

# Sample Examination

Level 2

180 Minutes

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**QUESTION 1 IS COMPOSED OF TWO PARTS FOR A TOTAL OF 13 MINUTES**

1. Kammel Investments has asked you to assist with the evaluation of mortgage-backed and CMO derivative securities for potential inclusion in several client portfolios.
  - A. **Define** *prepayment risk* as it relates to mortgage pass-through securities and **discuss** the following prepayment risk components:
    - *Contraction risk*
    - *Extension risk*

(7 MINUTES)

B. **Indicate** (by circling the appropriate response in the table below) and **discuss** the price sensitivity – relative to a change in *prepayments only* – of *each* of the following types of mortgage pass through derivative securities:

- *Interest-only MBS derivative*
- *Principal-only MBS derivative*

(6 MINUTES)

| Indication of prepayment sensitivity (circle one for each type) | Discussion |
|---|------------|
| IO    High / Low  |            |
| PO    High / Low  |            |

**QUESTION 2 IS COMPOSED OF FOUR PARTS FOR A TOTAL OF 16 MINUTES**

2. During the latest round of industry consolidations, Dell Air Lines market share was stabilized through a series of strategic alliances with several international carriers. In addition, Dell has just announced an additional strategic alliance with Intercontinental Airlines that should boost market share from 15% to 18%.

**Table 2-1.** Selected firm-specific statistics.

Net profit margin = 5%

Expected 2000 earnings retention ratio = 50%

Beta = .9

Risk-free rate = 6%

Market risk premium = 6%

Book value of equity = \$1,200 million

Shares outstanding = 10 million

Expected airline industry revenue = \$16,690.76 million

- A. Given the above industry and firm specific data, **estimate** 2000 total revenues for Dell Air Lines. **Show** all calculations.

(4 MINUTES)

- B. You have collected the following valuation statistics for Dell Air Lines in table 2-1 on the previous page. Using only the information in table 2-1 and your answers to part A, **estimate** the components of the constant growth dividend discount model. Place your answers in the template below:

(6 MINUTES)

| Component       | Computations |
|-----------------|--------------|
| Dividend        |              |
| Required return |              |
| Growth rate     |              |

- C. Using your answers to part B, **calculate** the value of Dell Air Lines' common stock using the constant growth dividend discount model.

(3 MINUTES)

- D. **Analyze** the following comment regarding the constant growth DDM: "An increase in dividends will always lead to an increase in stock price."

(3 MINUTES)

**QUESTION 3 IS COMPOSED OF TWO PARTS FOR A TOTAL OF 10 MINUTES**

3. Mary McNary is attempting to understand the link between EVA®, MVA, and the Franchise Factor.

A. **Contrast** the concepts of EVA, MVA, and the Franchise Factor.

(5 MINUTES)

B. ROA and ROE are traditional measures of valuation that are used by analysts to predict stock price performance. **Contrast** the use of EVA with these more traditional valuation measures to predict stock returns.

(5 MINUTES)

**QUESTION 4 IS COMPOSED OF THREE PARTS FOR A TOTAL OF 11 MINUTES**

4. Jimmy Jetson is the fixed-income portfolio manager for Worldwide Securities. Jimmy employs an active management strategy that relies heavily on yield spread analysis. In the past, Jimmy has employed a naive yield-to-maturity spread analysis.

A. **Describe** *two* drawbacks of conventional yield to maturity yield spread analysis that are based on:

- *Term structure*
- *Volatility of interest rates*

(4 MINUTES)

B. **Describe** how the following *two* alternative yield spread evaluation methodologies solve the problems that were identified in part A.

- *Static spread*
- *Option-adjusted spread*

(4 MINUTES)



- C. Bond A is a callable bond with a modified duration of 6 years and an effective duration of 4 years. Bond A's standard convexity is 123 while its effective convexity is -169. Using only the information provided and assuming a 10 basis point increase in interest rates, **calculate** the approximate percentage price change for Bond A. Use the Buetow, Tuttle & Johnson formula for your computations.

(3 MINUTES)

**QUESTION 5 IS COMPOSED OF ONE PART FOR A TOTAL OF 10 MINUTES**

5. As the equity-income portfolio manager for a large mutual fund company, you are attempting to purchase bonds that may also provide you with equity exposure in the future. You have decided to analyze an 8%, annual-pay, 20-year bond that is convertible into 10 common shares for each \$1,000 of par value. This bond is selling for \$920 in the market today. The common stock is selling at \$40 but is projected to increase to \$70 within the next two years. The stock's dividend is \$.40 per share and the market yield on comparable non-convertible bonds is 9.5%. **Compute** the *conversion value* of this convertible bond and its relative payback period. Given a two-year holding period, and assuming conversion of the bonds, **recommend** either purchasing the equity or the convertible bond. (Assume that coupons are reinvested at 6%.) **Show** any calculations.

(10 MINUTES)

**QUESTION 6 IS COMPOSED OF FOUR PARTS FOR A TOTAL OF 15 MINUTES**

6. Herpington Industries (HI), reported earnings of 15% based on a book value of equity of \$2 million. The dividend payout rate is 40%. HI has 100,000 shares outstanding

You have used the market model and found that HI's beta is 1.3. The risk-free rate is 6% and the market risk premium is 6%.

- A. Given the information above, **compute** HI's *equity value per share* using the constant growth dividend discount model.

(6 MINUTES)

- B. Assume also that HI sells 10,000 new shares at the current market price which you computed in part A. **Compute** HI's new book value per share.

(5 MINUTES)

C. HI showed the following statistics in their financial statements:

|                                      |   |             |
|--------------------------------------|---|-------------|
| • Earnings Before Interest and Taxes | = | \$400,000   |
| • Depreciation                       | = | \$40,000    |
| • Working Capital Increases          | = | \$20,000    |
| • Capital Expenditures               | = | \$30,000    |
| • Tax Rate                           | = | 15%         |
| • Total Market Value of Debt         | = | \$2 million |
| • Total Market Value of Equity       | = | \$2 million |
| • Average Cost of Debt               | = | 10%         |
| • Average Cost of Equity             | = | 13.8%       |
| • Free Cash Flow Growth              | = | 8%          |

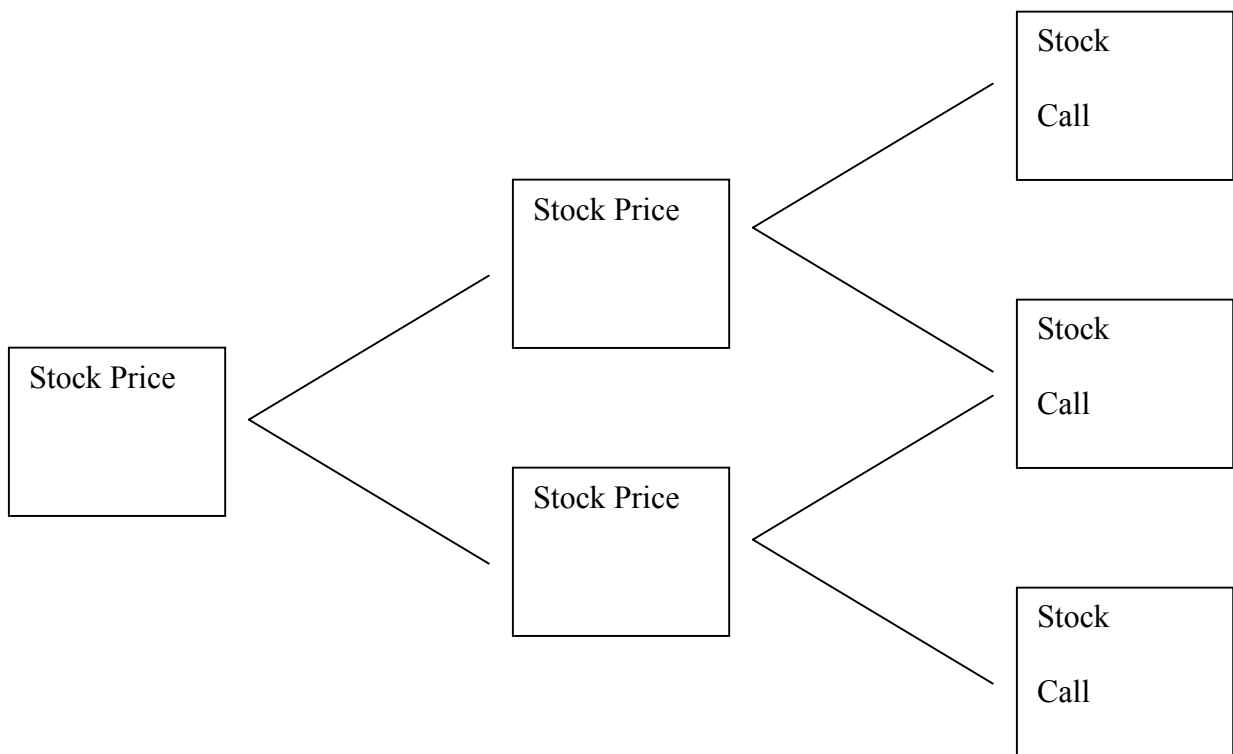
*Disregarding the previous analysis, using the above data and firm free cash flow valuation, **compute** the value of the *entire firm*.*

(6 MINUTES)

**QUESTION 7 IS COMPOSED OF THREE PARTS FOR A TOTAL OF 15 MINUTES**

7. There is a two-year call option that is written on Brenda's stock with a strike price of \$55. You have decided to value this call option using the binomial model and have determined that the stock price will either rise or fall by 25% per year over the next two years. Based on this analysis, and the risk-free rate of 7%, you have computed the probability of a stock price increase at 64%. The stock's current market price is \$52.
- A. Given this information, **complete** the two-period binomial tree below. **Indicate** the stock prices for each node (box) and the at-expiration call values. **Show** all computations in the space at the bottom of this page.

(6 MINUTES)



- B. Given your computations from part A and the two-period binomial model shown below, **calculate** the value of the call option.

$$c_t = \frac{\pi_{UU}c_{UU} + \pi_{UD}c_{UD} + \pi_{DU}c_{DU} + \pi_{DD}c_{DD}}{R^2}$$

(5 MINUTES)

- C. Brenda's is expected to pay a dividend of \$.90 per share in 2001. The basic binomial model computation in part B did not consider this dividend. **Describe** the affect that consideration of the dividend would have on your computed option valuation.

(4 MINUTES)

**QUESTION 8 IS COMPOSED OF SIX PARTS FOR A TOTAL OF 9 MINUTES**

8. Philip Haney, a CFA charterholder, is a portfolio manager for Wickett & Company, a brokerage and investment advisory firm in London. Tom Smith sells investment products for the Vector Fund group. Tom *personally* agrees to pay Philip a percentage of his commissions for every Vector Fund Philip sells to his clients at Wickett & Co. Philip sells Vector Funds to about 15% of his clients.
1. When asked if there is any financial relationship between the Vector Funds and Wickett & Co., Philip states that Wickett does not have a financial relationship with Vector Funds. He considers this statement accurate, since the compensation arrangements are directly between him and Tom Smith. Regarding this statement, which of the following applies?
    - A. Phil's statement is factually correct, and does not represent a violation of AIMR Standards.
    - B. Phil's statement is factually incorrect, but does not represent a violation of AIMR Standards.
    - C. Phil's statement is factually correct, but does represent a violation of AIMR Standards.
    - D. Phil's statement is factually incorrect, and does represent a violation of AIMR Standards.
  2. Philip has an MSc from The University of Reading. On his business card it states "Philip Haney, MSc, Portfolio Manager, A Chartered Financial Analyst." The information on Philip's business card is:
    - A. Correct in terms of title and education, and correct in the use of the CFA designation.
    - B. Correct in terms of title and education, but incorrect in the use of the CFA designation.
    - C. Incorrect in terms of title and education, but correct in the use of the CFA designation.
    - D. Incorrect in terms of title and education, and incorrect in the use of the CFA designation.
  3. Philip brews his own lager beer at home, and generally consumes some of his production on the weekends while watching football.
    - A. Philip's activity is illegal, and is in violation of AIMR Standards.
    - B. Philip's activity is illegal, but is not in violation of AIMR Standards.
    - C. Philip's activity is not illegal, but is in violation of AIMR Standards.
    - D. Philips activity is not illegal, and is not in violation of AIMR Standards.

4. Philip periodically sends his clients a newsletter. In a recent copy, he discusses the stock of Quidby, a Scottish shoe manufacturer. In his discussion of the firm, he uses financial data taken from a Reuters terminal, and uses a paragraph taken directly from a MacIntosh securities research report. For neither of these does he provide acknowledgement as to the source of the material.
- A. His use of the financial data is proper; his use of the MacIntosh material is proper.
  - B. His use of the financial data is improper; his use of the MacIntosh material is proper.
  - C. His use of the financial data is proper; his use of the MacIntosh material is improper.
  - D. His use of the financial data is improper; his use of the MacIntosh material is improper.
5. Philip serves on the Board of Directors for Quidby, and receives stock options for his service. None of these are in the money, and none of these have been exercised to date. Which of the following statement is correct with regard to his research report on Quidby?
- A. He does not need to disclose the directorship.
  - B. He does need to disclose the directorship, regardless of compensation arrangements.
  - C. He does need to disclose the directorship, but only if compensated with cash.
  - D. He does need to disclose the directorship, but only if the options are in the money.
6. Philip golfs regularly with the CFO of British Turf. He has recommended British Turf to his clients at Wickett & Co. in his newsletter. Which of the following statements is true?
- A. Philip does not need to disclose the relationship.
  - B. Philip must disclose the relationship in his newsletter.
  - C. Philip should not golf with the CFO.
  - D. Philip should not golf with any employee of British Turf.



**QUESTION 9 IS COMPOSED OF FIVE PARTS FOR A TOTAL OF 9 MINUTES**

9. Jamison partners is a medium-sized investment management firm that adopted the Code and Standards as part of its policy manual. Gerald Harrison, CFA, a portfolio manager, had recently added the stock of Vermont Biochemical Company and Manson PLC to all his clients' investment portfolios. Harrison had a personal relationship with the president of Vermont Biochemical. Shortly afterwards Vermont Biochemicals and Manson announced a merger that increased the share prices of both companies.

Harrison contends that he saw the president of Vermont Biochemical dining with the chairman of Manson, but did not overhear their conversation. Harrison researched both companies extensively and determined that each company was a good investment. He also pondered whether there would be a merger, as they seemed to complement each other. He put in block trades for shares of each company that were executed over a period of two weeks at various prices. Jamison's policies were not clear in this area so he allocated the shares by starting with his largest client and working down to small accounts. Some of Harrison's clients were very conservative personal trust accounts; others were pension funds that had aggressive investment objectives.

1. Which of the following statements concerning Harrison's actions is False?
  - A Harrison did not violate any Standards since he consulted the Jamison company manual for allocating trades.
  - B Jamison violated Standard III(E) for not putting into place adequate supervisory procedures.
  - C Jamison violated Standard III(E) because the firm had a responsibility to ensure clear compliance policies.
  - D Harrison did not violate Standard V(A) – prohibition against the use of material nonpublic information.
2. Which of the following statements is correct?
  - A Harrison acted on inside information because he had observed senior executives of Manson and Vermont Biochemical having lunch together, in violation of Standard V(A).
  - B Harrison failed to comply with Standard V(B.2) regarding suitability of investments for client portfolios.
  - C Jamison discharged their supervisory duties as required by the Standards.
  - D Vermont Biochemical was an appropriate investment for Jamison's personal trust accounts.
3. Jamison did not commit one of the following violations related to his supervision duties. Which one?
  - A Standard III(E) by failing to have complete and proper supervisory procedures in place.
  - B Standard III(E) by not ensuring that compliance procedures were in place.
  - C Standard IV(B.3) for allowing portfolio managers to place block trades at different prices and to allocate the same to clients' accounts.
  - D Standard III(E) by putting in place a procedure that only uncovers violations of Standards by employees but does not prevent violations.

4. Select the most appropriate policy statement for Jamison regarding Standard III(E) concerning Responsibilities of Supervisors.
- A. “Jamison employees who are in supervisory roles, will be held accountable for the actions of those who report to them in matters of compliance with the policies and procedures of Jamison. Supervisors will also be held responsible for compliance with securities laws and regulations by which employees’ activities are governed.”
  - B. “Jamison employees who are in a supervisory roles, will not be accountable for the actions of those who report to them in matters of compliance with the policies and procedures of Jamison. However, supervisors will be held responsible for compliance with securities laws and regulations by which employees’ activities are governed.”
  - C. “Jamison employees who are in supervisory roles, will be held accountable for the actions of those who report to them in matters of compliance with the policies and procedures of Jamison.”
  - D. “Jamison employees who are in supervisory roles, will be held accountable for the actions of those who report to them in matters of compliance with the policies and procedures of Jamison. Supervisors will not be held responsible for compliance with securities laws and regulations by which employees’ activities are governed.”
5. Select the most appropriate policy statement for Jamison regarding Standard IV(B.3) concerning Fair Dealing for allocation of block trades.
- A. “Jamison shall not discriminate against any client account, and all clients will receive the same price for order execution and will be charged the same commission, if applicable. However, larger clients, who are more profitable, can be allocated trades on a preferential basis consistent with general business practice in many industries.”
  - B. “Jamison shall not discriminate against any client account, and all clients will receive the same price for order execution and will be charged the same commission, if applicable. Block trades will be allocated pro rata before or immediately after the execution of the block trade.”
  - C. “Jamison shall not discriminate against any client account and all clients will receive the same price, adjusted for quantity discounts, for order execution and will be charged commissions based on number of shares allocated. Block trades will be allocated pro rata before or immediately after the execution of the block trade.”
  - D. “Jamison shall not discriminate against any client account, and all clients will receive the same price for order execution and will be charged the same commission, if applicable. Block trades will be allocated based on discussions with the client after the execution of the block trade.”

**QUESTION 10 IS COMPOSED OF TWELVE PARTS FOR A TOTAL OF 18 MINUTES**

10. Cynthia Jones, Director of marketing in Jason Mart, is looking at the following data on the firm's aggregate revenue and marketing expenditure over the last 10 quarters.

| Aggregate Revenue<br>(Y) | Advertising Expenditure<br>(X) | Y*Y            | X*Y          | X*X           |
|--------------------------|--------------------------------|----------------|--------------|---------------|
| 300                      | 7.5                            | 90000          | 2250         | 56.25         |
| 320                      | 9                              | 102400         | 2880         | 81            |
| 310                      | 8.5                            | 96100          | 2635         | 72.25         |
| 335                      | 8.2                            | 112225         | 2747         | 67.24         |
| 350                      | 9                              | 122500         | 3150         | 81            |
| 400                      | 8.5                            | 160000         | 3400         | 72.25         |
| 430                      | 10                             | 184900         | 4300         | 100           |
| 390                      | 10.5                           | 152100         | 4095         | 110.25        |
| 380                      | 9                              | 144400         | 3420         | 81            |
| 430                      | 11                             | 184900         | 4730         | 121           |
| <b>TOTAL</b>             | <b>3645</b>                    | <b>1349525</b> | <b>33607</b> | <b>842.24</b> |

Jones plans to demonstrate the effectiveness of marketing expenditures in boosting sales revenue. She decides in favor of a simple linear regression model. Here is some partial information regarding her statistical analysis.

Slope Coefficient = 34.74

Intercept Term = 47.70

Standard error of slope coefficient = 9.9166

Standard error of intercept = 92.2840

**ANOVA**

|            | Df | SS          | MS          |
|------------|----|-------------|-------------|
| Regression | 1  | 12665.12576 | 12665.12576 |
| Residual   | 8  | 8257.374238 | 1032.17178  |
| Total      | 9  | 20922.5     |             |

- What is the standard error of the estimate?
  - 10.71
  - 32.13
  - 35.60
  - 24.70
- What is the t-statistic for the slope coefficient?
  - 4.38
  - 3.50
  - 1.56
  - 0.70

3. The intercept term is:
  - A. is economically different from zero at the 95% confidence level.
  - B. is statistically different from zero at the 99% confidence level.
  - C. is statistically different from zero at the 95% confidence level.
  - D. is not statistically different from zero at all reasonable levels of confidence.
  
4. What is the F-statistic for the regression model?
  - A. 12.27
  - B. 5.33
  - C. 16.36
  - D. 8.85
  
5. What is the coefficient of determination?
  - A. 0.76
  - B. 0.52
  - C. 0.61
  - D. 0.40
  
6. What is the correlation coefficient between the sales revenue and advertising expenditure?
  - A. 0.91
  - B. 0.41
  - C. 0.24
  - D. 0.78
  
7. What will be the estimated sales revenue, based on the regression coefficients, if the planned marketing expenditure next quarter is \$12 million?
  - A. 436.71
  - B. 607.12
  - C. 464.54
  - D. 478.08
  
8. The correlation coefficient between sales and advertising is:
  - A. Significantly different from zero at the 95% level of confidence.
  - B. Significantly different from zero at the 99.99% level of confidence.
  - C. Not significantly different from zero at the 90% level of confidence.
  - D. The statistical significance of the correlation coefficient cannot be determined.

For the next four questions assume that the regression model was estimated using a large number of observations.

9. What is the upper limit of the 95% confidence interval for sales revenue at marketing expenditure level of \$12 million?
  - A. 466.50
  - B. 633.01
  - C. 527.51
  - D. 448.39
  
10. What is the lower limit of the 95% confidence interval for sales revenue at marketing expenditure level of \$12 million?
  - A. 501.97
  - B. 462.58
  - C. 301.18
  - D. 401.57
  
11. What is the upper limit of the 95% confidence interval for the slope coefficient?
  - A. 54.17
  - B. 62.84
  - C. 46.05
  - D. 36.70
  
12. What is the lower limit of the 95% confidence interval for the slope coefficient?
  - A. 32.78
  - B. 12.24
  - C. 15.30
  - D. 19.89

**QUESTION 11 IS COMPOSED OF SIX PARTS FOR A TOTAL OF 9 MINUTES**

11. Carl Davis, CFA, is the risk manager for a multinational corporation. Currently, Davis is concerned with a policy review regarding the company's position on hedging foreign exchange risk exposure. Since much of the firm's revenue comes from the U.K., Davis feels that he should start with a review of the exchange rate between the U.S. dollar and the pound. He obtains the following information:

| <u>Quote</u> | <u>Spot</u> | <u>1 year forward</u> |
|--------------|-------------|-----------------------|
| \$/£         | 1.2312      | 1.2115                |

Davis encounters several questions in his review.

1. Three years ago, the exchange rate between the U.S. dollar and the pound was 1.17. Over this same three-year period, the price level in the U.S. increased from a base of 100 to 115 while the price level in the U.K. increased from a base of 100 to 123. According to the Purchasing Power Parity (PPP) relationship, what should \$/£ spot exchange rate be today?
  - A. 0.91.
  - B. 1.09.
  - C. 1.23.
  - D. 1.29.
2. Three years ago, the exchange rate between the U.S. dollar and the pound was 1.17. Over this same three-year period, the price level in the U.S. increased from a base of 100 to 115 while the price level in the U.K. increased from a base of 100 to 123. Did PPP hold over the last three years?
  - A. Yes, because the current spot rate is approximately equal the PPP predicted rate.
  - B. Yes, because the U.S. \$ appreciated.
  - C. No, because the current spot rate does not equal the PPP predicted rate.
  - D. No, because the PPP predicted rate is not equal to 1.17.
3. Given the current spot and forward rates, which country should have the highest nominal interest rate?
  - A. The U.K., because the pound is depreciating relative to the dollar.
  - B. The U.K., because the pound is appreciating relative to the dollar.
  - C. The U.S., because the dollar is depreciating relative to the pound.
  - D. The U.S., because the dollar is appreciating relative to the pound.
4. Currently, the inflation rate in the U.S. is two percent, and the inflation rate in the U.K. is four percent. Using relative purchasing power parity, what is the predicted \$/£ spot rate three years from now?
  - A. 1.2075.
  - B. 1.2002.
  - C. 1.1953.
  - D. 1.1615.

5. Currently, the inflation rate in the U.S. is two percent, and the inflation rate in the U.K. is four percent. Additionally, the real rate in the U.K. is three percent. According to the generalized Fisher effect and assuming that the capital markets are fully integrated, what should be the nominal rate of interest in each country?
- A. U.K. = 7 percent, U.S. = 9 percent.
  - B. U.K. = 7 percent, U.S. = 5 percent.
  - C. U.K. = 1 percent, U.S. = 5 percent.
  - D. Not enough information.
6. Which of the following statements *best* describes the accuracy of the PPP relationship?
- A. PPP is a simple arbitrage relationship and as such holds almost always.
  - B. PPP is an idealized concept that does not describe the market.
  - C. PPP can be used to predict short-term exchange rates only.
  - D. PPP is a poor predictor of short-run exchange rates, but exchange rates tend to move toward PPP in the long run.

**QUESTION 12 IS COMPOSED OF SIX PARTS FOR A TOTAL OF 9 MINUTES**

12. Bill Austin is the CFO of TexMax, a mid-size manufacturing firm located in the Western U.S. Austin expects to see an increasing percentage of the firm's revenue come from international sales, especially sales to Germany and the U.K. Since TexMax is a relative newcomer to international trade, Austin feels the need to exercise extreme caution in managing the firm's foreign exchange risk. The firm recently shipped large orders to customers in both Germany and the U.K. and expects payment on both shipments in 90 days. Current exchange rates are as follows:

| <u>Quote</u> | <u>Spot</u> | <u>90-day forward</u> |
|--------------|-------------|-----------------------|
| \$/DM        | .4552       | .4723                 |
| \$/£         | 1.2312      | 1.2114                |

Austin develops the following questions with respect to the foreign exchange risk markets.

1. TexMax is expecting to receive a payment of DM 440,000 in 90 days. Assuming that the firm wants to hedge its foreign exchange risk, what is the appropriate hedge?  
Enter into a forward contract to:  
A. buy DM 440,000.  
B. sell DM 440,000.  
C. buy DM 207,812.  
D. sell DM 207,812.
2. Which of the following does **NOT** describe the \$/DM spot quote of .4552?  
A. The quote is an American quote in the interbank market.  
B. The quote is a direct quote in Germany.  
C. The quote is for immediate, i.e., within 2 days, delivery.  
D. The reciprocal of the quote would be a European quote.
3. Assume you are in Germany. What is the Deutsche mark/pound sterling spot cross-rate stated as a direct quote?  
A. 0.3697.  
B. 0.5604.  
C. 1.7843.  
D. 2.7047.
4. What is the forward discount between the U.S. dollar and the U.K. pound?  
A. -0.0643.  
B. -0.0654.  
C. -0.0792.  
D. 0.0792.



5. Currently, the 90-day interest rate in the U.S. is 5 percent. In order for interest rate parity to hold, what must the 90-day interest rate be in Germany? (round to nearest 0.1 percent)?
- A. 0.8%.
  - B. 1.1%.
  - C. 1.2%.
  - D. 6.2%.
6. Currently, the 90-day interest rate in the U.S. is 5 percent. If the 90-day interest rate in the U.K. is 7 percent, what forward rate would make the covered interest differential equal to zero?
- A. 1.1812.
  - B. 1.1988.
  - C. 1.2007.
  - D. 1.2082.

**QUESTION 13 IS COMPOSED OF TWELVE PARTS FOR A TOTAL OF 18 MINUTES**

13. Michael Smith is an analyst at Valley Securities following the automotive industry. Universal Motors (UM) is a large U.S. based automotive company and Smith currently has the company rated as a strong buy and comments that it is an industry leader. His conclusion is primarily based on comparing the company to three other very large U.S. automakers: National, Gemini and Crystal. Smith has used a number of financial measures based solely on data taken directly from the financial statements of these companies. Susan Stone, CFA, is Smith's supervisor and has called his analysis into question, because various underlying factors may prevent a direct comparison of Universal Motors to National, Gemini and Crystal. She believes that adjustments to the financial data are necessary before a meaningful analysis can be completed.

Universal Motors provides credit to its customers through a partially owned finance company, which it accounts for under the equity method. Gemini provides financing through a wholly owned, consolidated subsidiary. Finance companies typically carry a higher level of debt relative to most other industries. Over the last five years, Crystal has made several large acquisitions that it financed through the issuance of new common stock and accounted for the acquisitions using the purchase method. Universal Motors has made no acquisitions in the last 15 years.

National has 100 percent ownership interest in a foreign subsidiary. Universal Motors operations are located and conducted entirely in the United States. National's foreign subsidiary is based in Germany and denominates all of its financial statements in the Deutsch mark (DM). The subsidiary's operations, however, are located and operating in France, and the majority of the transactions are denominated in the French Franc (FF). Therefore, the subsidiary has differing local, functional, and reporting currencies. The DM is appreciating vs. the FF, and the FF is appreciating vs. the U.S. dollar. The subsidiary accounts for inventories using the first-in first-out (FIFO) method.

Stone believes that Smith's analysis is not valid because he has not properly taken into consideration the impact of Gemini's wholly owned financing subsidiary, Crystal's acquisition history, and National's foreign subsidiary.

Due to the recent economic boom and interest rates that are at historic lows, the wholesale prices of durable goods have been rising over the last five years, specifically new automobile prices that have risen at a rate of about 6.5 percent per annum. All of the car manufacturers account for their inventories using FIFO. Present management at each firm believes this method most accurately reflects the actual flow of their inventories and claim that it will not change in the foreseeable future.

1. Smith is having difficulty understanding why the debt to equity ratios of Universal Motors and Gemeni are not directly comparable. Stone explains that Gemeni's debt to equity ratio will be different under the consolidation method than if it used the equity method. Which of the following *most accurately* describes the difference in the debt-to-equity ratio under the two methods?

Under the consolidation method Gemeni's debt-to-equity ratio will be:

- A. lower because the finance company has a larger profit margin than Gemeni's automotive business.
  - B. higher because Gemeni must include all of the finance company's assets and liabilities on its balance sheet.
  - C. higher because Gemeni's finance company has a higher debt-to-equity ratio than Universal Motors' finance company.
  - D. lower because falling interest rates make the finance company's loans more valuable, thereby increasing the equity on its balance sheet.
2. Stone is also critical of Smith's direct comparison of the return on assets of Universal Motors and Gemeni. She explains that the effect the consolidation of Gemeni's finance company will cause its return on assets to be different than under the equity method used by Universal Motors. Which of the following *most accurately* describes the difference on return on assets under the two methods?

Under the consolidation method Gemeni's return on assets will be:

- A. higher because the finance company has a higher profit margin than Gemeni's core business.
  - B. lower because falling interest rates increase the value of the finance company's assets but do not improve returns.
  - C. higher because falling interest rates increase the value of the finance company's loans outstanding, in turn increasing net income.
  - D. lower because net income is no different under the two accounting methods, and Gemeni must include all assets of the subsidiary on the balance sheet.
3. Smith is starting to understand Stone's point. He now turns his attention to the interest coverage ratio of Universal Motors and Gemeni. Which of the following *most accurately* describes the difference in the interest coverage ratio under the consolidation method compared to the equity method?

Under the consolidation, method Gemeni's interest coverage ratio will be:

- A. lower because EBIT will decrease under consolidation.
- B. lower because interest expense will increase under consolidation.
- C. higher because interest expense will decrease under consolidation.
- D. higher because EBIT will increase greatly under the consolidation of the finance company.

4. Stone now asks Smith how Gemeni's accounts receivable turnover is affected under the consolidation method when compared to the equity method. Which of the following *most accurately* describes the difference on accounts receivable turnover under the two methods?

Under the consolidation method, Gemeni's accounts receivable turnover will be:

- A. lower because reported sales will decrease under consolidation.
  - B. higher because reported sales will increase under consolidation.
  - C. lower because accounts receivables will be higher under consolidation.
  - D. higher because accounts receivables will be lower under consolidation.
5. Smith is now curious how Crystal's acquisition history might affect its comparison to Universal Motors. He reasons that because Crystal has been aggressively making acquisitions, their growth rate must be affected. Which of the following *most accurately* describes the effect of the purchase method on Crystal's growth rate?
- A. It will be overstated.
  - B. It will be understated.
  - C. It will have no affect on the growth rate.
  - D. It will be distorted, but the amount and direction of the distortion cannot be determined without more information.
6. Smith wonders if a general statement regarding Crystal's asset ratios can be made due to their use of the purchase method of accounting. Which of the following is the *most accurate* statement?

Crystal's asset ratios:

- A. may be directly compared to Universal Motors' asset ratios because balance sheets are always comparable.
- B. may be directly compared to Universal Motors' asset ratios only if Crystal carries all the acquisitions on their balance sheet using the same accounting method.
- C. will not be directly comparable to Universal Motors, because some of Crystal's acquisitions may be in areas of business other than the automotive industry.
- D. will not be directly comparable to Universal Motors, because some of Crystal's assets are carried at cost, and some are carried at date of acquisition market value.

7. Stone now asks Smith about National's foreign subsidiary. Specifically, she would like for Smith to explain the currency relationship of the subsidiary. Which of the following statements best describes the currency relationship of the foreign subsidiary?
- A. The FF is the local currency.
  - B. The FF is the functional currency.
  - C. The DM is the reporting currency.
  - D. The DM is the functional currency.
8. Stone now asks Smith about National's foreign subsidiary. Specifically, she would like for Smith to explain the currency relationship of the subsidiary. Which of the following statements about the foreign subsidiary and its currencies is NOT true?
- A. The DM is the local currency.
  - B. The FF is the functional currency.
  - C. The USD is the reporting currency.
  - D. The DM is the reporting currency.
9. Smith would like to compare the gross profit margin percentage for the foreign subsidiary in its functional currency after remeasurement to the gross profit margin percentage in the local currency before remeasurement. Which of the following statements best describes this comparison?

The foreign subsidiaries gross profit margin percentage in the functional currency after remeasurement is:

- A. Higher because under the accounting method used to translate the results, sales will rise more rapidly than cost of goods sold.
  - B. The same because under the accounting method used to translate the results, sales and cost of goods sold will change by the same percentage amount.
  - C. Lower because under the accounting method used to translate the results, cost of goods sold will increase while reported sales will remain the same.
  - D. Higher because under the accounting method used to translate the results, cost of goods sold will actually decline while reported sales will remain the same.
10. Smith would like to compare the operating profit margin for the foreign subsidiary in its functional currency after remeasurement to the operating profit margin in the local currency before remeasurement. Which of the following statements best describes this comparison?

The foreign subsidiaries operating profit margin in the functional currency after remeasurement is:

- A. Higher because depreciation expense will be lower after the translation.
- B. Lower because depreciation expense will be higher after the translation.
- C. Lower because sales will decline by a larger percentage than costs after the translation.
- D. The same because all of the figures will change by the same percentage amounts after the translation.

11. Smith would like to compare the net profit margin for the foreign subsidiary in its functional currency after remeasurement to the net profit margin in the local currency before remeasurement. Which of the following statements best describes this comparison?

The foreign subsidiary's net profit margin in the functional currency after remeasurement is:

- A. Higher.
  - B. Lower.
  - C. The Same.
  - D. Unable to be determined from the information provided.
12. Smith would like to compare the gross profit margin percentage for the foreign subsidiary in its reporting currency after translation to the gross profit margin percentage in the functional currency before translation. Which of the following statements best describes this comparison?

The foreign subsidiary's gross profit margin percentage in the reporting currency after translation is:

- A. Unable to be determined from the information provided.
- B. The same because sales and cost of goods sold will change by the same percentage amount.
- C. Higher because under the accounting method used to translate the results, sales will rise more rapidly than cost of goods sold.
- D. Lower because under the accounting method used to translate the results, cost of goods sold will increase while reported sales will remain the same.

**QUESTION 14 IS COMPOSED OF FOUR PARTS FOR A TOTAL OF 8 MINUTES**

| <b>ABC Company</b>               |               |   |                 |
|----------------------------------|---------------|---|-----------------|
| <b>Balance Sheet</b>             |               |   |                 |
| <i>(in thousands of dollars)</i> |               |   |                 |
| <u>Assets</u>                    |               | <u>Liabilities and Stockholders' Equity</u> |                 |
| Cash                             | \$ 5,000      | Accounts payable                            | \$18,000        |
| Marketable securities            | 3,000         | Notes payable                               | <u>7,000</u>    |
| Accounts receivable              | 20,000        | Total current liabilities                   | \$25,000        |
| Inventories                      | <u>10,000</u> |   |                 |
| Total current assets             | \$38,000      | Long-term debt                              | \$24,000        |
|                                  |               | Preferred stock (100,000 shares)            | \$7,000         |
| Net P, P, & E                    | \$80,000      | Common stock (4 million shares)             | 40,000          |
| Intangible assets                | <u>10,000</u> | Retained earnings                           | <u>32,000</u>   |
| Total assets                     | \$128,000     | Total stockholders' equity                  | <u>\$79,000</u> |
|                                  |               | Total liabilities & equity                  | \$128,000       |

The following information is obtained from footnotes to ABC's financial statements and other sources:

- Inventories are valued at cost as determined by the first in, first out (FIFO) method.
- Additional operating facilities are financed with operating leases that have a present value of \$10 million.
- Intangible assets represent \$8 million of goodwill from previous acquisitions.
- Due to a decrease in interest rates, ABC's long-term debt has a current market value of \$25 million.
- Sales revenue for the period is \$250 million.

1. ABC's ratio of long-term debt to equity based on the historical cost balance sheet is:
  - A. 0.30.
  - B. 0.50.
  - C. 0.62.
  - D. 0.86.
  
2. ABC's ratio of long-term debt to equity based on the adjusted balance sheet is:
  - A. 0.30.
  - B. 0.50.
  - C. 0.62.
  - D. 0.86.

3. ABC's fixed-asset turnover based on the historical balance sheet is:
- A. 1.92 times.
  - B. 1.95 times.
  - C. 2.78 times.
  - D. 3.13 times.
4. ABC's fixed asset turnover based on the adjusted balance sheet is:
- A. 1.92 times.
  - B. 1.95 times.
  - C. 2.78 times.
  - D. 3.13 times.



**QUESTION 15 IS COMPOSED OF FIVE PARTS FOR A TOTAL OF 10 MINUTES**

1. Which of the following statements is **INCORRECT** regarding the accounting for business combinations according to U.S. Generally Accepted Accounting Principles (GAAP)?
  - A. Using the equity method, the parent's proportionate share of the affiliate's income is included in the income of the parent.
  - B. In the case of the consolidation of two companies, the revenues and expenses of both companies are added together, with any inter-company transfers removed and reported on the parent's income statement.
  - C. Using the equity method of accounting for an investment in another company, the income to the parent company will consist of dividends, interest, and capital gains from its investment in the other company.
  - D. The guidelines recommend using the consolidation method if one company owns 50% of another company.
  
2. Which of the following statements is **INCORRECT** regarding the classification of debt and equity security investments?
  - A. If equity and debt securities are available-for-sale securities, any realized and unrealized gains and losses are reported in the income statement.
  - B. If equity and debt securities are trading securities, any realized and unrealized gains and losses are reported in the income statement.
  - C. Debt and equity securities are reported on the balance sheet at fair market value for both available-for-sale and trading securities classification.
  - D. Debt held-to-maturity is reported in the balance sheet at amortized cost.
  
3. The Wilderness Company acquired an 80 percent interest in the Northwoods, Inc. Northwoods has common stock of \$50,000 and retained earnings of \$100,000. On the consolidated balance sheet, the minority interest is:
  - a. \$10,000.
  - b. \$20,000.
  - c. \$30,000.
  - d. \$40,000.

4. The California Wines owns 40 percent of a joint venture, Western Vineyards. Vineyard's income statement for this period is as follows:

|  |              |
|--|--------------|
| Revenues                                 | \$10,000     |
| Less cost of goods sold                  | <u>7,500</u> |
| Gross profit                             | \$ 2,500     |
| Less selling and administrative expenses | <u>500</u>   |
| Operating income                         | \$ 2,000     |
| Less interest expense                    | <u>500</u>   |
| Earnings before taxes                    | \$ 1,500     |
| Less tax                                 | <u>600</u>   |
| Net income                               | \$ 900       |

California Wines purchases 30 percent of the output of Vineyard. The amount of revenues, SG&A, and net income of Vineyard to be included in the California Wine's income statement under proportionate consolidation are, respectively,

- A. \$0; \$0; \$0.  
B. \$2,400; \$2,100; \$360.  
C. \$2,800; \$200; \$360.  
D. \$2,800; \$300; \$540.
5. Which of the following statements is **INCORRECT** regarding segment reporting?
- A. A segment is not strictly defined in U.S. generally accepted accounting principles (GAAP).  
B. For each segment, sales, operating profit, assets, depreciation, and capital expenditures must be disclosed.  
C. For each segment, liabilities must be disclosed.  
D. Segment reporting is useful in computing trends.