) If working capital is growing, EBITDA will be larger than CFO.
 - (C) EBITDA is useful for valuing capital-intensive businesses with high levels of depreciation and amortization.
87. Proprietary Technologies, Inc., (PTI) has a leading price-to-earnings (P/E) ratio of 28 while the median leading P/E of a peer group of companies within the industry is 28. Based on the method of comparables, an analyst would most likely conclude that PTI should be:
- (A) bought as an undervalued stock.
 - (B) viewed as a properly valued stock.
 - (C) sold or sold short as an overvalued stock.

CFA[®]

88. Which of the following statements about the method of comparables in price multiple valuation is CORRECT?
- (A) It relates multiples to company fundamentals using a discounted cash flow (DCF) model.
 - (B) It assumes that cash flows are related to fundamentals.
 - (C) It values an asset relative to a benchmark value of the multiple.
89. What is the appropriate justified trailing price-to-earnings (P/E) multiple of a stock that has a payout ratio of 40% if shareholders require a return of 15% on their investment and the expected growth rate in dividends is 5%?
- (A) 4.20.
 - (B) 6.30.
 - (C) 3.80.
90. An analyst is valuing a company with a dividend payout ratio of 0.35, a beta of 1.45, and an expected earnings growth rate of 0.08. A regression on comparable companies produces the following equation:
Predicted price to earnings (P/E) = 7.65 + (3.75 x dividend payout) + (15.35 x growth) – (0.70 x beta)
What is the predicted P/E using the above regression?
- (A) 9.18.
 - (B) 11.21.
 - (C) 7.65.
91. Which of the following factors is NOT a source of differences in cross-border valuation comparisons?
- (A) Intra-country market indicators.
 - (B) Growth opportunities.
 - (C) Cultures.
92. Robert Chan comments to Leslie Singer that Converted Industries' expected dividend growth rate is 5.0%, dividend payout ratio (g) is 45%, and required return on equity (r) is 10%. Based on a justified trailing P/E ratio compared to the stock's trailing P/E ratio at market of 9.0, Converted Industries is most likely:
- (A) overvalued.
 - (B) undervalued.
 - (C) correctly valued.

CFA[®]

93. An argument for using the price-to-earnings (P/E) valuation approach is that:
- (A) research shows that P/E differences are significantly related to long-run average stock returns.
 - (B) earnings can be negative.
 - (C) earnings volatility facilitates interpretation.
94. The multiple indicated by applying the discounted cash flow (DCF) model to a firm's fundamentals is necessarily the:
- (A) justified price multiple.
 - (B) same as the average industry multiple.
 - (C) result of calculating retention/(required rate of return – growth) for the overall market.
95. An analyst is valuing a company with a dividend payout ratio of 0.55, a beta of 0.92, and an expected earnings growth rate of 0.07. A regression on comparable companies produces the following equation:
Predicted price to earnings (P/E) = 7.65 + (3.75 x dividend payout) + (15.35 x growth) – (0.70 X beta)
What is the predicted P/E using the above regression?
- (A) 11.43.
 - (B) 10.14.
 - (C) 7.65.
96. Underlying earnings may be defined as earnings:
- (A) that exclude non-recurring components.
 - (B) net of capital expenditures needed to keep the business productive.
 - (C) that include non-recurring components.
97. Which of the following explanations is least likely to explain why Jenkins' stock picks underperform?
- (A) Large stocks have an outsized effect on the benchmark data.
 - (B) She is using the mean rather than the median valuation as a benchmark.
 - (C) Many stocks in the benchmark group are mispriced.
98. Which valuation ratio is least appropriate for comparing Massive and Mouse?
- (A) Enterprise value/EBITDA because Massive and Mouse have very different debt levels.
 - (B) Price/book because Massive is larger than Mouse.
 - (C) Price/cash flow because cash flows for small companies can be extremely volatile.

CFA[®]

99. Mouse & Associates is cheaper than Massive Tech as measured by:
- (A) the price/sales ratio and the dividend yield.
 - (B) the earnings yield but not the price/book.
 - (C) the price/sales ratio and the price/earnings ratio.
100. The price/cash flow ratio of Massive Tech, where cash flow is defined as earnings plus noncash charges, is closest to:
- (A) 16.67.
 - (B) 9.65.
 - (C) 7.89.
101. Which of the following is NOT a common momentum valuation indicator?
- (A) Relative strength.
 - (B) Dividend yield.
 - (C) Earnings surprise.
102. An increase in growth will cause a price-to-earnings (P/E) multiple to:
- (A) decrease.
 - (B) increase.
 - (C) there is insufficient information to tell.
103. Earnings before interest, taxes, depreciation, and amortization (EBITDA) is best suited as a measure of:
- (A) equity value.
 - (B) total company value.
 - (C) debt capacity.
104. Which of the following measures of cash flow is most closely linked with valuation theory?
- (A) Free cash flow to equity (FCFE).
 - (B) Earnings before interest, taxes, depreciation, and amortization (EBITDA).
 - (C) Cash flow from operations (CFO).
105. A firm's return on equity (ROE) is 15%, its required rate of return is 12%, and its expected growth rate is 7%. What is the firm's justified price to book value (P/B) based on these fundamentals?
- (A) 0.63.
 - (B) 1.71.
 - (C) 1.60.

CFA®

106. P/E multiples are often computed using the average of the multiples of comparable firms, because:

- (A) it provides the most accurate results.
- (B) it is conceptually very straightforward.
- (C) is very easy to find comparable firms that have the same business mix and risk and growth profiles.

107. An analyst gathered the following data for TRK Construction [all amounts in Swiss francs (Sf)]:

Recent share price	Sf 22.00
Shares outstanding	40 million
Market value of debt	Sf 140 million
Cash and marketable securities	Sf 55 million
Investments	Sf 300 million
Net income	Sf 140 million
Interest expense	Sf 7 million
Depreciation and amortization	Sf 10 million
Taxes	Sf 56 million

The EV/EBITDA ratio for TRK Construction is closest to:

- (A) 3.49x.
- (B) 3.12x.
- (C) 2.52x.

108. What is the appropriate leading price-to-earnings (P/E) multiple of a stock that has a projected payout ratio of 40% if shareholders require a return of 15% on their investment and the expected growth rate in dividends is 5%?

- (A) 4.00.
- (B) 6.30.
- (C) 13.20.

109. All other variables held constant, the justified price-to-book multiple will decrease with a decrease in:

- (A) payout ratio.
- (B) expected growth rate.
- (C) required rate of return

CFA®

110. The warranted or intrinsic price multiple is called the:

- (A) justified price multiple.
- (B) multiple implied by the market price.
- (C) multiple implied by historical growth.

111. Which of the following is a disadvantage of using the price-to-book value (PBV) ratio?

- (A) Book values are affected by accounting standards, which may vary across firms and countries.
- (B) Firms with negative earnings cannot be evaluated with the PBV ratios.
- (C) Book value may not mean much for manufacturing firms with significant fixed costs.

112. An analyst has gathered the following fundamental data:

	Firm A	Firm B	Firm C	Firm D
Payout Ratio	75%			
Required rate of Return	12%	12%	12%	12%
Return on Equity (ROE)	20%	15%	30%	14%
Price/ Book Value (PBV) Ratio		3.00	0.70	3.50

What is the PBV ratio for Firm A?

- (A) 1.25.
- (B) 0.71.
- (C) 2.14.

113. An argument for using the price-to-earnings (P/E) valuation approach is that:

- (A) management discretion increases the reliability of the ratio.
- (B) earnings can be negative.
- (C) earnings power is the primary determinant of investment value.

114. Consider the statement: "Unlike many valuation metrics that incorporate dividend discounting, the PEG ratio may be used to value firms with zero expected dividend growth prospects." Is this statement correct?

- (A) Yes, because the computation of the PEG ratio does not use the rate of expected dividend growth.
- (B) No, because the PEG ratio is undefined for zero-growth companies.
- (C) Yes, because the expected dividend growth rate is cancelled out in the computation of the PEG ratio.

CFA[®]

115. A firm's return on equity (ROE) is 14%, its required rate of return is 10%, and its expected growth rate is 8%. What is the firm's justified price-to-book value (P/B) based on these fundamentals?
- (A) 3.00.
 - (B) 2.00.
 - (C) 2.75.
116. For which of the following firms is the Price/Earnings to Growth (PEG) ratio most appropriate for identifying undervalued or overvalued equities?
- Firm A: Expected dividend growth = 6%; Cost of equity = 12%; price-to-earnings (P/E) = 12.
- Firm B: Expected dividend growth = -6%; Cost of equity = 12%; price-to-earnings (P/E) = 12.
- Firm C: Expected dividend growth = 1%; Cost of equity = 12%; price-to-earnings (P/E) = 12.
- (A) Firm C.
 - (B) Firm B.
 - (C) Firm A.
117. An argument against using the price-to-sales (P/S) valuation approach is that:
- (A) P/S ratios do not express differences in cost structures across companies.
 - (B) P/S ratios are not as volatile as price-to-earnings (P/E) multiples
 - (C) sales figures are not as easy to manipulate or distort as earnings per share (EPS) and book value.
118. A firm has a return on equity (ROE) of 18%, an estimated growth rate of 13%, and its shareholders require a return of 17% on their investment. Based on these fundamentals, a reasonable estimate of the appropriate price-to-book value ratio for the firm is:
- (A) 1.58.
 - (B) 1.25.
 - (C) 2.42.
119. Good Sports, Inc., (GSI) has a leading price-to-earnings (P/E) ratio of 12.75 and a 5-year consensus growth rate forecast of 8.5%. What is the firm's P/E to growth (PEG) ratio?
- (A) 0.67.
 - (B) 150.00.
 - (C) 1.50.

CFA[®]

120. Enhanced Systems, Inc., (ESI) has a leading price to sales (P/S) of 0.18 while the median leading P/S of a peer group of companies within the industry is 0.10. Based on the method of comparables, an analyst would most likely conclude that ESI should be:
- (A) bought as an undervalued stock.
 - (B) sold or sold short as an overvalued stock.
 - (C) bought on margin as an undervalued stock.
121. One disadvantage of using the price/sales (P/S) multiple for stock valuation is that:
- (A) sales are relatively stable and might not change even though earnings and value might change significantly.
 - (B) profit margins are not consistent across firms within an industry.
 - (C) P/S multiple does not provide a framework to evaluate the effects of corporate policy decisions and price changes.
122. What is the justified trailing price-to-earnings (P/E) multiple of a stock that has a payout ratio of 65% if the shareholders require a return of 10% on their investment and the expected growth rate in dividends is 6%?
- (A) 17.23.
 - (B) 16.25.
 - (C) 9.28.
123. Proprietary Technologies, Inc., (PTI) has a leading price-to-earnings (P/E) ratio of 28 while the median leading P/E of a peer group of companies within the industry is 38. Based on the method of comparables, an analyst would most likely conclude that PTI should be:
- (A) sold short as an overvalued stock.
 - (B) sold as an overvalued stock.
 - (C) bought as an undervalued stock.
124. Industrial Light had earnings per share (EPS) of \$5.00 past year, a dividend per share of \$2.50, a cost of equity of 12%, and a long-term expected growth rate of 5%. What is the trailing price-to-earnings (P/E) ratio?
- (A) 7.14.
 - (B) 7.50.
 - (C) 3.75.
125. Which of the following is a disadvantage of using price-to-sales (P/S) multiples in stock valuations?
- (A) It is difficult to capture the effects of changes in pricing policies using P/S ratios.
 - (B) P/S multiples are more volatile than price-to-earnings (P/E) multiples.
 - (C) The use of P/S multiples can miss problems associated with cost control.

CFA®

126. Margin and Sales Trade-off for CVR, Inc. and Home, Inc., for Next Year

Firm	Strategy	Retention Rate	Profit Margin	Sales/Book Value (SBV) of Equity
CVR, Inc.	High Margin / Low Volume	20%	8%	1.25
CVR, Inc.	Low Margin / High Volume	20%	2%	4.00
Home, Inc.	High Margin / Low Volume	40%	9%	2.00
Home, Inc.	Low Margin / High Volume	40%	1%	20.0

(Note: CVR, Inc., has a book value of equity of \$80 and a required rate of return of 10%. Home, Inc., has a book value of equity of \$100 and a required rate of return of 11%.)

If CVR, Inc., has a required return for shareholders of 10%, what is its appropriate leading price-to-sales (P/S) multiple if the firm undertakes the high margin/low volume strategy?

- (A) 0.80.
- (B) 1.46.
- (C) 0.20.

127. Bill Whelan and Chad Delft are arguing about the relative merits of valuation metrics.

Whelan: "My ratio is less volatile than most, and it works particularly well when I look at stocks in cyclical industries."

Delft: "The problem with your ratio is that it doesn't reflect differences in the cost structures of companies in different industries. I like to use a metric that strips out all the fluff that distorts true company performance."

Whelan: "People can't even agree how to calculate your ratio."

Which valuation metric do the analysts most likely prefer?

Whelan

Delft

- (A) Price/sales Price/cash flow
- (B) Price/cash flow Price/book
- (C) Price/book EV/EBITDA

128. An analyst gathered the following data for TRK Construction [all amounts in Swiss francs (Sf)]:

Recent share price	Sf 25.00
Shares outstanding	40 million
Market value of debt	Sf 130 million
Cash and marketable securities	Sf 65 million
Investments	Sf 250 million
Net income	Sf 150 million
Interest expense	Sf 8 million
Depreciation and amortization	Sf 11 million
Taxes	Sf 52 million

The EV/EBITDA multiple for TRK Construction is closest to:

- (A) 4.12x.
- (B) 3.69x.
- (C) 2.47x.

CFA®

129. Which of the following is a common momentum valuation indicator?
- (A) Relative strength.
 - (B) Dividend yield (D/P).
 - (C) Price to free cash flow to equity (P/FCFE).
130. The Farmer Co. has a payout ratio of 70% and a return on equity (ROE) of 14%. What will be the appropriate price-to-book value (PBV) based on fundamentals if the expected growth rate in dividends is 4.2% and the required rate of return is 11%?
- (A) 1.50.
 - (B) 1.44.
 - (C) 0.64.
131. The Farmer Co. has a payout ratio of 65% and a return on equity (ROE) of 16% (assume that this is expected ROE for the upcoming year). What will be the appropriate price-to-book value (PBV) based on return differential if the expected growth rate in dividends is 5.6% and the required rate of return is 13%?
- (A) 0.71.
 - (B) 1.48.
 - (C) 1.41.

132. An analyst gathered the following data for TRK Construction [all amounts in Swiss francs (Sf)]:

Recent share price	Sf 30.00
Shares outstanding	Sf 40 million
Market value of debt	Sf 120 million
Cash and marketable securities	Sf 75 million
Investments	Sf 200 million
Net income	Sf 160 million
Interest expense	Sf 9 million
Depreciation and amortization	Sf 12 million
Taxes	Sf 48 million

The EV/EBITDA multiple for TRK Construction is closest to:

- (A) 5.21x.
- (B) 4.56x.
- (C) 3.47x.

