

Question #1 of 60

A) \$687.

Explanation

Cost of finished jewelry = $11.06 + 2.897 \times (\text{cost of gold})$

$\$2,000 = 11.06 + 2.897 \times (\text{cost of gold})$

Price of gold = $(\$2,000 - 11.06) / 2.897 = \686.55

For Further Reference:

Study Session 3, LOS 9.h

SchweserNotes: Book 1 p.117

CFA Program Curriculum: Vol.1 p.287

Question #2 of 60

A) Both are correct.

Explanation

Singh is correct that a change in the relationship between gold prices and jewelry costs would be an example of parameter instability.

Hara is correct to fail to reject the null hypothesis that the value of the slope coefficient is equal to 4.0 at the 5% level of significance.

The critical t -value for the slope coefficient with $31 - 2 = 29$ df at the 5% level for a two-tailed test is 2.045. The test statistic is $(2.897 - 4.000)/0.615 = -1.79$. The absolute value (1.79) is less than 2.045, and the correct decision is to fail to reject the null hypothesis that the slope coefficient is equal to 4.0.

For Further Reference:

Study Session 3, LOS 9.g

SchweserNotes: Book 1 p.116

CFA Program Curriculum: Vol.1 p.287

Study Session 3, LOS 11.h

SchweserNotes: Book 1 p.198

CFA Program Curriculum: Vol.1 p.426

Question #3 of 60

B) No, because the wrong R^2 is used.

Explanation

Biscayne is incorrect in the specification of the formula because the appropriate R^2 to use in calculating a Breusch-Pagan chi-square statistic is not the R^2 of the regression of jewelry prices on gold prices but rather the R^2 of the regression of squared residuals from the original regression on the independent variable(s).

For Further Reference:

Study Session 3, LOS 10.k

SchweserNotes: Book 1 p.158

CFA Program Curriculum: Vol.1 p.338

Question #4 of 60

C) Both are incorrect.

Both are incorrect.

Explanation

Singh is incorrect because a potential result of misspecifying a regression equation is nonstationarity (not stationarity, which is desirable).

Biscayne is incorrect because the effect of omitting an important variable in a regression is that the regression coefficients are often biased (not unbiased) and/or inconsistent.

For Further Reference:

Study Session 3, LOS 10.m

SchweserNotes: Book 1 p.168

CFA Program Curriculum: Vol.1 p.353

Question #5 of 60

C) No, because the coefficient of determination would not increase.

Explanation

While Hara is correct about the remedy for multicollinearity (i.e., remove one or more of the highly correlated independent variables), he is incorrect about the effect of reducing the number of independent variables on the coefficient of determination R^2 . R^2 never increases when independent variables are dropped.

For Further Reference:

Study Session 3, LOS 10.h, i

SchweserNotes: Book 1 p.148, 165

CFA Program Curriculum: Vol.1 p.333, 349

Question #6 of 60

B) No, because the Hansen method adjusts the coefficient standard errors.

Explanation

Biscayne is incorrect because a serial correlation problem can be corrected by using the Hansen method to adjust the coefficient standard errors, not the R^2 .

For Further Reference:

Study Session 3, LOS 10.k

SchweserNotes: Book 1 p.158

CFA Program Curriculum: Vol.1 p.338

Question #7 of 60

B) days of sales outstanding increased by approximately 47% between 2012 and 2014, possibly due to aggressive revenue recognition or poor receivables management.

Explanation

	2012	2013	2014	2014 <i>Restated</i>
Revenue	14,000	13,720	15,915	15,915
Accounts Receivable	1,789	1,907	2,610	3,010
Receivables Turnover (Revenue/AR)	7.83	7.20		5.29

Percentage increase **$(69/47) - 1 = 47\%$**

Study Session 6, LOS 19.c
SchweserNotes: Book 2, p.104
CFA Program Curriculum: Vol.2 p.209

C) incorrect with respect to cash flows.

Bill and hold transactions record revenue for inventory that is still held by the firm. While this practice will increase reported revenues and accounts receivable, it does not alter the timing of billing and collections and will not boost cash flows.

Study Session 6, LOS 19.d
SchweserNotes: Book 2, p.104
CFA Program Curriculum: Vol.2 p.210

A) correct.

The cash component of earnings is more persistent than the accruals component of earnings. The formula given shows β as the coefficient of earnings persistence; β captures the relationship between current period earnings and earnings in the prior period. A higher β indicates a higher persistence in earnings.

Study Session 6, LOS 19.f
SchweserNotes: Book 2, p.107
CFA Program Curriculum: Vol.2 p.214

A) more than in 2015.

<i>As Reported</i>	<i>2015</i>	<i>2016</i>	<i>Excluding Associates</i>	<i>2015</i>	<i>2016</i>
Revenue	12,071	12,795	Net Income	770	585
Net Income	770	585	Less Associates	(63)	(94)
				<u>707</u>	<u>491</u>
Net Margin	6.38%	4.57%	Net Margin	5.86%	3.84%
Average Total Assets	15,302	15,893	Average Total Assets	15,302	15,893
			Less Associate	1,812	1,952
				13,490	13,941

Asset Turnover	0.79	0.81	Asset Turnover	0.89	0.92
Average Equity	4,513	4,938			
Leverage	3.39	3.22	Leverage	3.39	3.22
ROE	17.06%	11.84%		17.68%	11.38%

We have no information on how the associates are funded, so no adjustment is made to leverage.

Contribution in 2015: 17.06% - 17.68% = -0.62%

Contribution in 2016: 11.84 - 11.38 = +0.46%

For Further Reference:

Study Session 6, LOS 20.c

SchweserNotes: Book 2, p.142

CFA Program Curriculum: Vol.2 p.289

Question #11 of 60

C) 68%

Explanation

<i>Lease Obligations</i>	
	<i>\$ million</i>
2016	148
2017	148
2018	148
2019	148
2020	98
2021-25	98/yr
PV @ 4%	\$976
Debt As Reported	2,367
Lease Obligation	976
Total	3,343
Equity	4,936
Debt to Equity	67.73%

For Further Reference:

Study Session 6, LOS 20.d

SchweserNotes: Book 2, p.143

CFA Program Curriculum: Vol.2 p.302

Question #12 of 60

B) incorrect regarding the decrease in operating profit.

Explanation

Operating leases treat the entire least payment as rent, an operating expense, which reduces operating profit. Capital lease accounting instead expenses depreciation and interest. Of these two expenses, only depreciation is charged against operating profit and, hence, operating profit will be typically higher under a capital lease. Capital lease accounting results in a higher reported interest expense and lower coverage ratio.

For Further Reference:

Study Session 6, LOS 20.d

SchweserNotes: Book 2, p.143

CFA Program Curriculum: Vol.2 p.302

Question #13 of 60

B) 7.2%.

Explanation

The beta of 1.04 is estimated from the slope coefficient on the independent variable (the return on the market) from the regression.

From the CAPM: required return on equity = $0.03 + [1.04 (0.07 - 0.03)] = 0.072 = 7.2\%$.

For Further Reference:

Study Session 9, LOS 28.c

SchweserNotes: Book 3 p.19

CFA Program Curriculum: Vol.4 p.69

Question #14 of 60

B) \$40.00.

Explanation

The value of the stock in early 2009 is the present value of the future dividends. After 2011, dividends are expected to grow at the rate of 4%. The dividend that begins the constantly growing perpetuity is $\$2.63 \times 1.04 = \2.74 . You are given the cost of equity of 10%. Note that for the third cash flow, we add the third dividend (\$2.63) to the present value of the constantly growing perpetuity that begins in the fourth year = $\$2.74 / (0.10 - 0.04) = \45.67 . This is valid since they both occur at the same point in time (i.e., at the end of the third year). Using a financial calculator we can estimate the value of one share of O'Connor stock as follows:

CFO = 0; C01 = \$2.13; C02 = \$2.36; C03 = $\$2.63 + \$45.67 = \$48.30$; I = 10; CPT → NPV = \$40.18

For Further Reference:

Study Session 10, LOS 30.b

SchweserNotes: Book 3 p.65

CFA Program Curriculum: Vol.4 p.205

Question #15 of 60

A) less than three years.

Explanation

De Jong's estimate of value of \$75.00 (based on a high-growth period of three years) is greater than the market's consensus of \$70.00, which means the market's consensus high-growth duration must be less than three years, all else equal.

For Further Reference:

Study Session 10, LOS 30.b

SchweserNotes: Book 3 p.65

CFA Program Curriculum: Vol.4 p.205

Question #16 of 60

A) Non-control perspective FCFE aligned with profitability

Explanation

In order for the dividend discount model to produce a reasonable estimate of share price, the investor should have a non-control perspective. For the FCFE model to be appropriate, there should be a link between FCFE and profitability.

For Further Reference:

Study Session 10, LOS 30.a

SchweserNotes: Book 3 p.62

CFA Program Curriculum: Vol.4 p.199

Question #17 of 60

A) \$43.65

Explanation

$H = 6 / 2 = 3$, $D_0 = 1.92$, $r = 0.095$, $g_s = 0.11$, $g_L = 0.04$

$$P_0 = \frac{D_0(1+g_L)}{(r-g_L)} + \frac{D_0 \times H \times (g_s - g_L)}{(r-g_L)}$$
$$= \frac{1.92(1.04)}{(0.095 - 0.04)} + \frac{1.92 \times 3 \times 0.07}{(0.095 - 0.04)} = \$43.64$$

For Further Reference:

Study Session 10, LOS 30.I

SchweserNotes: Book 3 p.80

CFA Program Curriculum: Vol.4 p.224

Question #18 of 60

A) 8.86%

Explanation

$$r = \left[\left(\frac{D_0}{P_0} \right) \times [(1+g_L) + [H \times (g_s - g_L)]] \right] + g_L$$
$$= \left[\left(\frac{1.92}{48} \right) \times [(1.04) + (2.5 \times 0.07)] \right] + 0.04 = 0.0886$$

For Further Reference:

Study Session 10, LOS 30.m

SchweserNotes: Book 3 p.85

CFA Program Curriculum: Vol.4 p.237

Question #19 of 60

A) Yes in both cases.

Explanation

Increasing invested capital to take advantage of positive NPV projects will increase NOPAT and the dollar cost of capital (\$WACC). Because NPV is positive, the increase in NOPAT will be larger than the increase in \$WACC, so EVA will increase.

For Further Reference:

Study Session 7, LOS 23.d

SchweserNotes: Book 2 p.222

CFA Program Curriculum: Vol.3 p.139

Study Session 11, LOS 33.a

SchweserNotes: Book 3 p.200

CFA Program Curriculum: Vol.4 p.460

Question #20 of 60

A) Yes.

Explanation

All of the justifications noted by De Jong are appropriate reasons to use the residual income model.

For Further Reference:

Study Session 11, LOS 33.j

SchweserNotes: Book 3 p.215

CFA Program Curriculum: Vol.4 p.482

Question #21 of 60

A) Assumption 1.

Explanation

When residual income is expected to persist at its current level forever, the persistence factor is highest. When ROE declines over time to the cost of equity, residual income declines over time to zero, and the persistence factor will have a value between 0 and 1. When residual income falls to zero immediately, the persistence factor has a value of zero.

For Further Reference:

Study Session 11, LOS 33.h

SchweserNotes: Book 3 p.209

CFA Program Curriculum: Vol.4 p.475

Question #22 of 60

B) \$4.2 million \$4.2 million

Explanation

Residual income = net income – equity charge

Equity charge = equity capital × cost of equity capital

Equity charge = \$73,000,000 × 0.08 = \$5,840,000

Residual income = \$10,035,000 – \$5,840,000 = \$4,195,000

EVA = NOPAT – (C% × TC)

EVA = \$28,517,640 – (0.054 × \$324,000,000) = \$11,021,640

For Further Reference:

Study Session 11, LOS 33.a

Question #23 of 60

A) 7.75%.

Explanation

We need to solve for g in the relationship:

$$V_0 = B_0 + \left(\frac{ROE - r}{r - g} \right) B_0$$
$$\$70.00 = \$4.29 + \left(\frac{0.1184 - 0.08}{0.08 - g} \right) \$4.29$$

Solving for g , we get $g = 7.75\%$.

For Further Reference:

Study Session 11, LOS 33.g
SchweserNotes: Book 3 p.208
CFA Program Curriculum: Vol.4 p.475

Question #24 of 60

C) Only Statement 2 is correct.

Explanation

Only Statement 2 is correct. Residual income valuation is related to P/B. When the present value of expected future residual income is negative, the justified P/B based on fundamentals is less than 1. Statement 1 is not correct: residual income models recognize value *earlier* than other valuation models.

For Further Reference:

Study Session 11, LOS 33.e, i
SchweserNotes: Book 3 p.207, 214
CFA Program Curriculum: Vol.4 p.473, 479

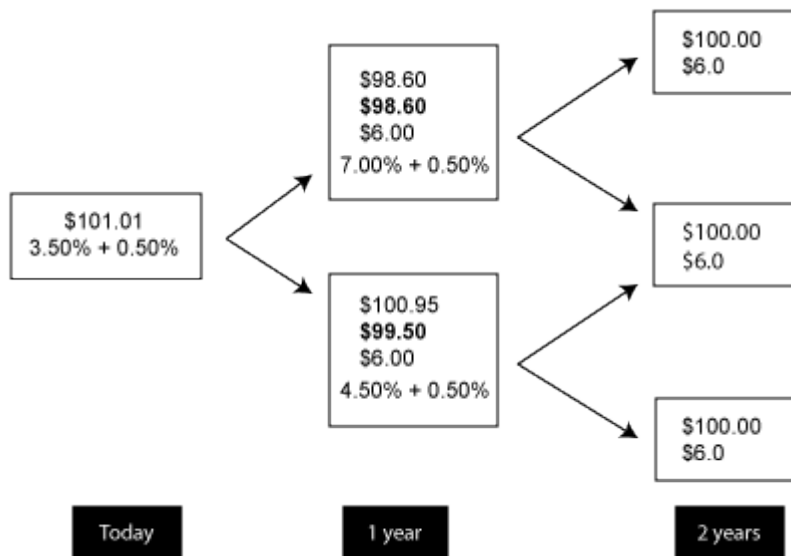
Question #25 of 60

B) \$101.01.

Explanation

The bond will be called in the lower node if the interest rate (including OAS) is 5.0% because the present value of the remaining cash flows (\$100.95) is greater than the call price (\$99.50). The bond will not be called if rates increase to 7.5% in the upper node because the value of the bond (\$98.60) is less than the call price (\$99.50). The value of the callable bond according to the model is 101.01:

$$V_0 = \frac{1}{2} \times \left[\frac{98.60 + 6.00}{1.04} + \frac{99.50 + 6.00}{1.04} \right] = 101.01$$



For Further Reference:

Study Session 13, LOS 37.f

SchweserNotes: Book 4 p.55

CFA Program Curriculum: Vol.5 p.125

Question #26 of 60

C) Incorrect on both the bond and the option.

Explanation

The value of a puttable bond is equal to the value of an otherwise equivalent option-free bond plus the value of the embedded put option. The value of the embedded put option will decrease if yield volatility decreases. The value of the option-free bond will not be affected by changes in yield volatility, so the value of the puttable bond will also decrease. Evermore is incorrect in her analysis of both effects.

For Further Reference:

Study Session 13, LOS 37.d

SchweserNotes: Book 4 p.58

CFA Program Curriculum: Vol.5 p.120

Question #27 of 60

A) Yes.

Explanation

The computed value of a puttable bond decreases with a decrease in the assumed level of volatility and therefore the OAS needed to force the model price to be equal to market price will be lower.

For Further Reference:

Study Session 13, LOS 37.h

SchweserNotes: Book 4 p.61

CFA Program Curriculum: Vol.5 p.135

Question #28 of 60

C) Correct on the BB issue only.

Explanation

The benchmark securities used to create the tree are Treasury securities, so the OAS for each callable corporate bond reflects additional credit risk and liquidity risk relative to the benchmark. The bonds are overvalued if their OAS are smaller than the required OAS and undervalued if their OAS are larger than the required OAS. The required OAS for both bonds is the Z-spread over Treasuries on comparably-rated securities with no embedded options. That required spread is not provided in the vignette.

The BB-rated issue is overvalued because its OAS is less than zero, which means it must be less than the required OAS. Therefore, Evermore is correct in her analysis of the BB-rated issue.

The AA-rated issue has a positive OAS relative to the Treasury benchmark, but we don't know the required OAS on similar bonds, so we can't determine whether or not the AA-rated issue is over or undervalued based on the information given. Therefore, Evermore is incorrect to conclude that the issue is undervalued.

For Further Reference:

Study Session 13, LOS 37.g

SchweserNotes: Book 4 p.59

CFA Program Curriculum: Vol.5 p.134

Question #29 of 60

A) Davenport's description is a more accurate depiction of the appropriate methodology than Evermore's.

Explanation

Davenport has correctly outlined the appropriate methodology for using a binomial model to estimate effective duration and effective convexity. Evermore fails to adjust for the OAS and, instead, simply adds 100 basis points to every rate on the tree rather than shifting the yield curve upward and then recreating the entire tree using the same rate volatility assumption from the first step. Even if both use the same rate volatility assumption and the OAS is equal to zero, the two methodologies will generate significantly different duration and convexity estimates.

For Further Reference:

Study Session 13, LOS 37.i

SchweserNotes: Book 4 p.62

CFA Program Curriculum: Vol.5 p.139

Question #30 of 60

C) Davenport is correct on yield volatility only.

Explanation

The value of a callable convertible bond is equal to the value of an option-free bond plus the value of the conversion option on the stock minus the value of the call option on the bond.

A decrease in the volatility of Highfour's common stock returns will decrease the value of the conversion option on the stock. Consequently the value of the convertible bond will also decrease. Evermore was correct in her analysis, and Davenport was incorrect to disagree with her.

A decrease in the yield volatility will decrease the value of the embedded call option. The investor has written the call option, so a decrease in the value of the call option will increase the value of the convertible bond. Evermore is incorrect in her analysis, and Davenport was correct to disagree with her.

For Further Reference:

Study Session 13, LOS 37.n

SchweserNotes: Book 4 p.67

CFA Program Curriculum: Vol.5 p.163

Question #31 of 60

A) all three portfolios will experience the same price performance.

Explanation

Each of the portfolios has an effective duration of five, so a parallel shift in the yield curve will have the same effect on each portfolio, and each will experience the same price performance.

For Further Reference:

Study Session 12, LOS 35.k

SchweserNotes: Book 4 p.20

CFA Program Curriculum: Vol.5 p.37

Question #32 of 60

B) Portfolio 1 will experience the best price performance.

Explanation

The exposure of each portfolio to changes in the 5- and 10-year rates are equal to the sum of the 5- and 10-year key rate durations:

portfolio 1 exposure = $0.20 + 0.15 = 0.35$

portfolio 2 exposure = $0.40 + 4.00 = 4.40$

Portfolio 2 has the largest exposure, and portfolio 1 has the smallest exposure. If the 5- and 10-year key rates increase, portfolio 1 will fall by the smallest amount and will experience the best price performance (i.e., the smallest decrease in value).

You can confirm this by doing the calculations for a 20 basis point increase:

$$\begin{aligned}\% \text{ change in portfolio 1} &= (-0.20 \times 0.002 \times 100) + (-0.15 \times 0.002 \times 100) \\ &= (-0.35 \times 0.002 \times 100) = -0.07\%\end{aligned}$$

$$\begin{aligned}\% \text{ change in portfolio 2} &= (-0.40 \times 0.002 \times 100) + (-4.00 \times 0.002 \times 100) \\ &= (-4.40 \times 0.002 \times 100) = -0.88\%\end{aligned}$$

For Further Reference:

Study Session 12, LOS 35.k

SchweserNotes: Book 4 p.20

CFA Program Curriculum: Vol.5 p.37

Question #33 of 60

A) Both statements are accurate.

Explanation

Statement 1 is correct. Swap markets tend to have more maturities with which to construct a yield curve as compared to government bond markets. Statement 2 is correct. Retail banks tend to have little exposure to swaps and hence are more likely to use the government spot curve as their benchmark.

For Further Reference:

Study Session 12, LOS 35.e

SchweserNotes: Book 4 p.10

CFA Program Curriculum: Vol.5 p.22

Question #34 of 60

C) \$100.69.

Explanation

The value of a 3-year bond extendible by one year is equal to an otherwise identical 4-year bond that is puttable in three years. Accordingly, the value of bonds B and C should be the same.

For Further Reference:

Study Session 13, LOS 37.a

SchweserNotes: Book 4 p.54

CFA Program Curriculum: Vol.5 p.110

Question #35 of 60

C) No, because the specified change in yield can be larger than, smaller than, or equal to the OAS.

Explanation

The steps in the process of calculating the effective duration of a callable bond using a binomial tree are as follows:

Step 1: Given assumptions about benchmark interest rates, interest rate volatility, and the call and/or put rule, calculate the OAS for the issue using the binomial model.

Step 2: Impose a small parallel shift in the on-the-run yield curve by an amount equal to $+\Delta y$.

Step 3: Build a new binomial interest rate tree using the new yield curve.

Step 4: Add the OAS to each of the 1-year forward rates in the interest rate tree to get a "modified" tree. (We assume that the OAS does not change when interest rates change.)

Step 5: Compute $BV_{+\Delta y}$ using this modified interest rate tree.

Step 6: Repeat steps 2 through 5 using a parallel rate shift of $-\Delta y$ to estimate a value of $BV_{-\Delta y}$.

There is no restriction on the relationship between the assumed change in the yield (Δy) and the OAS.

For Further Reference:

Study Session 13, LOS 37.i

SchweserNotes: Book 4 p.62

CFA Program Curriculum: Vol.5 p.139

Question #36 of 60**B)** Consistent with the pure expectations theory only.**Explanation**

An upward sloping yield curve predicts an increase in short-term rates according to the pure expectations theory but not necessarily the liquidity premium theory.

The liquidity theory says that forward rates are a biased estimate of the market's expectation of future rates because they include a liquidity premium. Therefore, a positive sloping yield curve may indicate either (1) that the market expects future interest rates to rise or (2) that rates are expected to remain constant (or even fall), but the addition of the liquidity premium results in a positive slope.

For Further Reference:

Study Session 12, LOS 35.i

SchweserNotes: Book 4 p.16

CFA Program Curriculum: Vol.5 p.31

Question #37 of 60**C)** 98.62.**Explanation**

The present value of the next coupon payment (per \$100 face value) is

$$\frac{2.50}{1.04^{\left(\frac{182}{365}\right)}} = 2.4516$$

$$\text{The no-arbitrage forward price is } (98.25 - 2.4516) \times 1.04^{\left(\frac{270}{365}\right)} = 98.62$$

For Further Reference:

Study Session 14, LOS 40.b

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.271

Question #38 of 60**C)** \$78,000.**Explanation**

$$\text{PV of the coupon is now } \frac{2.50}{1.04^{\left(\frac{122}{365}\right)}} = 2.4674, \text{ and the value of the forward contract to}$$

$$\text{the long is } 98.11 - 2.4674 - \frac{98.62}{1.04^{\left(\frac{210}{365}\right)}} = -0.77693 \text{ per } \$100, \text{ or } -\$77,693.$$

The value to the short is +\$77,693.

For Further Reference:

Study Session 14, LOS 40.a

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.270

Question #39 of 60

A) Two.

Explanation

Adams used the 90-day rate (0.0352) and the time period (90/360) in the numerator instead of the 150-day rate (0.0392) and the 150-day time period (150/360). The denominator is correct, so two out of the four terms are used correctly. The correct calculation is:

$$\left[\frac{1 + 0.0392 \left(\frac{150}{360} \right)}{1 + 0.0332 \left(\frac{60}{360} \right)} - 1 \right] \left(\frac{360}{90} \right) = \left[\frac{1.01633}{1.00553} - 1 \right] (4) = 4.30\%$$

For Further Reference:

Study Session 14, LOS 40.b

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.271

Question #40 of 60

B) \$3,948.

Explanation

$$(0.0430 - 0.0414) \times \$10 \text{ million} \times \frac{90}{360} = \$4,000 \text{ (expected payoff in 120 days)}$$

$$\text{PV of payoff is } \frac{\$4,000}{1 + 0.0392 \left(\frac{120}{360} \right)} = \$3,948$$

For Further Reference:

Study Session 14, LOS 40.a

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.270

Question #41 of 60

B) \$1.1740.

Explanation

$$1.1854 \left(\frac{1.03}{1.04} \right) = \$1.174$$

For Further Reference:

Study Session 14, LOS 40.a

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.270

Question #42 of 60

B) lending the Swiss franc.

Explanation

The arbitrage-free forward price = $1.2010(1.03)/(1.025) = 1.0310$. The forward price in the market is spot price + forward premium = $1.0210 + 0.0301 = 1.0511$. Therefore, the quoted forward price is higher than the arbitrage-free forward price. An arbitrage profit can be earned by selling Swiss francs at the forward price of \$1.0511 while buying francs in the spot market (using borrowed USD). (The francs purchased in the spot market are invested at the Swiss interest rate for the duration of the futures contract.)

Note: No calculations are needed to solve this problem.

At time $t=0$:

Begin with nothing.

Borrow \$100 at 3% (repayment of \$103 is required at $t=1$).

Convert the \$100 USD into $100/1.0210 = \text{CHF } 97.9432$

Invest (lend) CHF 97.9432 at the Swiss 2% rate (to produce CHF 99.902 at $t=1$)

Sell 99.902 CHF forward at the \$1.0511 rate.

At $t=1$

Convert CHF 99.902 to USD at the previously locked in rate of 1.0511, yielding $99.902 \times 1.0511 = \$105.01$

Repay \$103 for USD loan (with interest).

Arbitrage profit = $\$105.01 - \$103 = \$2.01$

For Further Reference:

Study Session 14, LOS 40.a

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.270

Question #43 of 60

C) -\$765,000.

Explanation

Current term structure:

<i>LIBOR</i>	<i>Discount Factor</i>
LIBOR ₁₈₀ 0.029	0.98571
LIBOR ₃₆₀ 0.030	0.97087
LIBOR ₅₄₀ 0.032	0.95420

Fixed payments: $0.035 \times 180 / 360 = 0.0175$

PV fixed payments per \$ notional:

$0.0175 \times (0.98571 + 0.97087 + 0.9542) + 0.9542 = 1.0051$

PV floating payments per \$ notional = 1.0000

As the contract is at the settlement date (180 days into the swap), the floating side will be valued at par.

Value to fixed-rate payer: $(\$1.0000 - \$1.0051) \times \$150,000,000 = -\$765,000$

For Further Reference:

Study Session 14, LOS 40.c

SchweserNotes: Book 4 p.138

CFA Program Curriculum: Vol.5 p.305

Question #44 of 60

C) -\$6,500,000.

- **Explanation**
- **References**

Current term structure:

<i>LIBOR</i>	<i>Discount Factor</i>
LIBOR ₆₀ 0.027	0.99552
LIBOR ₁₅₀ 0.0285	0.98826
LIBOR ₂₄₀ 0.0295	0.98071

Fixed-rate payment: $0.037 \times 90 / 360 = 0.00925$

Value to GD (fixed payer) per \$ notional principal:

$(1892.23 / 1926.64) - 0.98071 - 0.00925(0.99552 + 0.98826 + 0.98071) = -0.02599$

Value = $-0.02599 \times \$250,000,000 = -\$6,497,910$

For Further Reference:

Study Session 14, LOS 40.c

SchweserNotes: Book 4 p.138

CFA Program Curriculum: Vol.5 p.305

Question #45 of 60

C) 40-day LIBOR and 220-day LIBOR.

Explanation

The original contract was a 90-day FRA on 180-day LIBOR. As 50 days have passed, the equivalent contract is now a 40-day FRA on 180-day LIBOR. Hernandez needs the 40-day rate and the 220-day rate to reprice the FRA and discount the gain or loss back to today.

For Further Reference:

Study Session 14, LOS 40.a

SchweserNotes: Book 4 p.124

CFA Program Curriculum: Vol.5 p.270

Question #46 of 60

B) \$0.3 million.

Explanation

POPRT is part of the index CDS. GD sold protection of \$350 million over the 125 equally weighted entities, meaning that it has effective exposure of $\$350 \text{ million} / 125 = \2.8 million .

On the single-name POPRT CDS, GD purchased protection of \$2.5 million, leaving a net notional exposure of $2.8 - 2.5 = \$0.3 \text{ million}$.

For Further Reference:

Study Session 13, LOS 39.d

SchweserNotes: Book 4 p.112

CFA Program Curriculum: Vol.5 p.253

Question #47 of 60

B) a gain on the CDS position.

Explanation

As the credit spread for TRTRS has widened and GD has purchased protection, GD will gain by selling protection at a higher premium.

For Further Reference:

Study Session 13, LOS 39.c

SchweserNotes: Book 4 p.109

CFA Program Curriculum: Vol.5 p.244

Question #48 of 60

C) buying CDS protection and buying the underlying stock.

Explanation

Typically, an LBO will result in an increase in the probability of default due to the large increase in debt levels. An investor would, therefore, seek to buy protection, as the premium would rise along with the probability of default. Due to the takeover premium that would result from the LBO, Eagen would also benefit by going long TRTRS stock.

For Further Reference:

Study Session 13, LOS 39.e

SchweserNotes: Book 4 p.113

CFA Program Curriculum: Vol.5 p.255

Question #49 of 60

C) Incentivizing the general partner.

Explanation

Private equity funds add value to their portfolio investments in a variety of ways including utilizing optimal financial leverage, incentivizing portfolio company management, and creating operational improvements. Incentivizing the GP is a mechanism to reduce conflict of interest between LP and GP and not a mechanism to add value.

For Further Reference:

Study Session 15, LOS 45.a

SchweserNotes: Book 5 p.62

CFA Program Curriculum: Vol.6 p.141

Question #50 of 60

C) lower.

Explanation

Relative to demand for natural gas, seasonality in demand for oil is lower. Cold winters increase the demand for gas for heating fuel and hot summers increase the demand for gas as well (for cooling) because gas is a primary source of fuel for electrical power generation.

For Further Reference:

Study Session 15, LOS 46.a

SchweserNotes: Book 5 p.109

CFA Program Curriculum: Vol.6 p.187

Question #51 of 60

C) lower.

Explanation

The supply shortage would result in an increase in convenience yield, which will in turn lower the futures price relative to the spot price.

For Further Reference:

Study Session 15, LOS 46.f

SchweserNotes: Book 5 p.114

CFA Program Curriculum: Vol.6 p.209

Question #52 of 60

A) Commodity spot prices are flat over the long term but volatile over the short term.

Explanation

Rebalancing to original fixed weights entails selling contracts that have appreciated in value and purchasing contracts that have lost value. In volatile markets, contracts that have risen in value will be sold and contracts that have lost value will be purchased. This results in a significant positive return in markets that are flat in the long term and volatile in the short term.

For Further Reference:

Study Session 15, LOS 46.g

SchweserNotes: Book 5 p.116

CFA Program Curriculum: Vol.6 p.215

Question #53 of 60

A) The insurance perspective.

Explanation

The case provides that the pricing in cattle futures market reflects contango; futures prices are higher than spot prices. The hedging pressure hypothesis can explain contango pricing by suggesting that farmers that wish to hedge their commodity price risk may be outnumbered by commodity consumers reducing their risk by taking long positions in the futures market. The insurance perspective suggests that farmers should dominate the hedging market, which results in backwardation and would be least likely to explain a contango pricing behavior. The theory of storage relies on the convenience yield to predict the relationship between spot and futures prices; it links storage costs and storability to the convenience yield. Existence of high inventory levels could reduce the convenience yield and hence push futures prices higher, potentially leading to contango.

For Further Reference:

Study Session 15, LOS 46.f

Question #54 of 60

C) positive.

Explanation

Since futures prices are less than spot prices, the roll return will be positive. Convergence will create identical spot and futures prices at maturity; maturing contracts will be replaced with the next shortest futures contract, which will have a lower price.

For Further Reference:

Study Session 15, LOS 46.h
SchweserNotes: Book 5 p.117
CFA Program Curriculum: Vol.6 p.219

Question #55 of 60

A) 0.68%.

Explanation

Asset Class (i)	Portfolio Return $E(R_{Pi})$	Benchmark Return $E(R_{Bi})$	Active Weight (Δ_{wi})	(Δ_{wi}) ($E(R_{Bi})$)
Equities	13%	12%	10%	1.20%
Bonds	7%	5%	-11%	-0.55%
Cash	3%	3%	1%	0.03%
Total				0.68%

Expected active return from asset allocation = $\sum \Delta w_i E(R_{Bi}) = 0.68\%$

For Further Reference:

Study Session 17, LOS 51.a
SchweserNotes: Book 5 p.197
CFA Program Curriculum: Vol.6 p.444

Question #56 of 60

A) both statements are correct.

Explanation

Both statements are correct. The global optimal risky portfolio is the portfolio with the highest Sharpe ratio. Investors customize their portfolios based on their risk tolerance by combining this optimal risky portfolio and the risk-free asset. A market-neutral long-short equity fund would have beta of zero, and, hence, the appropriate benchmark would be the risk-free asset. The excess return in the numerator is the same for both the information ratio and the Sharpe ratio when the risk-free asset is the benchmark. Additionally, by definition, the active risk will be same as total risk when the benchmark is risk-free (i.e., zero volatility).

For Further Reference:

Study Session 17, LOS 51.b
SchweserNotes: Book 5 p.200
CFA Program Curriculum: Vol.6 p.449

Question #57 of 60

A) Transfer coefficient.

Explanation

Transfer coefficient can be thought of as a cross-sectional correlation between the forecasted active returns and active weights, adjusted for risk.

For Further Reference:

Study Session 17, LOS 51.c

SchweserNotes: Book 5 p.203

CFA Program Curriculum: Vol.6 p.459

Question #58 of 60

A) Prime.

Explanation

Prime has the highest information ratio and, hence, is most suitable for the investor regardless of the active risk constraint. In this instance, the investor would invest 5% or 83.33% in Prime and the remaining 16.67% in the benchmark portfolio to meet the maximum active risk constraint.

<i>Fund</i>	<i>Prime</i>	<i>Redux</i>	<i>Optimus</i>
Expected active return	2.40%	1.25%	1.28%
Active risk	6%	5%	4%
Information ratio	0.40	0.25	0.32

For Further Reference:

Study Session 17, LOS 51.d

SchweserNotes: Book 5 p.205

CFA Program Curriculum: Vol.6 p.452

Question #59 of 60

B) 19.

Explanation

Manager B has an information coefficient (IC) of $2(0.55) - 1$ or 0.10.

Given unconstrained optimization for Manager B, $TC = 1.0$

$$\text{Manager B information ratio} = IC \times \sqrt{BR} = 0.10 \times \sqrt{12} = 0.35$$

$$\text{Manager A information ratio} = TC \times IC \times \sqrt{BR} = 0.4 \times 0.20 \times \sqrt{BR}$$

$$\text{Setting Manager A information ratio} = 0.35, \sqrt{BR} = 4.375 \text{ and } BR = 19.14.$$

For Further Reference:

Study Session 17, LOS 51.e

SchweserNotes: Book 5 p.205

CFA Program Curriculum: Vol.6 p.471

Question #60 of 60

B) Low information ratio.

Explanation

Closet index funds are characterized by low active risk and a Sharpe ratio equal to that of the benchmark. The information ratio for closet index funds tends to be zero (or negative after fees). Low information ratio can also occur for (unsuccessful) active funds.

For Further Reference:

Study Session 17, LOS 51.b

SchweserNotes: Book 5 p.200

CFA Program Curriculum: Vol.6 p.449