Corporate Issuers

PRACTICE PROBLEMS

The following information relates to questions 1-5

Jurgen Knudsen has been hired to provide industry expertise to Henrik Sandell, CFA, an analyst for a pension plan managing a global large-cap fund internally. Sandell is concerned about one of the fund's larger holdings, auto parts manufacturer Kruspa AB. Kruspa currently operates in 80 countries, with the previous year's global revenues at €5.6 billion. Recently, Kruspa's CFO announced plans for expansion into Trutan, a country with a developing economy. Sandell worries that this expansion will change the company's risk profile and wonders if he should recommend a sale of the position.

Sandell provides Knudsen with the basic information. Kruspa's global annual free cash flow to the firm is €500 million, and earnings are €400 million. Sandell estimates that cash flow will level off at a 2% rate of growth. Sandell also estimates that Kruspa's after-tax free cash flow to the firm on the Trutan project for next three years is, respectively, €48 million, €52 million, and €54.4 million. Kruspa recently announced a dividend of €4.00 per share of stock. For the initial analysis, Sandell requests that Knudsen ignore possible currency fluctuations. He expects the Trutanese plant to sell only to customers within Trutan for the first three years. Knudsen is asked to evaluate Kruspa's planned financing of the required €100 million in Sweden with an €80 million public offering of 10-year debt and the remainder with an equity offering.

Additional information:	
Equity risk premium, Sweden	4.82%
Risk-free rate of interest, Sweden	4.25%
Industry debt-to-equity ratio	0.3
Market value of Kruspa's debt	€900 million
Market value of Kruspa's equity	€2.4 billion
Kruspa's equity beta	1.3
Kruspa's before-tax cost of debt	9.25%
Trutan credit A2 country risk premium	1.88%
Corporate tax rate	37.5%
Interest payments each year	Level

1. Using the capital asset pricing model, Kruspa's cost of equity capital for its typical project is *closest* to:

   A. 7.62%.

   B. 10.52%.

   C. 12.40%.

2. Sandell is interested in the weighted average cost of capital of Kruspa AB prior to its investing in the Trutan project. This weighted average cost of capital is *closest*

to:

A. 7.65%.

B. 9.23%.

C. 10.17%.

3. In his estimation of the project's cost of capital, Sandell would like to use the asset beta of Kruspa as a base in his calculations. The estimated asset beta of Kruspa prior to the Trutan project is *closest* to:

   A. 1.053.

   B. 1.110.

   C. 1.327.

4. Sandell is performing a sensitivity analysis of the effect of the new project on the company's cost of capital. If the Trutan project has the same asset risk as Kruspa, the estimated project beta for the Trutan project, if it is financed 80% with debt, is *closest* to:

   A. 1.300.

   B. 2.635.

   C. 3.686.

5. As part of the sensitivity analysis of the effect of the new project on the company's cost of capital, Sandell is estimating the cost of equity of the Trutan project considering that the Trutan project requires a country equity premium to capture the risk of the project. The cost of equity for the project in this case is *closest* to:

   A. 10.52%.

   B. 19.91%.

   C. 28.95%.

6. Which of the following statements is correct?

   A. The appropriate tax rate to use in the adjustment of the before-tax cost of debt to determine the after-tax cost of debt is the average tax rate because interest is deductible against the company's entire taxable income.

   B. For a given company, the after-tax cost of debt is generally less than both the cost of preferred equity and the cost of common equity.

   C. For a given company, the after-tax cost of debt is generally higher than both the cost of preferred equity and the cost of common equity.

7. The Gearing Company has an after-tax cost of debt capital of 4%, a cost of preferred stock of 8%, a cost of equity capital of 10%, and a weighted average cost of capital of 7%. Gearing intends to maintain its current capital structure as it raises additional capital. In making its capital-budgeting decisions for the average-risk project, the relevant cost of capital is:

   A. 4%.

   B. 7%.

C. 8%.

8. Fran McClure, of Alba Advisers, is estimating the cost of capital of Frontier Corporation as part of her valuation analysis of Frontier. McClure will be using this estimate, along with projected cash flows from Frontier's new projects, to estimate the effect of these new projects on the value of Frontier. McClure has gathered the following information on Frontier Corporation:

	Current Year ($)	Forecasted for Next Year ($)
Book value of debt	50	50
Market value of debt	62	63
Book value of equity	55	58
Market value equity	210	220

The weights that McClure should apply in estimating Frontier's cost of capital for debt and equity are, respectively:

A. w_d = 0.200 and w_e = 0.800.

B. w_d = 0.185 and w_e = 0.815.

C. w_d = 0.223 and w_e = 0.777.

9. An analyst assembles the following facts concerning a company's component costs of capital and capital structure. Based on the information given, calculate the company's WACC.

Facts	(%)
Cost of equity based on the CAPM	15.60
Pretax cost of debt	8.28
Corporate tax rate	30.00
Capital structure weight	Equity 80, Debt 20

10. The cost of equity is equal to the:

A. expected market return.

B. rate of return required by stockholders.

C. cost of retained earnings plus dividends.

11. Dot.Com has determined that it could issue $1,000 face value bonds with an 8% coupon paid semi-annually and a five-year maturity at $900 per bond. If Dot.Com's marginal tax rate is 38%, its after-tax cost of debt is *closest* to:

A. 6.2%.

B. 6.4%.

C. 6.6%.

12. The cost of debt can be determined using the yield-to-maturity and bond rating approaches. If the bond rating approach is used, the:

A. coupon is the yield.

B. yield is based on the interest coverage ratio.

C. company is rated and the rating can be used to assess the credit default spread of the company's debt.

13. Morgan Insurance Ltd. issued a fixed-rate perpetual preferred stock three years ago and placed it privately with institutional investors. The stock was issued at $25 per share with a $1.75 dividend. If the company were to issue preferred stock today, the yield would be 6.5%. The stock's current value is:

A. $25.00.

B. $26.92.

C. $37.31.

14. Two years ago, a company issued $20 million in long-term bonds at par value with a coupon rate of 9%. The company has decided to issue an additional $20 million in bonds and expects the new issue to be priced at par value with a coupon rate of 7%. The company has no other debt outstanding and has a tax rate of 40%. To compute the company's weighted average cost of capital, the appropriate after-tax cost of debt is *closest* to:

A. 4.2%.

B. 4.8%.

C. 5.4%.

15. At the time of valuation, the estimated betas for JPMorgan Chase & Co. and the Boeing Company were 1.50 and 0.80, respectively. The risk-free rate of return was 4.35%, and the equity risk premium was 8.04%. Based on these data, calculate the required rates of return for these two stocks using the CAPM.

16. An analyst's data source shows that Newmont Mining (NEM) has an estimated beta of –0.2. The risk-free rate of return is 2.5%, and the equity risk premium is estimated to be 4.5%.

A. Using the CAPM, calculate the required rate of return for investors in NEM.

B. The analyst notes that the current yield to maturity on corporate bonds with a credit rating similar to NEM is approximately 3.9%. How should this information affect the analyst's estimate?

17. Wang Securities had a long-term stable debt-to-equity ratio of 0.65. Recent bank borrowing for expansion into South America raised the ratio to 0.75. The increased leverage has what effect on the asset beta and equity beta of the company?

A. The asset beta and the equity beta will both rise.

B. The asset beta will remain the same, and the equity beta will rise.

C. The asset beta will remain the same, and the equity beta will decline.

18. Brandon Wiene is a financial analyst covering the beverage industry. He is evaluating the impact of DEF Beverage's new product line of flavored waters. DEF currently has a debt-to-equity ratio of 0.6. The new product line would be financed with $50 million of debt and $100 million of equity. In estimating the valuation

impact of this new product line on DEF's value, Wiene has estimated the equity beta and asset beta of comparable companies. In calculating the equity beta for the product line, Wiene is intending to use DEF's existing capital structure when converting the asset beta into a project beta. Which of the following statements is correct?

A. Using DEF's debt-to-equity ratio of 0.6 is appropriate in calculating the new product line's equity beta.

B. Using DEF's debt-to-equity ratio of 0.6 is not appropriate; rather, the debt-to-equity ratio of the new product, 0.5, is appropriate to use in calculating the new product line's equity beta.

C. Wiene should use the new debt-to-equity ratio of DEF that would result from the additional $50 million debt and $100 million equity in calculating the new product line's equity beta.

19. Happy Resorts Company currently has 1.2 million common shares of stock outstanding, and the stock has a beta of 2.2. It also has $10 million face value of bonds that have five years remaining to maturity and an 8% coupon with semi-annual payments and are priced to yield 13.65%. If Happy issues up to $2.5 million of new bonds, the bonds will be priced at par and will have a yield of 13.65%; if it issues bonds beyond $2.5 million, the expected yield on the entire issuance will be 16%. Happy has learned that it can issue new common stock at $10 a share. The current risk-free rate of interest is 3%, and the expected market return is 10%. Happy's marginal tax rate is 30%. If Happy raises $7.5 million of new capital while maintaining the same debt-to-equity ratio, its weighted average cost of capital will be *closest* to:

A. 14.5%.

B. 15.5%.

C. 16.5%.

The following information relates to questions 20-23

Boris Duarte, CFA, covers initial public offerings for Zellweger Analytics, an independent research firm specializing in global small-cap equities. He has been asked to evaluate the upcoming new issue of TagOn, a US-based business intelligence software company. The industry has grown at 26% per year for the previous three years. Large companies dominate the market, but sizable comparable companies, such as Relevant Ltd., ABJ Inc., and Opus Software Pvt. Ltd., also compete. Each of these competitors is domiciled in a different country, but they all have shares of stock that trade on the US NASDAQ. The debt ratio of the industry has risen slightly in recent years.

Company	Sales in Millions ($)	Market Value Equity in Millions ($)	Market Value Debt in Millions ($)	Equity Beta	Tax Rate (%)	Share Price ($)
Relevant Ltd.	752	3,800	0.0	1.702	23	42
ABJ Inc.	843	2,150	6.5	2.800	23	24

Company	Sales in Millions ($)	Market Value Equity in Millions ($)	Market Value Debt in Millions ($)	Equity Beta	Tax Rate (%)	Share Price ($)
Opus Software Pvt. Ltd.	211	972	13.0	3.400	23	13

Duarte uses the information from the preliminary prospectus for TagOn's initial offering. The company intends to issue 1 million new shares. In his conversation with the investment bankers for the deal, he concludes the offering price will be between $7 and $12. The current capital structure of TagOn consists of a $2.4 million five-year noncallable bond issue and 1 million common shares. The following table includes other information that Duarte has gathered:

Currently outstanding bonds	$2.4 million five-year bonds, coupon of 12.5% paying semi-annually with a market value of $2.156 million
Risk-free rate of interest	5.25%
Estimated equity risk premium	7%
Tax rate	23%

20. The asset betas for Relevant, ABJ, and Opus, respectively, are:

 A. 1.70, 2.52, and 2.73.

 B. 1.70, 2.79, and 3.37.

 C. 1.70, 2.81, and 3.44.

21. The average asset beta for comparable players in this industry, Relevant, ABJ, and Opus, weighted by market value of equity is *closest* to:

 A. 1.67.

 B. 1.97.

 C. 2.27.

22. Using the capital asset pricing model, the cost of equity capital for a company in this industry with a debt-to-equity ratio of 0.01, an asset beta of 2.27, and a marginal tax rate of 23% is *closest* to:

 A. 17%.

 B. 21%.

 C. 24%.

23. The marginal cost of capital for TagOn, based on an average asset beta of 2.27 for the industry and assuming that new stock can be issued at $8 per share, is *closest* to:

 A. 20.5%.

 B. 21.0%.

C. 21.5%.

24. An analyst gathered the following information about a private company and its publicly traded competitor:

Comparable Companies	Tax Rate (%)	Debt/Equity	Equity Beta
Private company	30.0	1.00	na
Public company	35.0	0.90	1.75

The estimated equity beta for the private company is *closest* to:

A. 1.029.

B. 1.104.

C. 1.877.

25. Which of the following statements is *most accurate*? If two equity issues have the same market risk but the first issue has higher leverage, greater liquidity, and a higher required return, the higher required return *is most likely* the result of the first issue's:

A. greater liquidity.

B. higher leverage.

C. higher leverage and greater liquidity.

26. SebCoe plc, a British firm, is evaluating an investment in a £50 million project that will be financed with 50% debt and 50% equity. Management has already determined that the NPV of this project is £5 million if it uses internally generated equity. However, if the company uses external equity, it will incur flotation costs of 5.8%. Assuming flotation costs are not tax deductible, the NPV using external equity would be:

A. less than £5 million because we would discount the cash flows using a higher weighted average cost of capital that reflects the flotation costs.

B. £3.55 million because flotation costs reduce NPV by $1.45 million.

C. £5 million because flotation costs have no impact on NPV.

PRACTICE PROBLEMS

1. Which of the following is *least* likely to affect the capital structure of Longdrive Trucking Company? Longdrive has moderate leverage today.

   A. The acquisition of a major competitor for shares

   B. A substantial increase in share price

   C. The payment of a stock dividend

2. Which of these statements is *most* accurate with respect to the use of debt by a start-up fashion retailer with negative cash flow and uncertain revenue prospects?

   A. Debt financing will be unavailable or very costly.

   B. The company will prefer to use equity rather than debt given its uncertain cash flow outlook.

   C. Both A and B.

3. Which of the following is true of the growth stage in a company's development?

   A. Cash flow is negative, by definition, with investment outlays exceeding cash flow from operations.

   B. Cash flow may be negative or positive.

   C. Cash flow is positive and growing quickly.

4. Which of the following mature companies is *most* likely to use a high proportion of debt in its capital structure?

   A. A mining company with a large, fixed asset base

   B. A software company with very stable and predictable revenues and an asset-light business model

   C. An electric utility

5. Which of the following is *most* likely to occur as a company evolves from growth stage to maturity and seeks to optimize its capital structure?

   A. The company relies on equity to finance its growth.

   B. Leverage increases as the company needs more capital to support organic expansion.

   C. Leverage increases as the company is able to support more debt.

6. If investors have homogeneous expectations, the market is efficient, and there are no taxes, no transaction costs, and no bankruptcy costs, Modigliani and Miller's Proposition I states that:

   A. bankruptcy risk rises with more leverage.

   B. managers cannot change the value of the company by changing the amount of debt.

C. managers cannot increase the value of the company by using tax-saving strategies.

7. According to Modigliani and Miller's Proposition II without taxes:
   A. the capital structure decision has no effect on the cost of equity.
   B. investment and capital structure decisions are interdependent.
   C. the cost of equity increases as the use of debt in the capital structure increases.

8. The weighted average cost of capital (WACC) for Van der Welde is 10%. The company announces a debt offering that raises the WACC to 13%. The *most* likely conclusion is that for Van der Welde:
   A. the company's prospects are improving.
   B. equity financing is cheaper than debt financing.
   C. the company's debt/equity has moved beyond the optimal range.

9. According to the static trade-off theory:
   A. debt should be used only as a last resort.
   B. companies have an optimal level of debt.
   C. the capital structure decision is irrelevant.

The following information relates to questions 10-12

Nailah Mablevi is an equity analyst who covers the entertainment industry for Kwame Capital Partners, a major global asset manager. Kwame owns a significant position, with a large unrealized capital gain, in Mosi Broadcast Group (MBG). On a recent conference call, MBG's management stated that they plan to increase the proportion of debt in the company's capital structure. Mablevi is concerned that any changes in MBG's capital structure will negatively affect the value of Kwame's investment.

To evaluate the potential impact of such a capital structure change on Kwame's investment, she gathers the information about MBG given in Exhibit 1.

Exhibit 1: Current Selected Financial Information on MBG

Yield to maturity on debt	8.00%
Market value of debt	USD100 million
Number of shares of common stock	10 million
Market price per share of common stock	USD30
Cost of capital if all equity-financed	10.3%

Yield to maturity on debt	8.00%
Marginal tax rate	35%

10. MBG is *best* described as currently:

   A. 25% debt-financed and 75% equity-financed.

   B. 33% debt-financed and 66% equity-financed.

   C. 75% debt-financed and 25% equity-financed.

11. Holding operating earnings constant, an increase in the marginal tax rate to 40% would:

   A. result in a lower cost of debt capital.

   B. result in a higher cost of debt capital.

   C. not affect the company's cost of capital.

12. Which of the following is *least* likely to be true with respect to optimal capital structure?

   A. The optimal capital structure minimizes WACC.

   B. The optimal capital structure is generally close to the target capital structure.

   C. Debt can be a significant portion of the optimal capital structure because of the tax-deductibility of interest.

13. Other factors being equal, in which of the following situations are debt-equity conflicts likely to arise?

   A. Financial leverage is low.

   B. The company's debt is secured.

   C. The company's debt is long-term.

14. Which of the following is an example of agency costs? In each case, management is advocating a substantial acquisition and management compensation is heavily composed of stock options.

   A. Management believes the acquisition will be positive for shareholder value but negative for the value and interests of the company's debtholders.

   B. Management's stock options are worthless at the current share price. The acquisition has a high (50%) risk of failure (with zero value) but substantial (30%) upside if it works out.

   C. The acquisition is positive for equityholders and does not significantly impair the position of debtholders. However, the acquisition puts the company into a new business where labor practices are harsh and the production process is environmentally damaging.

15. Which of the following is *least* accurate with respect to debt-equity conflicts?

    A. Equityholders focus on potential upside and downside outcomes, while debtholders focus primarily on downside risk.

    B. Management attempts to balance the interests of equityholders and debtholders.

    C. Debt covenants can mitigate the conflict between debtholders and equityholders.

16. Which of the following is *least* likely to be true with respect to agency costs and senior management compensation?

    A. Equity-based incentive compensation is the primary method to address the problem of agency costs.

    B. A well-designed compensation scheme should eliminate agency costs.

    C. High cash compensation for senior management, without significant equity-based performance incentives, can lead to excessive caution and complacency.

17. Integrated Systems Solutions Inc. (ISS) is a technology company that sells software to companies in the building construction industry. The company's assets consist mostly of intangible assets. Although the company is profitable, revenue growth and earnings growth have been slowing in recent years. The company's business model is a pay-per-use model, and given the cyclical nature of the construction industry, the company's revenues and earnings vary considerably over the business cycle.

    Describe two factors that would point to ISS having a relatively high cost of borrowing and low proportion of debt in its capital structure.

18. Tillett Technologies is a manufacturer of high-end audio and video (AV) equipment. The company, with no debt in its capital structure, has experienced rapid growth in revenues and improved profitability in recent years. About half of the company's revenues come from subscription-based service agreements. The company's assets consist mostly of inventory and property, plant, and equipment, representing its production facilities. Now, the company seeks to raise new capital to finance additional growth.

    Describe two factors that would support Tillett being able to access debt capital at a reasonable cost to finance the additional growth. Justify your response.

19. Discuss two financial metrics that can be used to assess a company's ability to service additional debt in its capital structure.

20. Identify two market conditions that can be characterized as favorable for companies wishing to add debt to their capital structures.

21. Which of the following is *least* accurate with respect to the market value and book value of a company's equity?

    A. Market value is more relevant than book value when measuring a company's cost of capital.

    B. Book value is often used by lenders and in financial ratio calculations.

    C. Both market value and book value fluctuate with changes in the company's share price.

22. Fran McClure of Alba Advisers is estimating the cost of capital of Frontier Corporation as part of her valuation analysis of Frontier. McClure will be using this estimate, along with projected cash flows from Frontier's new projects, to estimate the effect of these new projects on the value of Frontier. McClure has gathered the following information on Frontier Corporation:

	Current Year (USD)	Forecasted for Next Year (USD)
Book value of debt	50	50
Market value of debt	62	63
Book value of shareholders' equity	55	58
Market value of shareholders' equity	210	220

The weights that McClure should apply in estimating Frontier's cost of capital for debt and equity are, respectively:

A. w_d = 0.200; w_e = 0.800.

B. w_d = 0.185; w_e = 0.815.

C. w_d = 0.223; w_e = 0.777.

23. Which of the following is *not* a reason why target capital structure and actual capital structure tend to differ?

A. Financing is often tied to a specific investment.

B. Companies raise capital when the terms are attractive.

C. Target capital structure is set for a particular project, while actual capital structure is measured at the consolidated company level.

24. According to the pecking order theory:

A. new debt is preferable to new equity.

B. new debt is preferable to internally generated funds.

C. new equity is always preferable to other sources of capital.

25. Vega Company has announced that it intends to raise capital next year, but it is unsure as to the appropriate method of raising capital. White, the CFO, has concluded that Vega should apply the pecking order theory to determine the appropriate method of raising capital. Based on White's conclusion, Vega should raise capital in the following order:

A. debt, internal financing, equity.

B. equity, debt, internal financing.

C. internal financing, debt, equity.

PRACTICE PROBLEMS

The following information relates to questions 1-9

Mary Benn, CFA, is a financial analyst for Twin Fields Investments, located in Storrs, Connecticut, USA. She has been asked by her supervisor, Bill Cho, to examine two small Japanese cell phone component manufacturers: 4G, Inc. and Qphone Corp. Cho indicates that his clients are most interested in the use of leverage by 4G and Qphone. Benn states, "I will have to specifically analyze each company's respective business risk, sales risk, operating risk, and financial risk." "Fine, I'll check back with you shortly," Cho, answers.

Benn begins her analysis by examining the sales prospects of the two firms. The results of her sales analysis appear in Exhibit 1. She also expects very little price variability for these cell phones. She next gathers more data on these two companies to assist her analysis of their operating and financial risk.

When Cho inquires as to her progress Benn responds, "I have calculated Qphone's degree of operating leverage (DOL) and degree of financial leverage (DFL) at Qphone's 2009 level of unit sales. I have also calculated Qphone's breakeven level for unit sales. I will have 4G's leverage results shortly."

Cho responds, "Good, I will call a meeting of some potential investors for tomorrow. Please help me explain these concepts to them, and the differences in use of leverage by these two companies. In preparation for the meeting, I have a number of questions":

- "You mentioned business risk; what is included in that?"
- "How would you classify the risk due to the varying mix of variable and fixed costs?"
- "Could you conduct an analysis and tell me how the two companies will fare relative to each other in terms of net income if their unit sales increased by 10 percent above their 2009 unit sales levels?"
- "Finally, what would be an accurate verbal description of the degree of total leverage?"

The relevant data for analysis of 4G is contained in Exhibit 2, and Benn's analysis of the Qphone data appears in Exhibit 3:

Exhibit 1: Benn's Unit Sales Estimates for 4G, Inc. and Qphone Corp.

Company	2009 Unit Sales	Standard Deviation of Unit Sales	2010 Expected Unit Sales Growth Rate (%)
4G, Inc.	1,000,000	25,000	15
Qphone Corp.	1,500,000	10,000	15

Exhibit 2: Sales, Cost, and Expense Data for 4G, Inc. (At Unit Sales of 1,000,000)

Number of units produced and sold	1,000,000
Sales price per unit	¥108
Variable cost per unit	¥72
Fixed operating cost	¥22,500,000
Fixed financing expense	¥9,000,000

Exhibit 3: Benn's Analysis of Qphone (At Unit Sales of 1,500,000)

Degree of operating leverage	1.40
Degree of financial leverage	1.15
Breakeven quantity (units)	571,429

1. Based on Benn's analysis, 4G's sales risk relative to Qphone's is *most likely* to be:
   - **A.** lower.
   - **B.** equal.
   - **C.** higher.

2. What is the *most appropriate* response to Cho's question regarding the components of business risk?
   - **A.** Sales risk and financial risk.
   - **B.** Operating risk and sales risk.
   - **C.** Financial risk and operating risk.

3. The *most appropriate* response to Cho's question regarding the classification of risk arising from the mixture of variable and fixed costs is:
   - **A.** sales risk.
   - **B.** financial risk.
   - **C.** operating risk.

4. Based on the information in Exhibit 17, the degree of operating leverage (DOL) of 4G, Inc., at unit sales of 1,000,000, is *closest* to:
   - **A.** 1.60.
   - **B.** 2.67.
   - **C.** 3.20.

5. Based on the information in Exhibit 17, 4G, Inc.'s degree of financial leverage (DFL), at unit sales of 1,000,000, is *closest* to:
   - **A.** 1.33.

B. 2.67.

C. 3.00.

6. Based on the information in Exhibit 16 and Exhibit 18, Qphone's expected percentage change in operating income for 2010 is *closest* to:

   A. 17.25%.

   B. 21.00%.

   C. 24.30%.

7. 4G's breakeven quantity of unit sales is *closest* to:

   A. 437,500 units.

   B. 625,000 units.

   C. 875,000 units.

8. In response to Cho's question regarding an increase in unit sales above 2009 unit sales levels, it is *most likely* that 4G's net income will increase at:

   A. a slower rate than Qphone's.

   B. the same rate as Qphone's.

   C. a faster rate than Qphone's.

9. The *most appropriate* response to Cho's question regarding a description of the degree of total leverage is that degree of total leverage is:

   A. the percentage change in net income divided by the percentage change in units sold.

   B. the percentage change in operating income divided by the percentage change in units sold.

   C. the percentage change in net income divided by the percentage change in operating income.

10. If two companies have identical unit sales volume and operating risk, they are *most likely* to also have identical:

    A. sales risk.

    B. business risk.

    C. sensitivity of operating earnings to changes in the number of units produced and sold.

11. Degree of operating leverage is *best* described as a measure of the sensitivity of:

    A. net earnings to changes in sales.

    B. fixed operating costs to changes in variable costs.

    C. operating earnings to changes in the number of units produced and sold.

12. The Fulcrum Company produces decorative swivel platforms for home televi-

sions. If Fulcrum produces 40 million units, it estimates that it can sell them for $100 each. Variable production costs are $65 per unit and fixed production costs are $1.05 billion. Which of the following statements is *most accurate*? Holding all else constant, the Fulcrum Company would:

A. generate positive operating income if unit sales were 25 million.

B. have less operating leverage if fixed production costs were 10 percent greater than $1.05 billion.

C. generate 20 percent more operating income if unit sales were 5 percent greater than 40 million.

13. The business risk of a particular company is *most accurately* measured by the company's:

A. debt-to-equity ratio.

B. efficiency in using assets to generate sales.

C. operating leverage and level of uncertainty about demand, output prices, and competition.

14. Consider two companies that operate in the same line of business and have the same degree of operating leverage: the Basic Company and the Grundlegend Company. The Basic Company and the Grundlegend Company have, respectively, no debt and 50 percent debt in their capital structure. Which of the following statements is *most accurate*? Compared to the Basic Company, the Grundlegend Company has:

A. a lower sensitivity of net income to changes in unit sales.

B. the same sensitivity of operating income to changes in unit sales.

C. the same sensitivity of net income to changes in operating income.

15. Myundia Motors now sells 1 million units at ¥3,529 per unit. Fixed operating costs are ¥1,290 million and variable operating costs are ¥1,500 per unit. If the company pays ¥410 million in interest, the levels of sales at the operating breakeven and breakeven points are, respectively:

A. ¥1,500,000,000 and ¥2,257,612,900.

B. ¥2,243,671,760 and ¥2,956,776,737.

C. ¥2,975,148,800 and ¥3,529,000,000.

16. Juan Alavanca is evaluating the risk of two companies in the machinery industry: The Gearing Company and Hebelkraft, Inc. Alavanca used the latest fiscal year's financial statements and interviews with managers of the respective companies to gather the following information:

	The Gearing Company	**Hebelkraft, Inc.**
Number of units produced and sold	1 million	1.5 million
Sales price per unit	$200	$200
Variable cost per unit	$120	$100
Fixed operating cost	$40 million	$90 million

	The Gearing Company	Hebelkraft, Inc.
Fixed financing expense	$20 million	$20 million

Based on this information, the breakeven points for The Gearing Company and Hebelkraft, Inc. are:

A. 0.75 million and 1.1 million units, respectively.

B. 1 million and 1.5 million units, respectively.

C. 1.5 million and 0.75 million units, respectively.

Equity Investments

PRACTICE PROBLEMS

1. Akihiko Takabe has designed a sophisticated forecasting model, which predicts the movements in the overall stock market, in the hope of earning a return in excess of a fair return for the risk involved. He uses the predictions of the model to decide whether to buy, hold, or sell the shares of an index fund that aims to replicate the movements of the stock market. Takabe would *best* be characterized as a(n):

   A. hedger.

   B. investor.

   C. information-motivated trader.

2. James Beach is young and has substantial wealth. A significant proportion of his stock portfolio consists of emerging market stocks that offer relatively high expected returns at the cost of relatively high risk. Beach believes that investment in emerging market stocks is appropriate for him given his ability and willingness to take risk. Which of the following labels *most appropriately* describes Beach?

   A. Hedger.

   B. Investor.

   C. Information-motivated trader.

3. Lisa Smith owns a manufacturing company in the United States. Her company has sold goods to a customer in Brazil and will be paid in Brazilian real (BRL) in three months. Smith is concerned about the possibility of the BRL depreciating more than expected against the US dollar (USD). Therefore, she is planning to sell three-month futures contracts on the BRL. The seller of such contracts generally gains when the BRL depreciates against the USD. If Smith were to sell these future contracts, she would *most appropriately* be described as a(n):

   A. hedger.

   B. investor.

   C. information-motivated trader.

4. Which of the following is *not* a function of the financial system?

   A. To regulate arbitrageurs' profits (excess returns).

   B. To help the economy achieve allocational efficiency.

   C. To facilitate borrowing by businesses to fund current operations.

5. An investor primarily invests in stocks of publicly traded companies. The investor wants to increase the diversification of his portfolio. A friend has recommended investing in real estate properties. The purchase of real estate would *best* be characterized as a transaction in the:

   A. derivative investment market.

   B. traditional investment market.

C. alternative investment market.

6. A hedge fund holds its excess cash in 90-day commercial paper and negotiable certificates of deposit. The cash management policy of the hedge fund is *best described* as using:

   A. capital market instruments.

   B. money market instruments.

   C. intermediate-term debt instruments.

7. An oil and gas exploration and production company announces that it is offering 30 million shares to the public at $45.50 each. This transaction is *most likely* a sale in the:

   A. futures market.

   B. primary market.

   C. secondary market.

8. Consider a mutual fund that invests primarily in fixed-income securities that have been determined to be appropriate given the fund's investment goal. Which of the following is *least likely* to be a part of this fund?

   A. Warrants.

   B. Commercial paper.

   C. Repurchase agreements.

9. A friend has asked you to explain the differences between open-end and closed-end funds. Which of the following will you *most likely* include in your explanation?

   A. Closed-end funds are unavailable to new investors.

   B. When investors sell the shares of an open-end fund, they can receive a discount or a premium to the fund's net asset value.

   C. When selling shares, investors in an open-end fund sell the shares back to the fund whereas investors in a closed-end fund sell the shares to others in the secondary market.

10. The Standard & Poor's Depositary Receipts (SPDRs) is an investment that tracks the S&P 500 stock market index. Purchases and sales of SPDRs during an average trading day are *best* described as:

    A. primary market transactions in a pooled investment.

    B. secondary market transactions in a pooled investment.

    C. secondary market transactions in an actively managed investment.

11. Which of the following statements about exchange-traded funds is *most correct*?

    A. Exchange-traded funds are not backed by any assets.

    B. The investment companies that create exchange-traded funds are financial intermediaries.

C. The transaction costs of trading shares of exchange-traded funds are substantially greater than the combined costs of trading the underlying assets of the fund.

12. The usefulness of a forward contract is limited by some problems. Which of the following is *most likely* one of those problems?

    A. Once you have entered into a forward contract, it is difficult to exit from the contract.

    B. Entering into a forward contract requires the long party to deposit an initial amount with the short party.

    C. If the price of the underlying asset moves adversely from the perspective of the long party, periodic payments must be made to the short party.

13. Tony Harris is planning to start trading in commodities. He has heard about the use of futures contracts on commodities and is learning more about them. Which of the following is Harris *least likely* to find associated with a futures contract?

    A. Existence of counterparty risk.

    B. Standardized contractual terms.

    C. Payment of an initial margin to enter into a contract.

14. A German company that exports machinery is expecting to receive $10 million in three months. The firm converts all its foreign currency receipts into euros. The chief financial officer of the company wishes to lock in a minimum fixed rate for converting the $10 million to euro but also wants to keep the flexibility to use the future spot rate if it is favorable. What hedging transaction is *most likely* to achieve this objective?

    A. Selling dollars forward.

    B. Buying put options on the dollar.

    C. Selling futures contracts on dollars.

15. A book publisher requires substantial quantities of paper. The publisher and a paper producer have entered into an agreement for the publisher to buy and the producer to supply a given quantity of paper four months later at a price agreed upon today. This agreement is a:

    A. futures contract.

    B. forward contract.

    C. commodity swap.

16. The Standard & Poor's Depositary Receipts (SPDRs) is an exchange-traded fund in the United States that is designed to track the S&P 500 stock market index. The latest price of a share of SPDRs is $290. A trader has just bought call options on shares of SPDRs for a premium of $3 per share. The call options expire in six months and have an exercise price of $305 per share. On the expiration date, the trader will exercise the call options (ignore any transaction costs) if and only if the shares of SPDRs are trading:

    A. below $305 per share.

B. above $305 per share.

C. above $308 per share.

17. Jason Schmidt works for a hedge fund and he specializes in finding profit opportunities that are the result of inefficiencies in the market for convertible bonds—bonds that can be converted into a predetermined amount of a company's common stock. Schmidt tries to find convertibles that are priced inefficiently relative to the underlying stock. The trading strategy involves the simultaneous purchase of the convertible bond and the short sale of the underlying common stock. The above process could best be described as:

A. hedging.

B. arbitrage.

C. securitization.

18. Pierre-Louis Robert just purchased a call option on shares of the Michelin Group. A few days ago he wrote a put option on Michelin shares. The call and put options have the same exercise price, expiration date, and number of shares underlying. Considering both positions, Robert's exposure to the risk of the stock of the Michelin Group is:

A. long.

B. short.

C. neutral.

19. An online brokerage firm has set the minimum margin requirement at 55 percent. What is the maximum leverage ratio associated with a position financed by this minimum margin requirement?

A. 1.55.

B. 1.82.

C. 2.22.

20. A trader has purchased 200 shares of a non-dividend-paying firm on margin at a price of $50 per share. The leverage ratio is 2.5. Six months later, the trader sells these shares at $60 per share. Ignoring the interest paid on the borrowed amount and the transaction costs, what was the return to the trader during the six-month period?

A. 20 percent.

B. 33.33 percent.

C. 50 percent.

21. Jason Williams purchased 500 shares of a company at $32 per share. The stock was bought on 75 percent margin. One month later, Williams had to pay interest on the amount borrowed at a rate of 2 percent per month. At that time, Williams received a dividend of $0.50 per share. Immediately after that he sold the shares at $28 per share. He paid commissions of $10 on the purchase and $10 on the sale of the stock. What was the rate of return on this investment for the one-month

period?

A. −12.5 percent.

B. −15.4 percent.

C. −50.1 percent.

22. Caroline Rogers believes the price of Gamma Corp. stock will go down in the near future. She has decided to sell short 200 shares of Gamma Corp. at the current market price of €47. The initial margin requirement is 40 percent. Which of the following is an appropriate statement regarding the margin requirement that Rogers is subject to on this short sale?

A. She will need to contribute €3,760 as margin.

B. She will need to contribute €5,640 as margin.

C. She will only need to leave the proceeds from the short sale as deposit and does not need to contribute any additional funds.

23. The current price of a stock is $25 per share. You have $10,000 to invest. You borrow an additional $10,000 from your broker and invest $20,000 in the stock. If the maintenance margin is 30 percent, at what price will a margin call first occur?

A. $9.62.

B. $17.86.

C. $19.71.

24. A market has the following limit orders standing on its book for a particular stock. The bid and ask sizes are number of shares in hundreds.

Bid Size	Limit Price (€)	Offer Size
5	9.73	
12	9.81	
4	9.84	
6	9.95	
	10.02	5
	10.10	12
	10.14	8

What is the market?

A. 9.73 bid, offered at 10.14.

B. 9.81 bid, offered at 10.10.

C. 9.95 bid, offered at 10.02.

25. Consider the following limit order book for a stock. The bid and ask sizes are number of shares in hundreds.

Bid Size	Limit Price (¥)	Offer Size
3	122.80	

Bid Size	Limit Price (¥)	Offer Size
8	123.00	
4	123.35	
	123.80	7
	124.10	6
	124.50	7

A new buy limit order is placed for 300 shares at ¥123.40. This limit order is said to:

A. take the market.

B. make the market.

C. make a new market.

26. Currently, the market in a stock is "$54.62 bid, offered at $54.71." A new sell limit order is placed at $54.62. This limit order is said to:

A. take the market.

B. make the market.

C. make a new market.

27. You have placed a sell market-on-open order—a market order that would automatically be submitted at the market's open tomorrow and would fill at the market price. Your instruction, to sell the shares at the market open, is a(n):

A. execution instruction.

B. validity instruction.

C. clearing instruction.

28. Jim White has sold short 100 shares of Super Stores at a price of $42 per share. He has also simultaneously placed a "good-till-cancelled, stop 50, limit 55 buy" order. Assume that if the stop condition specified by White is satisfied and the order becomes valid, it will get executed. Excluding transaction costs, what is the maximum possible loss that White can have?

A. $800.

B. $1,300.

C. Unlimited.

29. You own shares of a company that are currently trading at $30 a share. Your technical analysis of the shares indicates a support level of $27.50. That is, if the price of the shares is going down, it is more likely to stay above this level rather than fall below it. If the price does fall below this level, however, you believe that the price may continue to decline. You have no immediate intent to sell the shares but are concerned about the possibility of a huge loss if the share price declines below the support level. Which of the following types of orders could you place to most appropriately address your concern?

A. Short sell order.

B. Good-till-cancelled stop sell order.

C. Good-till-cancelled stop buy order.

30. In an underwritten offering, the risk that the entire issue may not be sold to the public at the stipulated offering price is borne by the:

A. issuer.

B. investment bank.

C. buyers of the part of the issue that is sold.

31. A British company listed on AIM (formerly the Alternative Investment Market) of the London Stock Exchange announced the sale of 6,686,665 shares to a small group of qualified investors at £0.025 per share. Which of the following *best describes* this sale?

A. Shelf registration.

B. Private placement.

C. Initial public offering.

32. A German publicly traded company, to raise new capital, gave its existing shareholders the opportunity to subscribe for new shares. The existing shareholders could purchase two new shares at a subscription price of €4.58 per share for every 15 shares held. This is an example of a(n):

A. rights offering.

B. private placement.

C. initial public offering.

33. Consider an order-driven system that allows hidden orders. The following four sell orders on a particular stock are currently in the system's limit order book. Based on the commonly used order precedence hierarchy, which of these orders will have precedence over others?

Order	Time of Arrival (HH:MM:SS)	Limit Price (€)	Special Instruction (If any)
I	9:52:01	20.33	
II	9:52:08	20.29	Hidden order
III	9:53:04	20.29	
IV	9:53:49	20.29	

A. Order I (time of arrival of 9:52:01).

B. Order II (time of arrival of 9:52:08).

C. Order III (time of arrival of 9:53:04).

34. Zhenhu Li has submitted an immediate-or-cancel buy order for 500 shares of a company at a limit price of CNY 74.25. There are two sell limit orders standing in that stock's order book at that time. One is for 300 shares at a limit price of CNY 74.30 and the other is for 400 shares at a limit price of CNY 74.35. How many

shares in Li's order would get cancelled?

A. None (the order would remain open but unfilled).

B. 200 (300 shares would get filled).

C. 500 (there would be no fill).

35. A market has the following limit orders standing on its book for a particular stock:

Buyer	Bid Size (Number of Shares)	Limit Price (£)	Offer Size (Number of Shares)	Seller
Keith	1,000	19.70		
Paul	200	19.84		
Ann	400	19.89		
Mary	300	20.02		
		20.03	800	Jack
		20.11	1,100	Margaret
		20.16	400	Jeff

Ian submits a day order to sell 1,000 shares, limit £19.83. Assuming that no more buy orders are submitted on that day after Ian submits his order, what would be Ian's average trade price?

A. £19.70.

B. £19.92.

C. £20.05.

36. A financial analyst is examining whether a country's financial market is well functioning. She finds that the transaction costs in this market are low and trading volumes are high. She concludes that the market is quite liquid. In such a market:

A. traders will find it hard to make use of their information.

B. traders will find it easy to trade and their trading will make the market less informationally efficient.

C. traders will find it easy to trade and their trading will make the market more informationally efficient.

37. The government of a country whose financial markets are in an early stage of development has hired you as a consultant on financial market regulation. Your first task is to prepare a list of the objectives of market regulation. Which of the following is *least likely* to be included in this list of objectives?

A. Minimize agency problems in the financial markets.

B. Ensure that financial markets are fair and orderly.

C. Ensure that investors in the stock market achieve a rate of return that is at least equal to the risk-free rate of return.

PRACTICE PROBLEMS

1. A security market index represents the:
   - **A.** risk of a security market.
   - **B.** security market as a whole.
   - **C.** security market, market segment, or asset class.

2. One month after inception, the price return version and total return version of a single index (consisting of identical securities and weights) will be equal if:
   - **A.** market prices have not changed.
   - **B.** capital gains are offset by capital losses.
   - **C.** the securities do not pay dividends or interest.

3. The values of a price return index and a total return index consisting of identical equal-weighted dividend-paying equities will be equal:
   - **A.** only at inception.
   - **B.** at inception and on rebalancing dates.
   - **C.** at inception and on reconstitution dates.

4. Security market indexes are:
   - **A.** constructed and managed like a portfolio of securities.
   - **B.** simple interchangeable tools for measuring the returns of different asset classes.
   - **C.** valued on a regular basis using the actual market prices of the constituent securities.

5. When creating a security market index, an index provider must first determine the:
   - **A.** target market.
   - **B.** appropriate weighting method.
   - **C.** number of constituent securities.

6. An analyst gathers the following information for an equal-weighted index comprised of assets Able, Baker, and Charlie:

Security	Beginning of Period Price (€)	End of Period Price (€)	Total Dividends (€)
Able	10.00	12.00	0.75
Baker	20.00	19.00	1.00
Charlie	30.00	30.00	2.00

The price return of the index is:

A. 1.7%.

B. 5.0%.

C. 11.4%.

7. An analyst gathers the following information for an equal-weighted index comprised of assets Able, Baker, and Charlie:

Security	Beginning of Period Price (€)	End of Period Price (€)	Total Dividends (€)
Able	10.00	12.00	0.75
Baker	20.00	19.00	1.00
Charlie	30.00	30.00	2.00

The total return of the index is:

A. 5.0%.

B. 7.9%.

C. 11.4%.

8. An analyst gathers the following information for a price-weighted index comprised of securities ABC, DEF, and GHI:

Security	Beginning of Period Price (£)	End of Period Price (£)	Total Dividends (£)
ABC	25.00	27.00	1.00
DEF	35.00	25.00	1.50
GHI	15.00	16.00	1.00

The price return of the index is:

A. –4.6%.

B. –9.3%.

C. –13.9%.

9. An analyst gathers the following information for a market-capitalization-weighted index comprised of securities MNO, QRS, and XYZ:

Security	Beginning of Period Price (¥)	End of Period Price (¥)	Dividends per Share (¥)	Shares Outstanding
MNO	2,500	2,700	100	5,000
QRS	3,500	2,500	150	7,500
XYZ	1,500	1,600	100	10,000

The price return of the index is:

A. –9.33%.

B. –10.23%.

C. −13.90%.

10. An analyst gathers the following information for a market-capitalization-weighted index comprised of securities MNO, QRS, and XYZ:

Security	Beginning of Period Price (¥)	End of Period Price (¥)	Dividends Per Share (¥)	Shares Outstanding
MNO	2,500	2,700	100	5,000
QRS	3,500	2,500	150	7,500
XYZ	1,500	1,600	100	10,000

The total return of the index is:

A. 1.04%.

B. −5.35%.

C. −10.23%.

11. When creating a security market index, the target market:

A. determines the investment universe.

B. is usually a broadly defined asset class.

C. determines the number of securities to be included in the index.

12. An analyst gathers the following data for a price-weighted index:

	Beginning of Period		End of Period	
Security	**Price (€)**	**Shares Outstanding**	**Price (€)**	**Shares Outstanding**
A	20.00	300	22.00	300
B	50.00	300	48.00	300
C	26.00	2,000	30.00	2,000

The price return of the index over the period is:

A. 4.2%.

B. 7.1%.

C. 21.4%.

13. An analyst gathers the following data for a value-weighted index:

	Beginning of Period		End of Period	
Security	**Price (£)**	**Shares Outstanding**	**Price (£)**	**Shares Outstanding**
A	20.00	300	22.00	300
B	50.00	300	48.00	300

	Beginning of Period		End of Period	
Security	**Price (£)**	**Shares Outstanding**	**Price (£)**	**Shares Outstanding**
C	26.00	2,000	30.00	2,000

The return on the value-weighted index over the period is:

A. 7.1%.

B. 11.0%.

C. 21.4%.

14. An analyst gathers the following data for an equally-weighted index:

	Beginning of Period		End of Period	
Security	**Price (¥)**	**Shares Outstanding**	**Price (¥)**	**Shares Outstanding**
A	20.00	300	22.00	300
B	50.00	300	48.00	300
C	26.00	2,000	30.00	2,000

The return on the index over the period is:

A. 4.2%.

B. 6.8%.

C. 7.1%.

15. Which of the following index weighting methods requires an adjustment to the divisor after a stock split?

A. Price weighting.

B. Fundamental weighting.

C. Market-capitalization weighting.

16. If the price return of an equal-weighted index exceeds that of a market-capitalization-weighted index comprised of the same securities, the *most likely* explanation is:

A. stock splits.

B. dividend distributions.

C. outperformance of small-market-capitalization stocks.

17. A float-adjusted market-capitalization-weighted index weights each of its constituent securities by its price and:

A. its trading volume.

B. the number of its shares outstanding.

C. the number of its shares available to the investing public.

18. Which of the following index weighting methods is most likely subject to a value tilt?
    - **A.** Equal weighting.
    - **B.** Fundamental weighting.
    - **C.** Market-capitalization weighting.

19. Rebalancing an index is the process of periodically adjusting the constituent:
    - **A.** securities' weights to optimize investment performance.
    - **B.** securities to maintain consistency with the target market.
    - **C.** securities' weights to maintain consistency with the index's weighting method.

20. Which of the following index weighting methods requires the most frequent rebalancing?
    - **A.** Price weighting.
    - **B.** Equal weighting.
    - **C.** Market-capitalization weighting.

21. Reconstitution of a security market index reduces:
    - **A.** portfolio turnover.
    - **B.** the need for rebalancing.
    - **C.** the likelihood that the index includes securities that are not representative of the target market.

22. Security market indexes are used as:
    - **A.** measures of investment returns.
    - **B.** proxies to measure unsystematic risk.
    - **C.** proxies for specific asset classes in asset allocation models.

23. Uses of market indexes do not include serving as a:
    - **A.** measure of systemic risk.
    - **B.** basis for new investment products.
    - **C.** benchmark for evaluating portfolio performance.

24. Which of the following statements regarding sector indexes is *most* accurate? Sector indexes:
    - **A.** track different economic sectors and cannot be aggregated to represent the equivalent of a broad market index.
    - **B.** provide a means to determine whether an active investment manager is more successful at stock selection or sector allocation.

C. apply a universally agreed upon sector classification system to identify the constituent securities of specific economic sectors, such as consumer goods, energy, finance, health care.

25. Which of the following is an example of a style index? An index based on:

    A. geography.

    B. economic sector.

    C. market capitalization.

26. Which of the following statements regarding fixed-income indexes is *most* accurate?

    A. Liquidity issues make it difficult for investors to easily replicate fixed-income indexes.

    B. Rebalancing and reconstitution are the only sources of turnover in fixed-income indexes.

    C. Fixed-income indexes representing the same target market hold similar numbers of bonds.

27. An aggregate fixed-income index:

    A. comprises corporate and asset-backed securities.

    B. represents the market of government-issued securities.

    C. can be subdivided by market or economic sector to create more narrowly defined indexes.

28. Fixed-income indexes are *least likely* constructed on the basis of:

    A. maturity.

    B. type of issuer.

    C. coupon frequency.

29. In comparison to equity indexes, the constituent securities of fixed-income indexes are:

    A. more liquid.

    B. easier to price.

    C. drawn from a larger investment universe.

30. Commodity index values are based on:

    A. futures contract prices.

    B. the market price of the specific commodity.

    C. the average market price of a basket of similar commodities.

31. Which of the following statements is *most* accurate?

    A. Commodity indexes all share similar weighting methods.

B. Commodity indexes containing the same underlying commodities offer similar returns.

C. The performance of commodity indexes can be quite different from that of the underlying commodities.

32. Which of the following is *not* a real estate index category?

A. Appraisal index.

B. Initial sales index.

C. Repeat sales index.

33. A unique feature of hedge fund indexes is that they:

A. are frequently equal weighted.

B. are determined by the constituents of the index.

C. reflect the value of private rather than public investments.

34. The returns of hedge fund indexes are *most likely*:

A. biased upward.

B. biased downward.

C. similar across different index providers.

PRACTICE PROBLEMS

1. If markets are efficient, the difference between the intrinsic value and market value of a company's security is:
   A. negative.
   B. zero.
   C. positive.

2. The intrinsic value of an undervalued asset is:
   A. less than the asset's market value.
   B. greater than the asset's market value.
   C. the value at which the asset can currently be bought or sold.

3. The market value of an undervalued asset is:
   A. greater than the asset's intrinsic value.
   B. the value at which the asset can currently be bought or sold.
   C. equal to the present value of all the asset's expected cash flows.

4. In an efficient market, the change in a company's share price is *most likely* the result of:
   A. insiders' private information.
   B. the previous day's change in stock price.
   C. new information coming into the market.

5. Regulation that restricts some investors from participating in a market will *most likely*:
   A. impede market efficiency.
   B. not affect market efficiency.
   C. contribute to market efficiency.

6. With respect to efficient market theory, when a market allows short selling, the efficiency of the market is *most likely* to:
   A. increase.
   B. decrease.
   C. remain the same.

7. Which of the following regulations will *most likely* contribute to market efficiency? Regulatory restrictions on:
   A. short selling.
   B. foreign traders.

C. insiders trading with nonpublic information.

8. Which of the following market regulations will *most likely* impede market efficiency?
   A. Restricting traders' ability to short sell.
   B. Allowing unrestricted foreign investor trading.
   C. Penalizing investors who trade with nonpublic information.

9. An increase in the time between when an order to trade a security is placed and when the order is executed *most likely* indicates that market efficiency has:
   A. decreased.
   B. remained the same.
   C. increased.

10. With respect to the efficient market hypothesis, if security prices reflect *only* past prices and trading volume information, then the market is:
   A. weak-form efficient.
   B. strong-form efficient.
   C. semi-strong-form efficient.

11. Which one of the following statements *best* describes the semi-strong form of market efficiency?
   A. Empirical tests examine the historical patterns in security prices.
   B. Security prices reflect all publicly known and available information.
   C. Semi-strong-form efficient markets are not necessarily weak-form efficient.

12. If prices reflect all public and private information, the market is *best* described as:
   A. weak-form efficient.
   B. strong-form efficient.
   C. semi-strong-form efficient.

13. If markets are semi-strong efficient, standard fundamental analysis will yield abnormal trading profits that are:
   A. negative.
   B. equal to zero.
   C. positive.

14. If markets are semi-strong-form efficient, then passive portfolio management strategies are *most likely* to:
   A. earn abnormal returns.
   B. outperform active trading strategies.

C. underperform active trading strategies.

15. If a market is semi-strong-form efficient, the risk-adjusted returns of a passively managed portfolio relative to an actively managed portfolio are *most likely*:

A. lower.

B. higher.

C. the same.

16. Technical analysts assume that markets are:

A. weak-form efficient.

B. weak-form inefficient.

C. semi-strong-form efficient.

17. Fundamental analysts assume that markets are:

A. weak-form inefficient.

B. semi-strong-form efficient.

C. semi-strong-form inefficient.

18. If a market is weak-form efficient but semi-strong-form inefficient, then which of the following types of portfolio management is *most likely* to produce abnormal returns?

A. Passive portfolio management.

B. Active portfolio management based on technical analysis.

C. Active portfolio management based on fundamental analysis.

19. Which of the following is *least likely* to explain the January effect anomaly?

A. Tax-loss selling.

B. Release of new information in January.

C. Window dressing of portfolio holdings.

20. If a researcher conducting empirical tests of a trading strategy using time series of returns finds statistically significant abnormal returns, then the researcher has *most likely* found:

A. a market anomaly.

B. evidence of market inefficiency.

C. a strategy to produce future abnormal returns.

21. Researchers have found that value stocks have consistently outperformed growth stocks. An investor wishing to exploit the value effect should purchase the stock of companies with above-average:

A. dividend yields.

B. market-to-book ratios.

C. price-to-earnings ratios.

22. Which of the following market anomalies is inconsistent with weak-form market efficiency?

A. Earnings surprise.

B. Momentum pattern.

C. Closed-end fund discount.

23. With respect to efficient markets, a company whose share price changes gradually after the public release of its annual report *most likely* indicates that the market where the company trades is:

A. semi-strong-form efficient.

B. subject to behavioral biases.

C. receiving additional information about the company.

24. With respect to rational and irrational investment decisions, the efficient market hypothesis requires:

A. only that the market is rational.

B. that all investors make rational decisions.

C. that some investors make irrational decisions.

25. Observed overreactions in markets can be explained by an investor's degree of:

A. risk aversion.

B. loss aversion.

C. confidence in the market.

26. Like traditional finance models, the behavioral theory of loss aversion assumes that investors dislike risk; however, the dislike of risk in behavioral theory is assumed to be:

A. leptokurtic.

B. symmetrical.

C. asymmetrical.

PRACTICE PROBLEMS

1. Which of the following is *not* a characteristic of common equity?
   - **A.** It represents an ownership interest in the company.
   - **B.** Shareholders participate in the decision-making process.
   - **C.** The company is obligated to make periodic dividend payments.

2. The type of equity voting right that grants one vote for each share of equity owned is referred to as:
   - **A.** proxy voting.
   - **B.** statutory voting.
   - **C.** cumulative voting.

3. All of the following are characteristics of preference shares *except*:
   - **A.** They are either callable or putable.
   - **B.** They generally do not have voting rights.
   - **C.** They do not share in the operating performance of the company.

4. Participating preference shares entitle shareholders to:
   - **A.** participate in the decision-making process of the company.
   - **B.** convert their shares into a specified number of common shares.
   - **C.** receive an additional dividend if the company's profits exceed a pre-determined level.

5. Which of the following statements about private equity securities is *incorrect*?
   - **A.** They cannot be sold on secondary markets.
   - **B.** They have market-determined quoted prices.
   - **C.** They are primarily issued to institutional investors.

6. Venture capital investments:
   - **A.** can be publicly traded.
   - **B.** do not require a long-term commitment of funds.
   - **C.** provide mezzanine financing to early-stage companies.

7. Which of the following statements *most accurately* describes one difference between private and public equity firms?
   - **A.** Private equity firms are focused more on short-term results than public firms.
   - **B.** Private equity firms' regulatory and investor relations operations are less costly than those of public firms.

C. Private equity firms are incentivized to be more open with investors about governance and compensation than public firms.

8. Emerging markets have benefited from recent trends in international markets. Which of the following has *not* been a benefit of these trends?
   A. Emerging market companies do not have to worry about a lack of liquidity in their home equity markets.
   B. Emerging market companies have found it easier to raise capital in the markets of developed countries.
   C. Emerging market companies have benefited from the stability of foreign exchange markets.

9. When investing in unsponsored depository receipts, the voting rights to the shares in the trust belong to:
   A. the depository bank.
   B. the investors in the depository receipts.
   C. the issuer of the shares held in the trust.

10. With respect to Level III sponsored ADRs, which of the following is *least likely* to be accurate? They:
    A. have low listing fees.
    B. are traded on the NYSE, NASDAQ, and AMEX.
    C. are used to raise equity capital in US markets.

11. A basket of listed depository receipts, or an exchange-traded fund, would *most likely* be used for:
    A. gaining exposure to a single equity.
    B. hedging exposure to a single equity.
    C. gaining exposure to multiple equities.

12. Calculate the total return on a share of equity using the following data:
    Purchase price: \$50
    Sale price: \$42
    Dividend paid during holding period: \$2
    A. −12.0%
    B. −14.3%
    C. −16.0%

13. If a US-based investor purchases a euro-denominated ETF and the euro subsequently depreciates in value relative to the dollar, the investor will have a total return that is:
    A. lower than the ETF's total return.
    B. higher than the ETF's total return.

C. the same as the ETF's total return.

14. Which of the following is *incorrect* about the risk of an equity security? The risk of an equity security is:

A. based on the uncertainty of its cash flows.

B. based on the uncertainty of its future price.

C. measured using the standard deviation of its dividends.

15. From an investor's point of view, which of the following equity securities is the *least* risky?

A. Putable preference shares.

B. Callable preference shares.

C. Non-callable preference shares.

16. Which of the following is *least likely* to be a reason for a company to issue equity securities on the primary market?

A. To raise capital.

B. To increase liquidity.

C. To increase return on equity.

17. Which of the following is *not* a primary goal of raising equity capital?

A. To finance the purchase of long-lived assets.

B. To finance the company's revenue-generating activities.

C. To ensure that the company continues as a going concern.

18. Which of the following statements is *most accurate* in describing a company's book value?

A. Book value increases when a company retains its net income.

B. Book value is usually equal to the company's market value.

C. The ultimate goal of management is to maximize book value.

19. Calculate the book value of a company using the following information:

Number of shares outstanding	100,000
Price per share	€52
Total assets	€12,000,000
Total liabilities	€7,500,000
Net Income	€2,000,000

A. €4,500,000.

B. €5,200,000.

C. €6,500,000.

20. Which of the following statements is *least accurate* in describing a company's market value?

    A. Management's decisions do not influence the company's market value.

    B. Increases in book value may not be reflected in the company's market value.

    C. Market value reflects the collective and differing expectations of investors.

21. Calculate the return on equity (ROE) of a stable company using the following data:

Total sales	£2,500,000
Net income	£2,000,000
Beginning of year total assets	£50,000,000
Beginning of year total liabilities	£35,000,000
Number of shares outstanding at the end of the year	1,000,000
Price per share at the end of the year	£20

    A. 10.0%.

    B. 13.3%.

    C. 16.7%.

22. Holding all other factors constant, which of the following situations will *most likely* lead to an increase in a company's return on equity?

    A. The market price of the company's shares increases.

    B. Net income increases at a slower rate than shareholders' equity.

    C. The company issues debt to repurchase outstanding shares of equity.

23. Which of the following measures is the *most difficult* to estimate?

    A. The cost of debt.

    B. The cost of equity.

    C. Investors' required rate of return on debt.

24. A company's cost of equity is often used as a proxy for investors':

    A. average required rate of return.

    B. minimum required rate of return.

    C. maximum required rate of return.

PRACTICE PROBLEMS

1. Which of the following is *least likely* to involve industry analysis?
   - **A.** Sector rotation strategy
   - **B.** Top-down fundamental investing
   - **C.** Tactical asset allocation strategy

2. A sector rotation strategy involves investing in a sector by:
   - **A.** making regular investments in it.
   - **B.** investing in a pre-selected group of sectors on a rotating basis.
   - **C.** timing investment to take advantage of business-cycle conditions.

3. Which of the following information about a company would *most likely* depend on an industry analysis? The company's:
   - **A.** treatment of long-lived assets on its financial statements.
   - **B.** competitive environment.
   - **C.** trends in corporate expenses.

4. Which of the following is *not* a limitation of the cyclical/non-cyclical descriptive approach to classifying companies?
   - **A.** A cyclical company may have a growth component in it.
   - **B.** Business-cycle sensitivity is a discrete phenomenon rather than a continuous spectrum.
   - **C.** A global company can experience economic expansion in one part of the world while experiencing recession in another part.

5. A cyclical company is *most likely* to:
   - **A.** have low operating leverage.
   - **B.** sell relatively inexpensive products.
   - **C.** experience wider-than-average fluctuations in demand.

6. A company that is sensitive to the business cycle would *most likely*:
   - **A.** not have growth opportunities.
   - **B.** experience below-average fluctuation in demand.
   - **C.** sell products that customers can purchase at a later date if necessary.

7. Which of the following factors would *most likely* be a limitation of applying business-cycle analysis to global industry analysis?
   - **A.** Some industries are relatively insensitive to the business cycle.

B. Correlations of security returns between different world markets are relatively low.

C. One region or country of the world may experience recession while another region experiences expansion.

8. In which sector would a manufacturer of personal care products be classified?

A. Health care

B. Consumer staples

C. Consumer discretionary

9. An automobile manufacturer is *most likely* classified in which of the following industry sectors?

A. Consumer staples

B. Industrial durables

C. Consumer discretionary

10. Which of the following statements about commercial and government industry classification systems is *most* accurate?

A. Many commercial classification systems include private for-profit companies.

B. Both commercial and government classification systems exclude not-for-profit companies.

C. Commercial classification systems are generally updated more frequently than government classification systems.

11. Which of the following statements about peer groups is *most* accurate?

A. Constructing a peer group for a company follows a standardized process.

B. Commercial industry classification systems often provide a starting point for constructing a peer group.

C. A peer group is generally composed of all the companies in the most narrowly defined category used by the commercial industry classification system.

12. With regard to forming a company's peer group, which of the following statements is *not* correct?

A. Comments from the management of the company about competitors are generally not used when selecting the peer group.

B. The higher the proportion of revenue and operating profit of the peer company derived from business activities similar to those of the subject company, the more meaningful the comparison.

C. Comparing the company's performance measures with those for a potential peer-group company is of limited value when the companies are exposed to different stages of the business cycle.

13. When selecting companies for inclusion in a peer group, a company operating in three different business segments would:

    A. be in only one peer group.

    B. possibly be in more than one peer group.

    C. not be included in any peer group.

14. An industry that *most likely* has both high barriers to entry and high barriers to exit is the:

    A. restaurant industry.

    B. advertising industry.

    C. automobile industry.

15. Which factor is *most likely* associated with stable market share?

    A. Low switching costs

    B. Low barriers to entry

    C. Slow pace of product innovation

16. Which of the following companies *most likely* has the greatest ability to quickly increase its capacity to offer goods or services?

    A. A restaurant

    B. A steel producer

    C. An insurance company

17. Which of the following life-cycle phases is typically characterized by high prices?

    A. Mature

    B. Growth

    C. Embryonic

18. In which of the following life-cycle phases are price wars *most likely* to be absent?

    A. Mature

    B. Decline

    C. Growth

19. When graphically depicting the life-cycle model for an industry as a curve, the variables on the axes are:

    A. price and time.

    B. demand and time.

    C. demand and stage of the life cycle.

20. Industry consolidation and high barriers to entry *most likely* characterize which

life-cycle stage?

A. Mature

B. Growth

C. Embryonic

21. Which of the following is *most likely* a characteristic of a concentrated industry?

A. Infrequent, tacit coordination

B. Difficulty in monitoring other industry members

C. Industry members attempting to avoid competition on price

22. Which of the following industry characteristics is generally *least likely* to produce high returns on capital?

A. High barriers to entry

B. High degree of concentration

C. Short lead time to build new plants

23. An industry with high barriers to entry and weak pricing power *most likely* has:

A. high barriers to exit.

B. stable market shares.

C. significant numbers of issued patents.

24. Economic value is created for an industry's shareholders when the industry earns a return:

A. below the cost of capital.

B. equal to the cost of capital.

C. above the cost of capital.

25. Which of the following industries is *most likely* to be characterized as concentrated with strong pricing power?

A. Asset management

B. Alcoholic beverages

C. Household and personal products

26. A population that is rapidly aging would *most likely* cause the growth rate of the industry producing eye glasses and contact lenses to:

A. decrease.

B. increase.

C. not change.

27. If over a long period of time a country's average level of educational accomplishment increases, this development would *most likely* lead to the country's amount

of income spent on consumer discretionary goods to:

A. decrease.

B. increase.

C. not change.

28. If the technology for an industry involves high fixed capital investment, then one way to seek higher profit growth is by pursuing:

A. economies of scale.

B. diseconomies of scale.

C. removal of features that differentiate the product or service provided.

29. With respect to competitive strategy, a company with a successful cost leadership strategy is *most likely* characterized by:

A. a low cost of capital.

B. reduced market share.

C. the ability to offer products at higher prices than those of its competitors.

30. When conducting a company analysis, the analysis of demand for a company's product is *least likely* to consider the:

A. company's cost structure.

B. motivations of the customer base.

C. product's differentiating characteristics.

31. Which of the following statements about company analysis is *most* accurate?

A. The complexity of spreadsheet modeling ensures precise forecasts of financial statements.

B. The interpretation of financial ratios should focus on comparing the company's results over time but not with competitors.

C. The corporate profile would include a description of the company's business, investment activities, governance, and strengths and weaknesses.

PRACTICE PROBLEMS

1. An analyst estimates the intrinsic value of a stock to be in the range of €17.85 to €21.45. The current market price of the stock is €24.35. This stock is *most likely*:
   - **A.** overvalued.
   - **B.** undervalued.
   - **C.** fairly valued.

2. An analyst determines the intrinsic value of an equity security to be equal to $55. If the current price is $47, the equity is *most likely*:
   - **A.** undervalued.
   - **B.** fairly valued.
   - **C.** overvalued.

3. In asset-based valuation models, the intrinsic value of a common share of stock is based on the:
   - **A.** estimated market value of the company's assets.
   - **B.** estimated market value of the company's assets plus liabilities.
   - **C.** estimated market value of the company's assets minus liabilities.

4. Which of the following is *most likely* used in a present value model?
   - **A.** Enterprise value.
   - **B.** Price to free cash flow.
   - **C.** Free cash flow to equity.

5. Book value is *least likely* to be considered when using:
   - **A.** a multiplier model.
   - **B.** an asset-based valuation model.
   - **C.** a present value model.

6. An analyst is attempting to calculate the intrinsic value of a company and has gathered the following company data: EBITDA, total market value, and market value of cash and short-term investments, liabilities, and preferred shares. The analyst is *least likely* to use:
   - **A.** a multiplier model.
   - **B.** a discounted cash flow model.
   - **C.** an asset-based valuation model.

7. An analyst who bases the calculation of intrinsic value on dividend-paying capacity rather than expected dividends will *most likely* use the:
   - **A.** dividend discount model.

B. free cash flow to equity model.

C. cash flow from operations model.

8. An investor expects to purchase shares of common stock today and sell them after two years. The investor has estimated dividends for the next two years, D_1 and D_2, and the selling price of the stock two years from now, P_2. According to the dividend discount model, the intrinsic value of the stock today is the present value of:

   A. next year's dividend, D_1.

   B. future expected dividends, D_1 and D_2.

   C. future expected dividends and price—D_1, D_2 and P_2.

9. In the free cash flow to equity (FCFE) model, the intrinsic value of a share of stock is calculated as:

   A. the present value of future expected FCFE.

   B. the present value of future expected FCFE plus net borrowing.

   C. the present value of future expected FCFE minus fixed capital investment.

10. With respect to present value models, which of the following statements is *most accurate*?

    A. Present value models can be used only if a stock pays a dividend.

    B. Present value models can be used only if a stock pays a dividend or is expected to pay a dividend.

    C. Present value models can be used for stocks that currently pay a dividend, are expected to pay a dividend, or are not expected to pay a dividend.

11. A Canadian life insurance company has an issue of 4.80 percent, $25 par value, perpetual, non-convertible, non-callable preferred shares outstanding. The required rate of return on similar issues is 4.49 percent. The intrinsic value of a preferred share is *closest to*:

    A. $25.00.

    B. $26.75.

    C. $28.50.

12. Two analysts estimating the value of a non-convertible, non-callable, perpetual preferred stock with a constant dividend arrive at different estimated values. The *most likely* reason for the difference is that the analysts used different:

    A. time horizons.

    B. required rates of return.

    C. estimated dividend growth rates.

13. The Beasley Corporation has just paid a dividend of $1.75 per share. If the required rate of return is 12.3 percent per year and dividends are expected to grow indefinitely at a constant rate of 9.2 percent per year, the intrinsic value of Beasley

Corporation stock is *closest* to:

A. \$15.54.

B. \$56.45.

C. \$61.65.

14. An investor is considering the purchase of a common stock with a \$2.00 annual dividend. The dividend is expected to grow at a rate of 4 percent annually. If the investor's required rate of return is 7 percent, the intrinsic value of the stock is *closest* to:

A. \$50.00.

B. \$66.67.

C. \$69.33.

15. The Gordon growth model can be used to value dividend-paying companies that are:

A. expected to grow very fast.

B. in a mature phase of growth.

C. very sensitive to the business cycle.

16. Which of the following is *most likely* considered a weakness of present value models?

A. Present value models cannot be used for companies that do not pay dividends.

B. Small changes in model assumptions and inputs can result in large changes in the computed intrinsic value of the security.

C. The value of the security depends on the investor's holding period; thus, comparing valuations of different companies for different investors is difficult.

17. An analyst gathers or estimates the following information about a stock:

Current price per share	€22.56
Current annual dividend per share	€1.60
Annual dividend growth rate for Years 1–4	9.00%
Annual dividend growth rate for Years 5+	4.00%
Required rate of return	12%

Based on a dividend discount model, the stock is *most likely*:

A. undervalued.

B. fairly valued.

C. overvalued.

18. An analyst is attempting to value shares of the Dominion Company. The company has just paid a dividend of \$0.58 per share. Dividends are expected to grow by 20

percent next year and 15 percent the year after that. From the third year onward, dividends are expected to grow at 5.6 percent per year indefinitely. If the required rate of return is 8.3 percent, the intrinsic value of the stock is *closest* to:

A. $26.00.

B. $27.00.

C. $28.00.

19. Hideki Corporation has just paid a dividend of ¥450 per share. Annual dividends are expected to grow at the rate of 4 percent per year over the next four years. At the end of four years, shares of Hideki Corporation are expected to sell for ¥9000. If the required rate of return is 12 percent, the intrinsic value of a share of Hideki Corporation is *closest* to:

A. ¥5,850.

B. ¥7,220.

C. ¥7,670.

20. The best model to use when valuing a young dividend-paying company that is just entering the growth phase is *most likely* the:

A. Gordon growth model.

B. two-stage dividend discount model.

C. three-stage dividend discount model.

21. An equity analyst has been asked to estimate the intrinsic value of the common stock of Omega Corporation, a leading manufacturer of automobile seats. Omega is in a mature industry, and both its earnings and dividends are expected to grow at a rate of 3 percent annually. Which of the following is *most likely* to be the best model for determining the intrinsic value of an Omega share?

A. Gordon growth model.

B. Free cash flow to equity model.

C. Multistage dividend discount model.

22. A price earnings ratio that is derived from the Gordon growth model is inversely related to the:

A. growth rate.

B. dividend payout ratio.

C. required rate of return.

23. The primary difference between P/E multiples based on comparables and P/E multiples based on fundamentals is that fundamentals-based P/Es take into account:

A. future expectations.

B. the law of one price.

C. historical information.

24. An analyst makes the following statement: "Use of P/E and other multiples for analysis is not effective because the multiples are based on historical data and because not all companies have positive accounting earnings." The analyst's statement is *most likely*:

    A. inaccurate with respect to both historical data and earnings.

    B. accurate with respect to historical data and inaccurate with respect to earnings.

    C. inaccurate with respect to historical data and accurate with respect to earnings.

25. An analyst has gathered the following information for the Oudin Corporation:

    Expected earnings per share = €5.70

    Expected dividends per share = €2.70

    Dividends are expected to grow at 2.75 percent per year indefinitely

    The required rate of return is 8.35 percent

    Based on the information provided, the price/earnings multiple for Oudin is *closest* to:

    A. 5.7.

    B. 8.5.

    C. 9.4.

26. An analyst has prepared a table of the average trailing twelve-month price-to-earning (P/E), price-to-cash flow (P/CF), and price-to-sales (P/S) for the Tanaka Corporation for the years 2014 to 2017.

Year	P/E	P/CF	P/S
2014	4.9	5.4	1.2
2015	6.1	8.6	1.5
2016	8.3	7.3	1.9
2017	9.2	7.9	2.3

As of the date of the valuation in 2018, the trailing twelve-month P/E, P/CF, and P/S are, respectively, 9.2, 8.0, and 2.5. Based on the information provided, the analyst may reasonably conclude that Tanaka shares are *most likely*:

A. overvalued.

B. undervalued.

C. fairly valued.

27. An analyst gathers the following information about two companies:

	Alpha Corp.	Delta Co.
Current price per share	$57.32	$18.93
Last year's EPS	$3.82	$1.35
Current year's estimated EPS	$4.75	$1.40

Which of the following statements is *most accurate*?

A. Delta has the higher trailing P/E multiple and lower current estimated P/E multiple.

B. Alpha has the higher trailing P/E multiple and lower current estimated P/E multiple.

C. Alpha has the higher trailing P/E multiple and higher current estimated P/E multiple.

28. An analyst gathers the following information about similar companies in the banking sector:

	First Bank	Prime Bank	Pioneer Trust
P/B	1.10	0.60	0.60
P/E	8.40	11.10	8.30

Which of the companies is *most likely* to be undervalued?

A. First Bank.

B. Prime Bank.

C. Pioneer Trust.

29. The market value of equity for a company can be calculated as enterprise value:

A. minus market value of debt, preferred stock, and short-term investments.

B. plus market value of debt and preferred stock minus short-term investments.

C. minus market value of debt and preferred stock plus short-term investments.

30. Which of the following statements regarding the calculation of the enterprise value multiple is *most likely* correct?

A. Operating income may be used instead of EBITDA.

B. EBITDA may not be used if company earnings are negative.

C. Book value of debt may be used instead of market value of debt.

31. An analyst has determined that the appropriate EV/EBITDA for Rainbow Company is 10.2. The analyst has also collected the following forecasted information for Rainbow Company:

EBITDA = $22,000,000

Market value of debt = $56,000,000

Cash = $1,500,000

The value of equity for Rainbow Company is *closest* to:

A. $169 million.

B. $224 million.

C. $281 million.

32. Enterprise value is most often determined as market capitalization of common equity and preferred stock minus the value of cash equivalents plus the:

    A. book value of debt.

    B. market value of debt.

    C. market value of long-term debt.

33. A disadvantage of the EV method for valuing equity is that the following information may be difficult to obtain:

    A. Operating income.

    B. Market value of debt.

    C. Market value of equity.

34. Asset-based valuation models are best suited to companies where the capital structure does not have a high proportion of:

    A. debt.

    B. intangible assets.

    C. current assets and liabilities.

35. Which of the following is *most likely* a reason for using asset-based valuation?

    A. The analyst is valuing a privately held company.

    B. The company has a relatively high level of intangible assets.

    C. The market values of assets and liabilities are different from the balance sheet values.

36. Which type of equity valuation model is *most likely* to be preferable when one is comparing similar companies?

    A. A multiplier model.

    B. A present value model.

    C. An asset-based valuation model.

Fixed Income

PRACTICE PROBLEMS

1. A 10-year bond was issued four years ago. The bond is denominated in US dollars, offers a coupon rate of 10% with interest paid semi-annually, and is currently priced at 102% of par. The bond's:

   A. tenor is six years.

   B. nominal rate is 5%.

   C. redemption value is 102% of the par value.

2. A sovereign bond has a maturity of 15 years. The bond is *best* described as a:

   A. perpetual bond.

   B. pure discount bond.

   C. capital market security.

3. A company has issued a floating-rate note with a coupon rate equal to the three-month MRR + 65 bps. Interest payments are made quarterly on 31 March, 30 June, 30 September, and 31 December. On 31 March and 30 June, the three-month MRR is 1.55% and 1.35%, respectively. The coupon rate for the interest payment made on 30 June is:

   A. 2.00%.

   B. 2.10%.

   C. 2.20%.

4. The legal contract that describes the form of the bond, the obligations of the issuer, and the rights of the bondholders can be *best* described as a bond's:

   A. covenant.

   B. indenture.

   C. debenture.

5. Which of the following is a type of external credit enhancement?

   A. Covenants

   B. A surety bond

   C. Overcollateralization

6. An affirmative covenant is *most likely* tostipulate:

   A. limits on the issuer's leverage ratio.

   B. how the proceeds of the bond issue will be used.

   C. the maximum percentage of the issuer's gross assets that can be sold.

7. Which of the following *best* describes a negative bond covenant? The issuer is:

   A. required to pay taxes as they come due.

B. prohibited from investing in risky projects.

C. required to maintain its current lines of business.

8. Clauses that specify the rights of the bondholders and any actions that the issuer is obligated to perform or is prohibited from performing are:

A. covenants.

B. collaterals.

C. credit enhancements.

9. Which of the following type of debt obligation *most likely* protects bondholders when the assets serving as collateral are non-performing?

A. Covered bonds

B. Collateral trust bonds

C. Mortgage-backed securities

10. Which of the following *best* describes a negative bond covenant? The requirement to:

A. insure and maintain assets.

B. comply with all laws and regulations.

C. maintain a minimum interest coverage ratio.

11. Contrary to positive bond covenants, negative covenants are *most likely*:

A. costlier.

B. legally enforceable.

C. enacted at time of issue.

12. A South African company issues bonds denominated in pound sterling that are sold to investors in the United Kingdom. These bonds can be *best* described as:

A. Eurobonds.

B. global bonds.

C. foreign bonds.

13. Relative to domestic and foreign bonds, Eurobonds are *most likely* to be:

A. bearer bonds.

B. registered bonds.

C. subject to greater regulation.

14. An investor in a country with an original issue discount tax provision purchases a 20-year zero-coupon bond at a deep discount to par value. The investor plans to hold the bond until the maturity date. The investor will *most likely* report:

A. a capital gain at maturity.

B. a tax deduction in the year the bond is purchased.

C. taxable income from the bond every year until maturity.

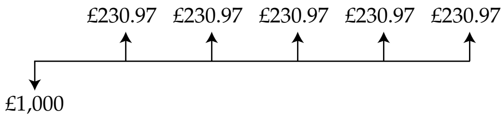
15. A bond that is characterized by a fixed periodic payment schedule that reduces the bond's outstanding principal amount to zero by the maturity date is *best* described as a:

A. bullet bond.

B. plain vanilla bond.

C. fully amortized bond.

16. A five-year bond has the following cash flows:



The bond can *best* be described as a:

A. bullet bond.

B. fully amortized bond.

C. partially amortized bond.

17. If interest rates are expected to increase, the coupon payment structure *most likely* to benefit the issuer is a:

A. step-up coupon.

B. inflation-linked coupon.

C. cap in a floating-rate note.

18. Investors who believe that interest rates will rise *most likely* prefer to invest in:

A. inverse floaters.

B. fixed-rate bonds.

C. floating-rate notes.

19. A 10-year, capital-indexed bond linked to the Consumer Price Index (CPI) is issued with a coupon rate of 6% and a par value of 1,000. The bond pays interest semi-annually. During the first six months after the bond's issuance, the CPI increases by 2%. On the first coupon payment date, the bond's:

A. coupon rate increases to 8%.

B. coupon payment is equal to 40.

C. principal amount increases to 1,020.

20. Which type of bond *most likely* earns interest on an implied basis?

A. Floater

B. Conventional bond

C. Pure discount bond

21. Investors seeking some general protection against a poor economy are *most likely* to select a:

    A. deferred coupon bond.

    B. credit-linked coupon bond.

    C. payment-in-kind coupon bond.

22. The benefit to the issuer of a deferred coupon bond is *most likely* related to:

    A. tax management.

    B. cash flow management.

    C. original issue discount price.

23. The provision that provides bondholders the right to sell the bond back to the issuer at a predetermined price prior to the bond's maturity date is referred to as:

    A. a put provision.

    B. a make-whole call provision.

    C. an original issue discount provision.

24. Which of the following bond types provides the *most* benefit to a bondholder when bond prices are declining?

    A. Callable

    B. Plain vanilla

    C. Multiple put

25. Which type of call bond option offers the *greatest* flexibility as to when the issuer can exercise the option?

    A. Bermuda call

    B. European call

    C. American call

26. Which of the following provisions is a benefit to the issuer?

    A. Put provision

    B. Call provision

    C. Conversion provision

27. Relative to an otherwise similar option-free bond, a:

    A. putable bond will trade at a higher price.

    B. callable bond will trade at a higher price.

    C. convertible bond will trade at a lower price.

28. Which of the following *best* describes a convertible bond's conversion premium?

    A. Bond price minus conversion value

    B. Par value divided by conversion price

    C. Current share price multiplied by conversion ratio

PRACTICE PROBLEMS

1. The distinction between investment-grade debt and non-investment-grade debt is *best* described by differences in:
   - **A.** tax status.
   - **B.** credit quality.
   - **C.** maturity dates.

2. A bond issued internationally, outside the jurisdiction of the country in whose currency the bond is denominated, is *best* described as a:
   - **A.** Eurobond.
   - **B.** foreign bond.
   - **C.** municipal bond.

3. When classified by type of issuer, asset-backed securities are part of the:
   - **A.** corporate sector.
   - **B.** structured finance sector.
   - **C.** government and government-related sector.

4. Compared with developed market bonds, emerging market bonds *most likely*:
   - **A.** offer lower yields.
   - **B.** exhibit higher risk.
   - **C.** benefit from lower growth prospects.

5. With respect to floating-rate bonds, a reference rate (such as MRR) is *most likely* used to determine the bond's:
   - **A.** spread.
   - **B.** coupon rate.
   - **C.** frequency of coupon payments.

6. The variability of the coupon rate on a Libor-based floating-rate bond is *most likely* caused by:
   - **A.** periodic resets of the reference rate.
   - **B.** market-based reassessments of the issuer's creditworthiness.
   - **C.** changing estimates by the Libor administrator of borrowing capacity.

7. Which of the following statements is *most accurate*? An interbank offered rate:
   - **A.** is a single reference rate.
   - **B.** applies to borrowing periods of up to 10 years.

C. is used as a reference rate for interest rate swaps.

8. An investment bank that underwrites a bond issue *most likely*:
   A. buys and resells the newly issued bonds to investors or dealers.
   B. acts as a broker and receives a commission for selling the bonds to investors.
   C. incurs less risk associated with selling the bonds than in a best-efforts offering.

9. In major developed bond markets, newly issued sovereign bonds are *most* often sold to the public via a(n):
   A. auction.
   B. private placement.
   C. best-efforts offering.

10. Which of the following describes privately placed bonds?
   A. They are non-underwritten and unregistered.
   B. They usually have active secondary markets.
   C. They are less customized than publicly offered bonds.

11. A mechanism by which an issuer may be able to offer additional bonds to the general public without preparing a new and separate offering circular *best* describes:
   A. the grey market.
   B. a shelf registration.
   C. a private placement.

12. Which of the following statements related to secondary bond markets is *most accurate*?
   A. Newly issued corporate bonds are issued in secondary bond markets.
   B. Secondary bond markets are where bonds are traded between investors.
   C. The major participants in secondary bond markets globally are retail investors.

13. A bond market in which a communications network matches buy and sell orders initiated from various locations is *best* described as an:
   A. organized exchange.
   B. open market operation.
   C. over-the-counter market.

14. A liquid secondary bond market allows an investor to sell a bond at:
   A. the desired price.

B. a price at least equal to the purchase price.

C. a price close to the bond's fair market value.

15. Corporate bond secondary market trading *most often* occurs:

A. on a book-entry basis.

B. on organized exchanges.

C. prior to settlement at $T + 1$.

16. Sovereign bonds are *best* described as:

A. bonds issued by local governments.

B. secured obligations of a national government.

C. bonds backed by the taxing authority of a national government.

17. Which factor is associated with a more favorable quality sovereign bond credit rating?

A. Issued in local currency, only

B. Strong domestic savings base, only

C. Issued in local currency of country with strong domestic savings base

18. Which type of sovereign bond has the lowest interest rate risk for an investor?

A. Floaters

B. Coupon bonds

C. Discount bonds

19. Agency bonds are issued by:

A. local governments.

B. national governments.

C. quasi-government entities.

20. The type of bond issued by a multilateral agency such as the International Monetary Fund (IMF) is *best* described as a:

A. sovereign bond.

B. supranational bond.

C. quasi-government bond.

21. A bond issued by a local government authority, typically without an explicit funding commitment from the national government, is *most likely* classified as a:

A. sovereign bond.

B. quasi-government bond

C. non-sovereign government bond.

22. Which of the following statements relating to commercial paper is *most accurate*?
    A. There is no secondary market for trading commercial paper.
    B. Only the strongest, highly rated companies issue commercial paper.
    C. Commercial paper is a source of interim financing for long-term projects.

23. Eurocommercial paper is *most likely*:
    A. negotiable.
    B. denominated in euros.
    C. issued on a discount basis.

24. For the issuer, a sinking fund arrangement is *most similar* to a:
    A. term maturity structure.
    B. serial maturity structure.
    C. bondholder put provision.

25. When issuing debt, a company may use a sinking fund arrangement as a means of reducing:
    A. credit risk.
    B. inflation risk.
    C. interest rate risk.

26. Which of the following is a source of wholesale funds for banks?
    A. Demand deposits
    B. Money market accounts
    C. Negotiable certificates of deposit

27. A characteristic of negotiable certificates of deposit is:
    A. they are mostly available in small denominations.
    B. they can be sold in the open market prior to maturity.
    C. a penalty is imposed if the depositor withdraws funds prior to maturity.

28. A repurchase agreement is *most* comparable to a(n):
    A. interbank deposit.
    B. collateralized loan.
    C. negotiable certificate of deposit.

29. The repo margin is:
    A. negotiated between counterparties.
    B. established independently of market-related conditions.

C. structured on an agreement assuming equal credit risks to all counterparties.

30. The repo margin on a repurchase agreement is *most likely* to be lower when:

A. the underlying collateral is in short supply.

B. the maturity of the repurchase agreement is long.

C. the credit risk associated with the underlying collateral is high.

PRACTICE PROBLEMS

1. A portfolio manager is considering the purchase of a bond with a 5.5% coupon rate that pays interest annually and matures in three years. If the required rate of return on the bond is 5%, the price of the bond per 100 of par value is *closest* to:

   A. 98.65.

   B. 101.36.

   C. 106.43.

2. A bond with two years remaining until maturity offers a 3% coupon rate with interest paid annually. At a market discount rate of 4%, the price of this bond per 100 of par value is *closest* to:

   A. 95.34.

   B. 98.00.

   C. 98.11.

3. An investor who owns a bond with a 9% coupon rate that pays interest semiannually and matures in three years is considering its sale. If the required rate of return on the bond is 11%, the price of the bond per 100 of par value is *closest* to:

   A. 95.00.

   B. 95.11.

   C. 105.15.

4. A bond offers an annual coupon rate of 4%, with interest paid semiannually. The bond matures in two years. At a market discount rate of 6%, the price of this bond per 100 of par value is *closest* to:

   A. 93.07.

   B. 96.28.

   C. 96.33.

5. A bond offers an annual coupon rate of 5%, with interest paid semiannually. The bond matures in seven years. At a market discount rate of 3%, the price of this bond per 100 of par value is *closest* to:

   A. 106.60.

   B. 112.54.

   C. 143.90.

6. A zero-coupon bond matures in 15 years. At a market discount rate of 4.5% per year and assuming annual compounding, the price of the bond per 100 of par value is *closest* to:

   A. 51.30.

   B. 51.67.

C. 71.62.

7. Consider the following two bonds that pay interest annually:

Bond	Coupon Rate	Time-to-Maturity
A	5%	2 years
B	3%	2 years

At a market discount rate of 4%, the price difference between Bond A and Bond B per 100 of par value is *closest* to:

A. 3.70.

B. 3.77.

C. 4.00.

The following information relates to questions 8-9

Bond	Price	Coupon Rate	Time-to-Maturity
A	101.886	5%	2 years
B	100.000	6%	2 years
C	97.327	5%	3 years

8. Which bond offers the lowest yield-to-maturity?

A. Bond A

B. Bond B

C. Bond C

9. Which bond will *most likely* experience the smallest percent change in price if the market discount rates for all three bonds increase by 100 bps?

A. Bond A

B. Bond B

C. Bond C

10. Suppose a bond's price is expected to increase by 5% if its market discount rate decreases by 100 bps. If the bond's market discount rate increases by 100 bps, the bond price is *most likely* to change by:

A. 5%.

B. less than 5%.

C. more than 5%.

The following information relates to questions 11-12

Bond	Coupon Rate	Maturity (years)
A	6%	10
B	6%	5
C	8%	5

All three bonds are currently trading at par value.

11. Relative to Bond C, for a 200 bp decrease in the required rate of return, Bond B will *most likely* exhibit a(n):

    A. equal percentage price change.

    B. greater percentage price change.

    C. smaller percentage price change.

12. Which bond will *most likely* experience the greatest percentage change in price if the market discount rates for all three bonds increase by 100 bps?

    A. Bond A

    B. Bond B

    C. Bond C

13. An investor considers the purchase of a two-year bond with a 5% coupon rate, with interest paid annually. Assuming the sequence of spot rates shown below, the price of the bond is *closest* to:

Time-to-Maturity	Spot Rates
1 year	3%
2 years	4%

A. 101.93.

B. 102.85.

C. 105.81.

14. A three-year bond offers a 10% coupon rate with interest paid annually. Assuming the following sequence of spot rates, the price of the bond is *closest* to:

Time-to-Maturity	Spot Rates
1 year	8.0%
2 years	9.0%
3 years	9.5%

A. 96.98.

B. 101.46.

C. 102.95.

The following information relates to questions 15-17

Bond	Coupon Rate	Time-to-Maturity	Time-to-Maturity	Spot Rates
X	8%	3 years	1 year	8%
Y	7%	3 years	2 years	9%
Z	6%	3 years	3 years	10%

All three bonds pay interest annually.

15. Based on the given sequence of spot rates, the price of Bond X is *closest* to:

A. 95.02.

B. 95.28.

C. 97.63.

16. Based on the given sequence of spot rates, the price of Bond Y is *closest* to:

A. 87.50.

B. 92.54.

C. 92.76.

17. Based on the given sequence of spot rates, the yield-to-maturity of Bond Z is *closest* to:

A. 9.00%.

B. 9.92%.

C. 11.93%.

18. Bond dealers *most* often quote the:

A. flat price.

B. full price.

C. full price plus accrued interest.

The following information relates to questions 19-21

Bond G, described in the exhibit below, is sold for settlement on 16 June 2020.

Annual Coupon	5%
Coupon Payment Frequency	Semiannual
Interest Payment Dates	10 April and 10 October
Maturity Date	10 October 2022
Day-Count Convention	30/360
Annual Yield-to-Maturity	4%

19. The full price that Bond G settles at on 16 June 2020 is *closest* to:

A. 102.36.

B. 103.10.

C. 103.65.

20. The accrued interest per 100 of par value for Bond G on the settlement date of 16 June 2020 is *closest* to:

A. 0.46.

B. 0.73.

C. 0.92.

21. The flat price for Bond G on the settlement date of 16 June 2020 is *closest* to:

A. 102.18.

B. 103.10.

C. 104.02.

22. Matrix pricing allows investors to estimate market discount rates and prices for bonds:

A. with different coupon rates.

B. that are not actively traded.

C. with different credit quality.

23. When underwriting new corporate bonds, matrix pricing is used to get an estimate of the:

A. required yield spread over the benchmark rate.

B. market discount rate of other comparable corporate bonds.

C. yield-to-maturity on a government bond having a similar time-to-maturity.

24. A bond with 20 years remaining until maturity is currently trading for 111 per 100 of par value. The bond offers a 5% coupon rate with interest paid semiannually. The bond's annual yield-to-maturity is *closest* to:

A. 2.09%.

B. 4.18%.

C. 4.50%.

25. The annual yield-to-maturity, stated for with a periodicity of 12, for a four-year, zero-coupon bond priced at 75 per 100 of par value is *closest* to:

    A. 6.25%.

    B. 7.21%.

    C. 7.46%.

26. A five-year, 5% semiannual coupon payment corporate bond is priced at 104.967 per 100 of par value. The bond's yield-to-maturity, quoted on a semiannual bond basis, is 3.897%. An analyst has been asked to convert to a monthly periodicity. Under this conversion, the yield-to-maturity is *closest to*:

    A. 3.87%.

    B. 4.95%.

    C. 7.67%.

The following information relates to questions 27-30

A bond with five years remaining until maturity is currently trading for 101 per 100 of par value. The bond offers a 6% coupon rate with interest paid semiannually. The bond is first callable in three years and is callable after that date on coupon dates according to the following schedule:

End of Year	Call Price
3	102
4	101
5	100

27. The bond's annual yield-to-maturity is *closest* to:

    A. 2.88%.

    B. 5.77%.

    C. 5.94%.

28. The bond's annual yield-to-first-call is *closest* to:

    A. 3.12%.

    B. 6.11%.

    C. 6.25%.

29. The bond's annual yield-to-second-call is *closest* to:

    A. 2.97%.

B. 5.72%.

C. 5.94%.

30. The bond's yield-to-worst is *closest* to:

A. 2.88%.

B. 5.77%.

C. 6.25%.

31. A two-year floating-rate note pays six-month Libor plus 80 bps. The floater is priced at 97 per 100 of par value. The current six-month MRR is 1.00%. Assume a 30/360 day-count convention and evenly spaced periods. The discount margin for the floater in basis points is *closest* to:

A. 180 bps.

B. 236 bps.

C. 420 bps.

32. An analyst evaluates the following information relating to floating-rate notes (FRNs) issued at par value that have three-month MRR as a reference rate:

Floating-Rate Note	Quoted Margin	Discount Margin
X	0.40%	0.32%
Y	0.45%	0.45%
Z	0.55%	0.72%

Based only on the information provided, the FRN that will be priced at a premium on the next reset date is:

A. FRN X.

B. FRN Y.

C. FRN Z.

33. A 365-day year bank certificate of deposit has an initial principal amount of USD96.5 million and a redemption amount due at maturity of USD100 million. The number of days between settlement and maturity is 350. The bond equivalent yield is *closest* to:

A. 3.48%.

B. 3.65%.

C. 3.78%.

34. The bond equivalent yield of a 180-day banker's acceptance quoted at a discount rate of 4.25% for a 360-day year is *closest* to:

A. 4.31%.

B. 4.34%.

C. 4.40%.

35. Which of the following statements describing a par curve is *incorrect*?

    A. A par curve is obtained from a spot curve.

    B. All bonds on a par curve are assumed to have different credit risk.

    C. A par curve is a sequence of yields-to-maturity such that each bond is priced at par value.

36. A yield curve constructed from a sequence of yields-to-maturity on zero-coupon bonds is the:

    A. par curve.

    B. spot curve.

    C. forward curve.

37. The rate interpreted to be the incremental return for extending the time-to-maturity of an investment for an additional time period is the:

    A. add-on rate.

    B. forward rate.

    C. yield-to-maturity.

The following information relates to questions 38-39

Time Period	Forward Rate
"0y1y"	0.80%
"1y1y"	1.12%
"2y1y"	3.94%
"3y1y"	3.28%
"4y1y"	3.14%

All rates are annual rates stated for a periodicity of one (effective annual rates).

38. The three-year implied spot rate is *closest* to:

    A. 1.18%.

    B. 1.94%.

    C. 2.28%.

39. The value per 100 of par value of a two-year, 3.5% coupon bond with interest payments paid annually is *closest* to:

    A. 101.58.

    B. 105.01.

C. 105.82.

40. The spread component of a specific bond's yield-to-maturity is *least likely* impacted by changes in:

    A. its tax status.

    B. its quality rating.

    C. inflation in its currency of denomination.

41. The yield spread of a specific bond over the standard swap rate in that currency of the same tenor is *best* described as the:

    A. I-spread.

    B. Z-spread.

    C. G-spread.

The following information relates to questions 42-42

Bond	Coupon Rate	Time-to-Maturity	Price
UK Government Benchmark Bond	2%	3 years	100.25
UK Corporate Bond	5%	3 years	100.65

Both bonds pay interest annually. The current three-year EUR interest rate swap benchmark is 2.12%.

42. The G-spread in basis points on the UK corporate bond is *closest* to:

    A. 264 bps.

    B. 285 bps.

    C. 300 bps.

43. A corporate bond offers a 5% coupon rate and has exactly three years remaining to maturity. Interest is paid annually. The following rates are from the benchmark spot curve:

Time-to-Maturity	Spot Rate
1 year	4.86%
2 years	4.95%
3 years	5.65%

The bond is currently trading at a Z-spread of 234 bps. The value of the bond is *closest to*:

    A. 92.38.

    B. 98.35.

C. 106.56.

44. An option-adjusted spread (OAS) on a callable bond is the Z-spread:

A. over the benchmark spot curve.

B. minus the standard swap rate in that currency of the same tenor.

C. minus the value of the embedded call option expressed in basis points per year.

PRACTICE PROBLEMS

1. Securitization is beneficial for banks because it:
   - **A.** repackages bank loans into simpler structures.
   - **B.** increases the funds available for banks to lend.
   - **C.** allows banks to maintain ownership of their securitized assets.

2. Securitization benefits financial markets by:
   - **A.** increasing the role of intermediaries.
   - **B.** establishing a barrier between investors and originating borrowers.
   - **C.** allowing investors to tailor credit risk and interest rate risk exposures to meet their individual needs.

3. A benefit of securitization is the:
   - **A.** reduction in disintermediation.
   - **B.** simplification of debt obligations.
   - **C.** creation of tradable securities with greater liquidity than the original loans.

4. Securitization benefits investors by:
   - **A.** providing more direct access to a wider range of assets.
   - **B.** reducing the inherent credit risk of pools of loans and receivables.
   - **C.** eliminating cash flow timing risks of an ABS, such as contraction and extension risks.

5. In a securitization, the special purpose entity (SPE) is responsible for the:
   - **A.** issuance of the asset-backed securities.
   - **B.** collection of payments from the borrowers.
   - **C.** recovery of underlying assets from delinquent borrowers.

6. In a securitization, the collateral is initially sold by the:
   - **A.** issuer.
   - **B.** depositor.
   - **C.** underwriter.

7. A special purpose entity issues asset-backed securities in the following structure.

Bond Class	**Par Value (€ millions)**
A (senior)	200
B (subordinated)	20

Bond Class	Par Value (€ millions)
C (subordinated)	5

At which of the following amounts of default in par value would Bond Class A experience a loss?

A. €20 million

B. €25 million

C. €26 million

8. In a securitization, time tranching provides investors with the ability to choose between:

   A. extension and contraction risks.

   B. senior and subordinated bond classes.

   C. fully amortizing and partially amortizing loans.

9. The creation of bond classes with a waterfall structure for sharing losses is referred to as:

   A. time tranching.

   B. credit tranching.

   C. overcollateralization.

10. Which of the following statements related to securitization is correct?

    A. Time tranching addresses the uncertainty of a decline in interest rates.

    B. Securitizations are rarely structured to include both credit tranching and time tranching.

    C. Junior and senior bond classes differ in that junior classes can be paid off only at the bond's set maturity.

11. A goal of securitization is to:

    A. separate the seller's collateral from its credit ratings.

    B. uphold the absolute priority rule in bankruptcy reorganizations.

    C. account for collateral's primary influence on corporate bond credit spreads.

12. The last payment in a partially amortizing residential mortgage loan is *best* referred to as a:

    A. waterfall.

    B. principal repayment.

    C. balloon payment.

13. Which of the following characteristics of a residential mortgage loan would *best*

protect the lender from a strategic default by the borrower?

A. Recourse

B. A prepayment option

C. Interest-only payments

14. William Marolf obtains a EUR5 million mortgage loan from Bank Nederlandse. A year later, the principal on the loan is EUR4 million and Marolf defaults on the loan. Bank Nederlandse forecloses, sells the property for EUR2.5 million, and is entitled to collect the EUR1.5 million shortfall from Marolf. Marolf *most likely* had a:

A. bullet loan.

B. recourse loan.

C. non-recourse loan.

15. Fran Martin obtains a non-recourse mortgage loan for $500,000. One year later, when the outstanding balance of the mortgage is $490,000, Martin cannot make his mortgage payments and defaults on the loan. The lender forecloses on the loan and sells the house for $315,000. What amount is the lender entitled to claim from Martin?

A. $0.

B. $175,000.

C. $185,000.

16. A balloon payment equal to a mortgage's original loan amount is a characteristic of a:

A. bullet mortgage.

B. fully amortizing mortgage.

C. partially amortizing mortgage.

17. Which of the following statements is correct concerning mortgage loan defaults?

A. A non-recourse jurisdiction poses higher default risks for lenders.

B. In a non-recourse jurisdiction, strategic default will not affect the defaulting borrower's future access to credit.

C. When a recourse loan defaults, the mortgaged property is the lender's sole source for recovery of the outstanding mortgage balance.

18. If a mortgage borrower makes prepayments without penalty to take advantage of falling interest rates, the lender will *most likely* experience:

A. extension risk.

B. contraction risk.

C. yield maintenance.

19. If interest rates increase, an investor who owns a mortgage pass-through security

is *most likely* affected by:

A. credit risk.

B. extension risk.

C. contraction risk.

20. In the context of mortgage-backed securities, a conditional prepayment rate (CPR) of 8% means that approximately 8% of the outstanding mortgage pool balance at the beginning of the year is expected to be prepaid:

A. in the current month.

B. by the end of the year.

C. over the life of the mortgages.

21. For a mortgage pass-through security, which of the following risks *most likely* increases as interest rates decline?

A. Balloon

B. Extension

C. Contraction

22. Compared with the weighted average coupon rate of its underlying pool of mortgages, the pass-through rate on a mortgage pass-through security is:

A. lower.

B. the same.

C. higher.

23. The single monthly mortality rate (SMM) *most likely:*

A. increases as extension risk rises.

B. decreases as contraction risk falls.

C. stays fixed over time when the standard prepayment model remains at 100 PSA.

24. Which of the following describes a typical feature of a non-agency residential mortgage-backed security (RMBS)?

A. Senior/subordinated structure

B. A pool of conforming mortgages as collateral

C. A guarantee by a government-sponsored enterprise

25. Which of the following is *most likely* an advantage of collateralized mortgage obligations (CMOs)? CMOs can

A. eliminate prepayment risk.

B. be created directly from a pool of mortgage loans.

C. meet the asset/liability requirements of institutional investors.

26. The longest-term tranche of a sequential-pay CMO is *most likely* to have the lowest:
    - **A.** average life.
    - **B.** extension risk.
    - **C.** contraction risk.

27. The tranches in a collateralized mortgage obligation that are *most likely* to provide protection for investors against both extension and contraction risk are:
    - **A.** planned amortization class (PAC) tranches.
    - **B.** support tranches.
    - **C.** sequential-pay tranches.

28. Support tranches are *most* appropriate for investors who are:
    - **A.** concerned about their exposure to extension risk.
    - **B.** concerned about their exposure to concentration risk.
    - **C.** willing to accept prepayment risk in exchange for higher returns.

29. Collateralized mortgage obligations are designed to:
    - **A.** eliminate contraction risk in support tranches.
    - **B.** distribute prepayment risk to various tranches.
    - **C.** eliminate extension risk in planned amortization tranches.

30. Credit risk is an important consideration for commercial mortgage-backed securities (CMBS) if the CMBS are backed by mortgage loans that:
    - **A.** are non-recourse.
    - **B.** have call protection.
    - **C.** have prepayment penalty points.

31. Which commercial mortgage-backed security characteristic causes a CMBS to trade more like a corporate bond than a residential mortgage-backed security?
    - **A.** Call protection
    - **B.** Internal credit enhancement
    - **C.** Debt-service-coverage ratio level

32. A commercial mortgage-backed security does not meet the debt-to-service coverage at the loan level necessary to achieve a desired credit rating. Which of the following features would *mostlikely* improve the credit rating of the CMBS?
    - **A.** Subordination
    - **B.** Call protection
    - **C.** Balloon payments

33. If a default occurs in a non-recourse commercial mortgage-backed security, the lender will *most likely*:
    A. recover prepayment penalty points paid by the borrower to offset losses.
    B. use only the proceeds received from the sale of the property to recover losses.
    C. initiate a claim against the borrower for any shortfall resulting from the sale of the property.

34. Which of the following investments is least subject to prepayment risk?
    A. Auto loan receivable–backed securities
    B. Commercial mortgage-backed securities
    C. Non-agency residential mortgage-backed securities

35. An excess spread account incorporated into a securitization is designed to limit:
    A. credit risk.
    B. extension risk.
    C. contraction risk.

36. Which of the following *best* describes the cash flow that owners of credit card receivable asset-backed securities receive during the lockout period?
    A. No cash flow
    B. Only principal payments collected
    C. Only finance charges collected and fees

37. Which type of asset-backed security is not affected by prepayment risk?
    A. Auto loan ABS
    B. Residential MBS
    C. Credit card receivable ABS

38. In auto loan ABS, the form of credit enhancement that *most likely* serves as the first line of loss protection is the:
    A. excess spread account.
    B. sequential-pay structure.
    C. proceeds from repossession sales.

39. In credit card receivable ABS, principal cash flows can be altered only when the:
    A. lockout period expires.
    B. excess spread account is depleted.
    C. early amortization provision is triggered.

40. The CDO tranche with a credit-rating status between senior and subordinated

bond classes is called the:

A. equity tranche.

B. residual tranche.

C. mezzanine tranche.

41. The key to a CDO's viability is the creation of a structure with a competitive return for the:

A. senior tranche.

B. mezzanine tranche.

C. subordinated tranche.

42. When the collateral manager fails pre-specified risk tests, a CDO is:

A. deleveraged by reducing the senior bond class.

B. restructured to reduce its most expensive funding source.

C. liquidated by paying off the bond classes in order of seniority.

43. Which statement about covered bonds is *least* accurate?

A. Covered bonds provide investors with dual recourse, to the cover pool and also to the issuer.

B. Covered bonds usually carry higher credit risks and offer higher yields than otherwise similar ABS.

C. Covered bonds have a dynamic cover pool, meaning sponsors must replace any prepaid or non-performing assets.