24 PRIVATE COMPANY VALUATION

1. An analyst values a private company using a price multiple based on recent sales of comparable assets. This approach to private company valuation is best described as the:
   (A) income approach
   (B) asset-based approach
   (C) market approach

2. An analyst is valuing a small private firm that is still developing and has yet to generate any earnings. Which of the following best describes the approach that should be used?
   (A) A market approach based on public comparables would be utilized.
   (B) An asset-based approach would be used.
   (C) Nonoperating assets are not crucial to the firm and should be excluded in any valuation.

3. Using the following figures, calculate the value of the equity using the capitalized cash flow method (CCM), assuming the firm will be acquired.

Normalized FCFE in current year	$3,000,000
Reported FEFF in current year	$2,400,000
Growth rate of FCFE	7.0%
Equity discount rate	16.0%
WACC	13.0%
Risk-free rate	3.5%
Cost if debt	10.5%
Market value of debt	$3,000,000

The value of the equity is:
   (A) $28,533,333.
   (B) $35,666,667.
   (C) $32,666,667.

4. An analyst is examining three companies. Given the information below, which of them is most likely to be a private firm?

Firm	Number of Years in Operation	Market Capitalization	Required Return for Common Stock
A	12 years	$1,324.8 million	14.8%
B	4 years	$1,313.9 million	14.3%
C	19 years	$2,231.0 million	16.4%

(A) Firm C.
(B) Firm B.
(C) Firm A.

5. Which of the following best describes the build-up method used for the estimation of the discount rate in private company valuations?
(A) Because it is not used in the calculation, beta is assumed to be zero.
(B) An industry risk premium is not included because it is captured in the equity risk premium.
(C) It is useful when there are no comparable public firms.

6. Which of the following statements related to the models used to estimate the required rate of return to private company equity is most accurate:
(A) The build-up method begins with betas for comparable public firms and adds risk premiums.
(B) The expanded CAPM model adds premiums for size and firm-specific risk.
(C) The CAPM model uses betas estimated from firm returns of other private firms.

7. Which of the following is least likely an example of a compliance-related valuation for a private company?
(A) Tax purposes.
(B) Financial reporting.
(C) Bankruptcy proceeding.

8. When would the asset-based approach result in a higher valuation than its going concern value, in the case of private company valuation?
(A) If the firm has minimal profits and poor prospects.
(B) When valuing pharmaceutical firms.
(C) When valuing biotech firms.

9. Which of the following is least likely an example of a transaction-related valuation for a private company?
(A) Performance-based managerial compensation.
(B) Financial reporting.
(C) Bankruptcy proceeding.

10. One valuation method that Smith is considering for Timber Industries involves using a growing perpetuity formula to estimate the value of intangible assets, and then adding this value to the values of working capital and fixed assets. This method is most accurately described as the:
    (A) free cash flow method.
    (B) excess earnings method.
    (C) capitalized cash flow method.

11. The asset-based approach to private company valuation that Smith is considering for Timber Industries is most likely to be appropriate in the case of a:
    (A) finance firm such as a bank.
    (B) mature company with many intangible assets.
    (C) firm with strong profits and growth potential.

12. Which of the following statements related to discounts and premiums to benchmark for Smith's private company valuation of Timber Industries is most accurate?
    (A) A discount for lack of marketability should be applied when the comparables are based on public shares, and the interest in the target company is a minority interest in a private firm.
    (B) A discount for lack of control should be applied when the comparable company values are for public shares, and the target company valuation is for a controlling interest.
    (C) A control premium should be added when the comparable values are for the sale of an entire company, and the valuation is being done for a minority interest in the target company.

13. Assume that a property that you are evaluating has a gross annual income equal to $230,000, and that comparable properties are selling for 10.5 times gross income. The gross income multiplier approach provides a market value for this property that is closest to:
    (A) $2,190,000
    (B) $2,303,000.
    (C) $2,415,000.

14. A private pharmaceutical firm is under consideration for acquisition where the financial buyer will pay with equity. Part of the payment to the sellers is based on FDA approval of the firm's drug. If the analyst uses a market approach and comparable data from public firms, which of the following would most likely result in a price-multiple that is too high? The comparable data is:
    (A) for strategic buyers.
    (B) for transactions where the consideration was non-contingent.
    (C) from transactions where the buyer used cash.

15. Which of the following approaches to private company valuation uses discounted cash flow analysis?

(A) The market approach.

(B) The income approach.

(C) The asset-based approach.

16. Using the following information, calculate the required return on equity using the expanded CAPM.

Income return on bonds	6.0%
Capital return on bonds	2.0%
Long-term Treasury yield	3.5%
Beta	1.4
Equity risk premium	6.0%
Small stock premium	4.0%
Company-specific risk premium	3.0%
Industry risk-premium	2.0%
Pretax cost of debt	11.0%
Optimal Debt/Total Cap	16%
Current Debt/Total	7%
Debt/Total Cap for public firms in industry	33%
Tax Rate	30%

(A) 11.9%.

(B) 15.9%.

(C) 18.9%.

17. Given the following figures, calculate the normalized EBITDA for a financial and strategic buyer.

Reported EBITDA	$4,500,000
Current Executive Compensation	$700,000
Market-Based Executive Compensation	$620.000
Current SG&A expenses	$6,300,000
SG&A expenses after synergistic savings	$5,600,000
Current Lease Rate	$300,000
Market-Based Lease Rate	$390,000

The normalized EBITDA for each type of buyer is:

	Financial buyer	**Strategic Buyer**
(A)	$4,490,000	$5,190,000
(B)	$4,670,000	$5,370,000
(C)	$4,190,000	$4,890,000

18. Which of the following best describes the use of FCFF and FCFE when used in private firm valuation?

(A) FCFE is usually favored if the firm is going to change its capital structure because the equityholders are usually the investors requesting the valuation.

(B) FCFE is usually favored if the firm is going to change its capital structure because the cost of equity is less sensitive to leverage changes than the WACC.

(C) FCFF is usually favored if the firm is going to change its capital structure because the WACC is less sensitive to leverage changes than the cost of equity.

19. The asset-based approach values a firm based on:

(A) book values.

(B) fair values.

(C) investment values.

20. Which of the following is least likely an example of a litigation-related valuation for a private company?

(A) Bankruptcy proceeding.

(B) Divorce settlements.

(C) Lost profits claims.

21. Which of the following statements related to the market approaches to private company valuation is most accurate?

(A) The guideline public company method (GPCM) is based on price multiples from comparable traded firms.

(B) The guideline transactions method (GTM) is based on historical stock sales of the actual subject company.

(C) The prior transaction method (PTM) is based on price multiples from the sale of whole public and private companies.

22. Assume a minority shareholder holds 10% of a private firm's equity, with the CEO holding the other 90%. Using normalized earnings, the value of the firm's equity is estimated at $20 million. The CEO refuses to sell the firm and the minority shareholder cannot sell their interest easily. A discount for lack of marketability (DLOM) of 15% will be applied. A discount for lack of control (DLOC) will also be estimated. Using reported earnings instead of normalized earnings provides an estimated firm equity value of $19 million. Which of the following is closest to the value of the minority shareholder's equity interest?

(A) $1,700,000.

(B) $1,900,000.

(C) $1,615,000.

23. A private business is being valued for the purpose of determining the appropriate level of performance-based managerial compensation. This private company valuation would be best described as a:

(A) Compliance-related valuation

(B) Litigation-related valuation

(C) Transaction-related valuation

24. Which of the following best describes projection risk in the estimation of the discount rate for private company valuations?
    (A) Management will always be overly optimistic to increase the acquisition price.
    (B) If the availability of information from private firms is poor, the uncertainty of projected cash flows may increase.
    (C) Projection risk results in higher discount rates.

25. The capitalized cash flow method (CCM) used in private firm valuation is most appropriate when:
    (A) there are many intangible assets to value.
    (B) stable growth is expected.
    (C) earnings are growing quickly in an initial period.

26. Which of the following best describes how debt is incorporated into the estimation of the discount rate for private company valuations, relative to that for public firms? In general, the cost of debt:
    (A) and debt capacity is the same for both private and public firms.
    (B) is higher for private firms and debt capacity is the same for both private and public firms.
    (C) is higher for private firms and debt capacity is lower for private firms.

27. An analyst is valuing a private firm on the behalf of a strategic buyer and deflates the average public company multiple by 15% to account for the higher risk of the private firm. Given the following figures, calculate the value of firm equity using the guideline public company method (GPCM).

Market value of debt	\$4,100,000
Normalized EBITDA	\$42,800,000
Average MVIC/EBITDA multiple	8.5
Control premium from past transaction	25%

The value of the firm's equity is closest to:
    (A) \$382,438,000.
    (B) \$304,060,000.
    (C) \$381,412,500.

28. Given the following figures, calculate the FCFF. Assume the earnings and expenses are normalized and that capital expenditures will cover depreciation plus 3 percent of the firm's incremental revenues.

Current Revenues	\$30,000,000
Revenue growth	6%

Growth profit margin	20%
Depreciation expense as a percent of sales	1%
Working capital as a percent of sales	15%
SG&A expenses	$3,800,000
Tax rate	30%

(A) $927,400.

(B) $1,785,400.

(C) $1,245,400.

29. Which of the following statements most accurately describes the difference between private and public firm managers?

(A) Because managers in a public firm are often paid with incentive compensation, public managers may take a longer term view than private managers.

(B) Because managers in a private firm are concerned with having the firm go public, private managers may take a shorter term view than public managers.

(C) Although managers in a public firm are often paid with incentive compensation, public managers may take a shorter term view than private managers because shareholders often focus on the short-term.

Stan Bowles works for Marsh Inc. and has been tasked with the valuation of Park Limited, a small private footwear producer. Bowles prepares a valuation report on Park Limited and his report contains the following:

Comment 1: Company-specific characteristics such as the quality and depth of management, tax considerations, and shareholders agreements that restrict liquidity mark the main differences between a private and public company.

Comment 2: The value of a private company depends on the investor's expectations and investment requirements and could differ from one buyer to the next due to different perception of risk and future potential.

To obtain an appropriate discount rate for Park, we have assumed the following:

Comment 3:
- Estimated beta of Park: 0.75
- Company specific risk premium: 1.2%
- Small stock premium: 2.8%
- Risk free rate: 3%
- Equity risk premium: 4.5%

Comment 4: If we are valuing Park for non-controlling equity interest, a discount for lack of control might be required.

30. Which of the following mentioned in Comment 1 is least likely to be a company specific characteristic of a private company?

(A) Tax consideration.

(B) Quality and depth of management.

(C) Shareholders agreements that restrict liquidity.

31. Comment 2 is describing:

(A) fair value.

(B) investment value.

(C) fair market value.

32. Calculate Park's discount rate using the build-up method and the information in Comment 3.

(A) 9.375%.

(B) 10.375%.

(C) 11.5%.

33. Using Comment 4, which of the following method is least likely to require a discount for lack of control?

(A) Guideline Transaction Method.

(B) Capitalized Cash Flow Methods.

(C) Guideline Public Company Method.

34. Which of the following best describes the estimation of discounts for lack of marketability (DLOM) in private company valuations? The primary advantage of using put prices to estimate the DLOM over the other two methods is:

(A) exchange traded put prices are readily available.

(B) the Black-Scholes model has been shown to be valid for private firms.

(C) the volatility of the firm can be incorporated into the analysis.

35. Using the following information, calculate the WACC using the build-up method, assuming the firm is being acquired.

Income return on bonds	6.0%
Capital return on bonds	2.0%
Long-term Treasury yield	3.5%
Beta	1.4
Equity risk premium	6.0%
Small stock premium	4.0%
Company-specific risk premium	3.0%
Industry risk-premium	2.0%
Pretax cost of debt	11.0%
Optimal Debt/Total Cap	20%
Current Debt/Total	7%

Debt/Total Cap for public firms in industry	33%
Tax Rate	30%

(A) 18.5%.

(B) 16.3%.

(C) 17.7%.

Jimmy Choo, CFA, works for Joel Constable, a high net worth investor who invests a large proportion of his portfolio speculatively in order to chase high returns. Choo is usually tasked with carrying out initial analysis on investment opportunities, which Constable has identified and may proceed further with.

Most of the opportunities identified by Constable are investments in private companies with little history of profits or dividends. Some, however, are more stable growth companies, which Constable still believes to be undervalued.

One opportunity recently identified by Constable is a private company, Bakan Fashion. Bakan is a fashion retailer, which started up recently with an online presence and a retail unit in a high-end location on a city high street. The company began trading four years ago and has published the following financial information for the benefit of its investors:

Bakan Fashion

Income Statement ($m) (extracts)	2x07	2x08	2x09	2x10
Revenue	0.3	0.8	1.9	1.9
Net income	(0.9)	(0.9)	(0.3)	0.1
Cash flow statement ($m) (extracts)	**2x07**	**2x08**	**2x09**	**2x10**
CFO	(0.6)	(0.7)	(0.3)	0.2
CFI	(3.6)	(3.2)	(1.0)	(0.4)
CFF	5.6	1.0	0.4	0.4
Balance sheet ($m) (extracts)	**2x07**	**2x08**	**2x09**	**2x10**
Net assets	3.2	3.0	2.6	2.9

Choo has also made some additional notes regarding the 2x10 net income figure after meeting briefly with the finance director of Bakan.

Notes Re: 2x10 Net Income

- CEO compensation package is $650,000 per annum
- A leading fashion supplier provided the retail outlet at a rate of $120,000 per annum for the first four years
- A friend of the CEO helped set up the online operations for a discounted cost of $20,000
- The CEO agreed to the compensation package in a bid to help the company breakeven as quickly as possible. Choo estimates that a market based compensation figure would be $850,000

- The market lease rate for the retail unit is $170,000
- The set up cost for the online operation should have been $50,000

In addition to the financial information for Bakan, Choo has also identified the following specific factors, which he always takes into account in any analysis of private companies for Constable:

Factor 1: Private company equity typically has fewer potential owners and is less liquid than publicly traded shares; hence a discount should be applied in any valuation of Bakan.

Factor 2: One key objective of the board of Bakan may be to limit exposure to taxes, as 75% of the board members also own substantial equity in the company.

Factor 3: Due to the significant ownership of equity by the board of Bakan, management may be tempted to take a shorter-term view than that typically taken by public firms.

Constable always prefers to see a basic analysis of price multiples for companies before any valuation.

Choo produces this where possible, but usually follows it with a valuation of the private company-using price multiples based on recent sales of comparable assets. He calls this the "Choo Comparison Method (CCM)."

The CCM valuation is then adjusted by Constable and Choo to take account of Constable's individual financing costs and any perceived synergies with his existing assets.

Choo refers to this final valuation after adjustments in his reports as the "Intrinsic Value." Constable has recently taken him to task on this and suggested that as the valuation focuses on the value to him as a specific investor it should be called the "Investment Value."

36. Assuming Choo uses price multiples based on the four years of financial information from Bakan, ignoring his additional notes regarding 2x10, which of the following statements is least accurate?
    (A) Price to Earnings ratios would be meaningless.
    (B) Price to Book ratios would be the most useful as they would take account of the human capital in a start-up business such as Bakan.
    (C) Price to Cash Flow ratios are theoretically better if calculated using free cash flow to equity rather than CFO.

37. When valuing private companies, how would the factors described by Choo usually be classified?
    (A) Factor 1 Stock-specific, Factor 2 Stock-specific.
    (B) Factor 1 Stock-specific, Factor 2 Company-specific.
    (C) Factor 1 Company-specific, Factor 2 Company-specific.

38. Is Choo correct in his assessment of Factor 3?
    (A) Yes.

(B) No, it is rare for private companies to allow key management to own equity.

(C) No, board equity ownership usually results in a longer-term view than public companies.

39. The "Choo Comparison Method" of valuing a private company is consistent with which major approach?

(A) Income Approach.

(B) Multiple Approach.

(C) Market Approach.

40. Is Constable right in his suggested renaming of the final valuation?

(A) Yes.

(B) No, a valuation based on analysis of company fundamentals should be referred to as an Intrinsic Value.

(C) No, it should be renamed Market Value as it uses primarily market information.

41. Using Choo's additional notes on Bakan's 2x10 Net Income, which of the following is the most accurate estimate of normalized earnings for 2x10?

(A) Loss $150,000.

(B) Profit $250,000.

(C) Loss $180,000.

42. Using the following figures, calculate the value of the firm using the excess earnings method (EEM).

Working capital	$600,000
Fixed assets	$2,300,000
Normalized earnings	$340,000
Required return of working capital	5%
Required return for fixed assets	13%
Growth rate of residual income	4%
Discount rate of intangible assets	18%

(A) $3,073,199.

(B) $2,981,714.

(C) $3,027,111.

43. An analyst calculates a control premium of 15% and discount for lack of marketability (DLOM) of 20%. Which of the following is closest to the total discount for valuing minority equity interests in the private firm?

(A) 35.7%.

(B) 35.0%.

(C) 30.4%.

44. Which of the following best describes the use of size premiums when estimating the discount rate for private company valuations?

(A) The treatment is similar to that for public firms.

(B) A size premium is subtracted when calculating the discount rate.

(C) When using data from comparable public firms, a distress premium may be inadvertently added in.

45. An analyst is examining the stock of three companies. Given the information below, which of them is most likely to be the stock of a private firm?

Firm	Restrictions on Sales of Stock?	DLOM	Stock Ownership of 5 Largest Owners
A	Yes	0%	28%
B	No	5%	35%
C	Yes	15%	64%

(A) Firm A.

(B) Firm C.

(C) Firm B.

46. Which of the following is most accurate regarding the asset-based approach? Of the three valuation methods for private firms, it usually:

(A) results in the lowest valuation.

(B) is the most appropriate for going concerns.

(C) is not difficult to apply.

47. An analyst values a private firm by using price multiple from the sale of whole companies, with adjustments for risk differences. Which of the following the valuation method that the analyst is using?

(A) The guideline transactions method.

(B) The prior transaction method.

(C) The guideline public company method.

48. An analyst is valuing a firm's equity using the price-to-book-value ratio of similar firms. Which of the following is the most likely valuation approach the analyst will use?

(A) The income approach.

(B) The asset-based approach.

(C) The market approach.

Paul Smith is an analyst performing valuations for Lumber Limited. Smith has been given a project to value Timber Industries, a firm that Lumber Limited is considering acquiring. Smith is aware that a number of characteristics distinguish private and public companies, and that these characteristics must be considered during his process of valuing Timber Industries. A number of issues complicate Smith's valuation: Timber Industries pays its CEO well below a market-based compensation figure, leases a warehouse at an above-market rate, and owns a vacant office building that is not needed for core operations. Smith is also aware that discounts and premiums based on control and marketability must be considered in his valuation of Timber Industries.

49. Compared to a public company, it is most likely that as a private company Timber Industries will have greater:

(A) focus on the short-term.

(B) quality and depth of management.

(C) concerns related to taxes.