Question #1 of 20

Question ID: 1587589

Simon Feldberg sold treasury futures that have now reached their delivery date. Which of the three eligible bonds below should Feldberg deliver?

	Bond A	Bond B	Bond C
Bond coupon	5.7%	5.75%	5.8%
Bond maturity	20 years	19 years	18 years
Clean price	$144.18	$144.17	$143.96
Accrued interest*	$0	$0	$0
Conversion factor	0.9653	0.9719	0.9782
Futures settlement price		$148.75	
Contract size		$100,000	

Accrued interest* = accrued interest at futures delivery (assumed zero)

A) Bond A.

B) Bond C.

C) Bond B.

Explanation

At the delivery date, the bond that is cheapest to deliver (CTD) will generate the greatest gain or lowest loss on settlement.

$$\text{Profit/(loss) on delivery} = [(\text{Settlement price} \times \text{CF}) + \text{AI}_T] - (\text{CTD clean price} + \text{AI}_T)$$

	Bond A	**Bond B**	**Bond C**
Settlement price × CF	$143.59	$144.57	$145.50
Accrued interest	$0	$0	$0
Total	$143.59	$144.57	$145.50
Principal invoice amount **A**	$143,590	$144,570	$145,500
CTD dirty price	$144.18	$144.17	$143.96
Accrued interest	$0	$0	$0
CTD dirty price	$144.18	$144.17	$143.96
Purchase value **B**	$144,180	$144,170	$143,960
Gain/(loss) on delivery (A − B)	($590)	$400	$1,540

Note that this question assumes that accrued interest on the CTD bonds is zero at futures delivery.

Due to the mark-to-market feature in futures contracts, the short party does not receive the initial futures price at contract expiry. Daily futures settlement prices are used to compute the daily profit or loss on the futures contract with gains being added to the counterparties' margin accounts and losses deducted. Daily profit or loss is calculated as $FP_t - FP_{t-1}$. To avoid double counting profits and losses, the short party will receive the final settlement price × CF at the maturity of the futures contract.

(Module 7.1, LOS 7.a)

Question #2 of 20

Question ID: 1587604

Which of the following statements regarding the VIX Index is *most accurate*?

A) VIX is the annualized standard deviation of the expected percentage changes in the index with 68% confidence.

B) VIX measures realized 3-month volatility on the S&P 500 Index.

C) **VIX is a measure of implied volatility derived from lookback options traded on the S&P 500.**

Explanation

The CBOE volatility index (VIX) is a measure of the weighted average volatility computed from both 30-day call and put options on the S&P 500 Index.

If VIX has a value of 40, we can interpret this as the market, implying that the S&P 500 will stay within a range of +/− 40% over one year with a 68% level of confidence. This implies a range +/− $\frac{40}{\sqrt{12}}$ = 11.55% over the next 30-day period.

Importantly, empirical studies have shown a negative correlation between the VIX and stock returns, which becomes more pronounced during downturns. This correlation allows derivatives based on the index to offset the losses on an equity portfolio when volatility increases.

(Module 7.4, LOS 7.d)

Question #3 of 20

Question ID: 1587633

A U.S. investor has some of her wealth invested in a 300,000 euro portfolio managed by a European fund manager. The investor wants to terminate her euro portfolio in nine months but is worried about currency fluctuation; therefore, she wants to hedge the full 300,000 euro value today. The investor should:

A) sell euros and buy U.S. dollars under a 9-month forward contract, which is an imperfect hedge because it doesn't hedge potential gains or losses in the portfolio. ✓

B) buy euros and buy U.S. dollars under a 9-month forward contract, which is a perfect hedge because it covers the full portfolio value. ✗

C) sell U.S. dollars and buy euros under a 9-month forward contract, which is an imperfect hedge because it doesn't hedge potential gains or losses in the portfolio. ✗

Explanation

The investor wants to sell her euro portfolio in nine months. A 9-month sell euros/buy U.S. dollars forward contract would achieve this objective. A currency forward contract with an underlying notional value of 300,000 euros would hedge the portfolio value today, but it ignores any potential gains or losses over the next nine months. As a result, the hedge is imperfect, and the investor may have either overhedged or underhedged her portfolio. At the same time, the contract will fix in advance the amount of U.S. dollars to be received in the future.

(Module 8.1, LOS 8.c)

Question #4 of 20

Question ID: 1582086

An investor is expecting low volatility in the near term for the price of a stock she owns but has a long-term bullish view. The *best* course of action for the investor to take would be to enter into a:

A) long calendar spread with calls.

B) long zero-cost collar.

C) short straddle.

Explanation

A long calendar spread involves buying a longer-dated call and selling a shorter-dated call with the same strike and underlying. This allows a longer-term bullish view that is subsidized by the premium of the shorter-dated call.

A collar caps the upside and is therefore not appropriate. A short straddle will result in premium income but is very risky if the share price moves significantly in either direction.

(Module 6.12, LOS 6.j)

Question #5 of 20

Question ID: 1587619

Tom Corser is the manager of the $140,000,000 Intrepid Growth Fund. Corser's long-term view of the equity market is negative, and as a result, his portfolio is allocated defensively with a beta of 0.85. Despite his negative long-term outlook, Corser thinks the market is temporarily mispriced and could rise significantly over the next few weeks. Corser has implemented tactical asset allocation measures in his fund sporadically over the years, and he thinks now is another time to do so. Because he likes his long-term holdings, he decides to use a futures overlay rather than trading assets to implement his view of the market. Corser decides he wants to increase the beta of his portfolio to 1.25. The appropriate futures contract has a beta of 1.03, and the total futures price is $310,000. What is the appropriate tactical allocation strategy for Corser to accomplish his objective?

A) Buy 373 equity futures contracts.

B) Sell 175 equity futures contracts.

C) Buy 175 equity futures contracts.

Explanation

Note: On the exam, it is very likely for material on tactical asset allocation to be tested in conjunction with material from derivatives as tactical asset allocation can be accomplished by selling assets, or with a derivative overlay. Because Corser wants to increase the beta of his portfolio, he should buy futures contracts. The appropriate number of contracts to buy is calculated as follows:

$$[(1.25 - 0.85) / 1.03] \times (\$140{,}000{,}000 / \$310{,}000) = 175.38 \approx 175 \text{ contracts.}$$

(Module 7.5, LOS 7.f)

Question #6 of 20

Question ID: 1587649

Luis Gomez manages a Canadian-based investment fund in CAD, which has some U.S.-based investments. Assuming there is a negative correlation between the CAD and corporate profits of the U.S. companies in which it invests, what is the appropriate minimum variance hedge ratio required to reduce the volatility of the returns in CAD?

A) One.

B) Greater than one.

C) Less than one.

Explanation

If there is negative correlation between the CAD currency and U.S. corporate profits, then it must mean that the correlation between USD currency and U.S. corporate profits is positive *(note: when we compare USD and CAD currencies to each other, the strengthening of one currency means the weakening of the other currency and vice versa)*.

Therefore, R_{DC} volatility will increase because R_{FX} (USD currency) and R_{FC} (USD corporate profits) are positively correlated. That means there is a greater need to hedge (i.e., hedge ratio must be greater than one) to reduce the volatility of R_{DC}.

(Module 8.6, LOS 8.h)

Question #7 of 20

Question ID: 1587602

Sofia Chiara manages an equity fund that invests in Italian stocks. The fund has a market value of €120m at the start of the period. Chiara sold 563 futures contracts at the start of the period to give her overall portfolio a beta (relative to the FTSE MIB) of 0.8. The equity portion of her portfolio has a beta of 1.3. The FTSE MIB has a value of 21,350 at the start of the period, and the futures price was 21,315.

Twelve months later, the index has fallen to 21,050, and the futures price is 21,025. Assuming that the beta remains constant at 1.3 over the period and the futures contract multiplier is €5 per index point, the return on her fund at the end of the 12-month period is *closest* to:

A) −€1,375,687.

B) −€1,347,537.

C) −€1,348,946.

Explanation

Equity portfolio performance:

% change in index × portfolio value × portfolio beta

$$\left(\frac{21{,}050}{21{,}350}-1\right)\times €120\text{m}\times 1.3=-€2{,}192{,}037$$

Short futures performance:

(21,315 − 21,025) = 290 points

Points × multiplier × contracts = 290 × €5 × 563 = €816,350

Return on portfolio:

−€2,192,037 + €816,350 = −€1,375,687

Return if the portfolio had a beta of 0.8:

$$\left(\frac{21{,}050}{21{,}350}-1\right)\times €120\text{m}\times 0.8=-€1{,}348{,}946$$

Reason for the difference:

1. Rounding in the number of futures contracts to achieve the desired beta
2. Change in basis on the futures contracts; due to convergence (when spot = futures price) at delivery, basis typically declines over the life of a futures contract

Basis = spot − futures price

Basis at initiation = 21,350 − 21,315 = 35 points (positive basis = backwardation)

Basis 12 months later = 21,050 − 21,025 = 25 points

Basis has declined on the futures, causing the hedge to be imperfect. In this case, −10 points × €5 × 563 = −€28,150.

Note that if we remove the impact of the basis change on the combined portfolio, we would get a loss of = −€1,375,687 +€28,150 = −€1,347,537. This is closer to the result if the portfolio had achieved a beta of 0.8 (the remaining difference due to rounding to the nearest complete futures contract).

(Module 7.3, LOS 7.c)

Octopus Portfolio Management (OPM) is a European company that specializes in investment management services. After developing and implementing new risk policies and employing qualified audit and compliance personnel, OPM's board of directors approved the use of derivatives in client portfolios.

Johnny Dorser, a trader specializing in derivative strategies, joins OPM as an assistant portfolio manager. Dorser is tasked with organizing internal training sessions for company associates that cover the role and use of derivatives in risk management. Dorser asks the associates to prepare questions to discuss during the sessions. Two of the questions received by Dorser are as follows:

Question 1:	How will the delta of a covered call change if the call option was out of the money when the strategy was initiated and became in the money at the call's maturity?
Question 2:	What does an increase in both the level of skew and absolute implied volatility indicate about the market, and which option strategy should be used in such a case?

Dorser meets Lizette Zena, a client who holds 40,000 shares of Stabru—a European-listed company. Zena would like to hedge against a drop in the stock price of Stabru below EUR 65. A recently prepared report on Stabru by OPM's equity research team notes, "For the next three months, Stabru's outlook is slightly bullish. It is unlikely that the stock price will increase above EUR 75." Dorser decides to implement a collar strategy. Information on Stabru options is shown in **Exhibit 1: Selected Information on 3-Month Stabru* Options (In EUR)**.

Exhibit 1: Selected Information on 3-Month Stabru* Options (In EUR)

Call Price	Exercise Price	Put Price
6.5	65	0.4
1.3	70	1.4
0.2	75	6.4

*The current price of Stabru is EUR 70.

Three months later, the equity research team provides an updated analysis on Stabru, mentioning that the company is not expected to start paying dividends and that its outlook is stable with a possible price decline. While Zena wishes to hedge against a possible stock price decline, she does not want to forgo the upside potential. Dorser suggests implementing a protective put. During a training session later that day, to test the associates' knowledge, Dorser asks which of the following strategies would replicate a protective put using at-the-money put options on 40,000 Stabru shares, given small changes in the stock price:

Strategy 1:	Long 40,000 Stabru shares and short a forward contract on 20,000 Stabru shares.

Strategy 2:	Long 40,000 Stabru shares and short a forward contract on 40,000 Stabru shares.
Strategy 3:	Long 40,000 Stabru shares and short out-of-the-money call options on 20,000 Stabru shares.

Question #8 - 11 of 20

Question ID: 1551813

Regarding Question 1, the delta of the covered call will *most likely* be:

A) lower than 0 at initiation and close to –1 at expiry of the call option.

B) close to 0 at initiation and close to 0 at expiry of the call option.

C) higher than 0 at initiation and close to 0 at expiry of the call option.

Explanation

A covered call is constructed by going long a stock and short a call option on the stock. At initiation, because the call option is out of the money, the option's delta will be lower than 1 (typically less than 0.5). Thus, because the stock's delta is 1 and only partially hedged by the negative delta of the short out-of-the-money call option, the delta of the covered call strategy is positive at initiation.

At expiry, because the call is in the money, its delta will be close to 1. The delta of the short call option in this case will offset the delta of the stock, and the resulting delta of the covered call strategy will be closer to 0.

At initiation, the strategy's delta is higher than zero.

This answer represents the delta of the short call option without accounting for the delta of the stock.

(Module 6.9, LOS 6.d)

Question #9 - 11 of 20

Question ID: 1551814

Which of the following is the *most accurate* answer to Question 2?

A) The market sentiment is bearish, and a suitable strategy may involve writing call options.

B) The market sentiment is bullish, and a suitable strategy may involve buying call options.

C) The market sentiment is bearish, and a suitable strategy may involve buying put options.

Explanation

An increase in the level of volatility skew (i.e., the difference in the implied volatility between the out-of-the-money put options and the out-of-the-money call options) associated with an increase in absolute implied volatility indicates that the market sentiment is bearish. Accordingly, buying a put option may be a suitable strategy.

An increase in both the level of volatility skew and absolute implied volatility indicates the market is bearish.

Because options are positively related to implied volatility, selling options leads to losses if implied volatility increases.

(Module 6.11, LOS 6.h)

Question #10 - 11 of 20

Question ID: 1551815

Based on **Exhibit 1: Selected Information on 3-Month Stabru* Options (In EUR)** and the report of OPM's equity research team on Stabru, the maximum profit on a suitable collar strategy for Zena is *closest* to:

A) EUR 5.9.

B) EUR 4.8.

C) EUR 9.8.

Explanation

The combination of a stock, a long put option with an exercise price below the current stock price, and a short call option with an exercise price above the current stock price is referred to as a *collar*.

Because Zena wishes to hedge against a decrease in the stock price below EUR 65, a put option with a strike price of EUR 65 should be bought. Because the stock price of Stabru is not expected to increase above EUR 75 within three months, selling a 3-month call option with an exercise price of EUR 75 may be considered appropriate for offsetting (or partially offsetting) the put premium paid.

The maximum profit on a collar strategy is calculated as

$$\text{maximum profit} = X_H - S_0 - p_0 + c_0$$

where X_H is the higher strike price (i.e., the strike price of the call option), S_0 is the stock price at Time 0, p_0 is the premium of the put option, and c_0 is the premium of the call option.

Maximum profit = 75 – 70 – 0.4 + 0.2 = EUR 4.8. Thus, this is the correct answer.

With the EUR 5.9 answer option, the EUR 70 call option instead of the EUR 75 call option and the exercise price of the put instead of the current stock price are used, so the result is the maximum profit = 70 – 65 – 0.4 + 1.3 = EUR 5.9.

With the EUR 9.8 answer option, the maximum profit is calculated using the exercise price of the put instead of the current stock price as 75 – 65 – 0.4 + 0.2 = EUR 9.8.

(Module 6.6, LOS 6.f)

Question #11 - 11 of 20

Question ID: 1551816

Which of the following *best* replicates a protective put on 40,000 Stabru shares for small changes in Stabru's stock price?

A) Strategy 3.

B) Strategy 1.

C) Strategy 2.

Explanation

Because small changes in the price of the underlying stock are expected, the strategy that best replicates the protective put is the strategy that has a delta similar to that of the protective put.

First, calculate the delta of the protective put as

delta of the protective put = delta of stock + delta of the at-the-money put option

Delta of the stock = 1.

Delta of the at-the-money put option ≈ –0.5.

Delta of the protective put ≈ 1 – 0.5 ≈ 0.5 per each share.

Total delta of the protective put = 40,000 × 0.5 ≈ 20,000.

The delta of a forward contract on the stock of Stabru is equal to 1 because the stock is a non-dividend-paying stock.

The delta of Strategy 1 = delta of 40,000 stocks + delta of the short forward on 20,000 stocks = 40,000 –20,000 = 20,000.

Because Strategy 1 has a delta that is approximately equal to the delta of the protective put, the change in value of Strategy 1 is similar to the change in value of a protective put for small changes in the stock price. Thus, for small changes in the stock price of Stabru, the combination of longing 40,000 Stabru shares and shorting a forward contract on 20,000 Stabru shares closely replicates a protective put strategy on 40,000 Stabru shares that uses at-the-money put options.

Because the delta of Strategy 2 is equal to 40,000 – 40,000 = 0, it does not match the delta of the protective put using at-the-money put options. As such, the changes in value of Strategy 2 and the protective put will differ for small changes in the price of the underlying stock. Therefore, Strategy 2 does not closely replicate a protective put strategy using at-the-money put options on 40,000 Stabru shares.

With the Strategy 3 answer option, a n out-of-the-money call option has a delta that is typically lower than |–0.5|. As such, the delta of Strategy 3 is higher than 40.000 – (0.5 × 20,000) = 30,000 and differs from the delta of a protective put. Therefore, Strategy 3 does not closely replicate a protective put strategy using at-the-money put options on 40,000 Stabru shares.

(Module 6.9, LOS 6.d)

Question #12 of 20

Question ID: 1587551

Suppose an investor purchased a stock for $40 last month and sold (took a short position in) a $45 call, for a $3 premium. At expiration of the call, the stock is trading at $47. Which of the following statements is *most accurate*?

A) At expiration, the option is out of the money.

B) The investor has an $8 gain at expiration of the option.

C) The investor would have made a larger profit by simply owning the stock, without the option position.

Explanation

At expiration, the option is in the money by $47 − $45 = $2 and the call will be exercised. As a result, the investor's profit is $7 from the stock, a $3 premium from the option sale, and a $2 loss from the short call, for a total gain of $8.

The investor does not benefit from an upside from the stock above $45 because that benefit was sold to someone else through the short call option. Without the option, the investor would have had a $7 gain on the stock (= $47 − $40), which is actually less than the gain from the covered call position.

(Module 6.3, LOS 6.b)

Question #13 of 20

Question ID: 1587612

An S&P 500 Index manager knows that he will have $60,000,000 in funds available in three months. He is very bullish on the stock market and would like to hedge the cash inflow using S&P 500 futures contracts. The S&P 500 futures contract stands at 1,100.00, and one contract is worth 250 times the index. Which of the following is the *most accurate* hedge for this portfolio?

A) Sell 218 contracts.

B) Buy 284 contracts.

C) Buy 218 contracts.

Explanation

To be hedged against stock price increases, S&P 500 futures contracts have to be purchased. The quantity of contracts to buy is computed as follows:

contracts = (beta)(portfolio value) / (futures price)(contract multiplier)

= (1)(60,000,000) / (1,100)(250) ≅ 218.18 = 218 contracts

(Module 7.5, LOS 7.e)

Question #14 of 20

Question ID: 1587635

Currency trading based on economic fundamentals would be *most likely* to sell a currency forward if the country issuing the currency is experiencing:

A) declining levels of relative risk in the economy. ✗

B) increasing real rates of return. ✗

C) rising relative inflation. ✓

Explanation

Higher relative inflation is associated with a declining value of the currency, and it would tend to encourage a sale of the currency by the manager. The other two factors are associated with currency appreciation.

(Module 8.2, LOS 8.d)

Question #15 of 20

Question ID: 1587583

Justin Nate wishes to speculate on the direction of interest rates, based on his belief that they will rise over the coming year. Specifically, Nate plans to use interest rate derivatives that are based on 30-day loan periods and that mature in 240 days. Current 240-day USD LIBOR is 5% and 270-day LIBOR is 5.2%. Which of the following statements is *least accurate*?

A) The forward price of the FRA and the forward rate implied by the Eurodollar future should be the same. ✗

B) The futures price of the Eurodollar future is 99.45. ✓

C) The current forward price for an FRA with a 30-day loan period that matures in 240 days is 6.6%. ✗

Explanation

The forward price for a forward rate agreement (FRA) is a forward rate of interest derived from current LIBOR rates:

$$\text{Forward price rate} = \left[\frac{(1+270\text{-day LIBOR})}{(1+240\text{-day LIBOR})} - 1\right] \times \frac{360}{\text{Borrowing / Lending days}}$$

This formula, used to price an FRA, was first encountered in the Level II curriculum. The price of the FRA is the fixed rate, which is the annualized forward interest over the borrowing or lending period:

$$270\text{-day LIBOR} = 5.2 \times \frac{270}{360} = 3.9\%$$

$$240\text{-day LIBOR} = 5.0 \times \frac{240}{360} = 3.333\%$$

$$\text{Forward price (rate)} = \left[\frac{(1.0390)}{(1.0333)} - 1\right] \times \frac{360}{30} = 0.066 \text{ or } 6.6\%$$

Both the FRA and the Eurodollar future lock into a guaranteed forward rate from expiry of the contract until the end of the borrowing and lending period. The standardization of the STIR means that the borrowing and lending period lasts for 30-days after the maturity of the future. FRAs are OTC derivatives and therefore the borrowing and lending period is customized, however a FRA with a 30-day borrowing and lending period is equivalent to a STIR future. To prevent arbitrage between the two contracts the locked in forward rate should be approximately the same in the two contracts.

The STIR future is priced using IMM index convention = 100 − annualized forward rate.

Eurodollar future price = 100 − 6.60 = 93.4.

The error made in answer "The futures price of the Eurodollar future is 99.45" was a failure to annualize the forward rate.

(Module 7.1, LOS 7.a)

Question #16 of 20

Question ID: 1587609

Michael Hallen, CFA, manages an equity portfolio with a current market value of $78 million and a beta of 0.95. Convinced the market is poised for a significant upward movement, Hallen would like to increase the beta of the portfolio by 40%, using S&P 500 futures currently trading at 856. The multiplier is 250. What is the number of futures contracts, rounded up to the nearest whole number, that will be needed to achieve Hallen's objective?

A) 139.

B) 144.

C) 143.

Explanation

First, determine the new target beta by multiplying the current beta of the portfolio, which is 0.95 by 1.4 to achieve a new target beta that is 40% greater than the current portfolio beta:

$$(0.95)(1.4) = 1.33$$

Then, use the equation:

$$[(beta_T - beta_p) / beta_f][V_p / (P_f \times \text{multiplier})]$$

$$[(1.33 - 0.95) / 1](78{,}000{,}000) / (856)(250) = (0.38)(364.49) = 138.50\text{, rounded to } 139$$

(Module 7.5, LOS 7.e)

Question #17 of 20

Question ID: 1587622

A manager of $30 million in mid-cap equities would like to move half of the position to an exposure resembling small-cap equities. The beta of the mid-cap position is 1.0, and the average beta of small-cap stocks is 1.6. The betas of the corresponding mid- and small-cap futures contracts are 1.05 and 1.5, respectively. The mid- and small-cap futures prices are $260,000 and $222,222, respectively. What is the appropriate strategy?

A) Short 17 small-cap futures and go long 17 mid-cap futures.

B) Short 17 mid-cap futures and go long 17 small-cap futures.

C) Short 55 mid-cap futures and go long 72 small-cap futures.

Explanation

We should recall our formula for altering beta:

$$\text{number of contracts} = (\{\text{target beta} - B_{portfolio}\} \times V) / (B_{futures} \times \text{futures price})$$

In this case, for the first step where we convert the mid-cap position to cash, V = $15 million, and the target beta is 0. The current beta is 1.0, and the futures beta is 1.05:

$$-54.95 = (0 - 1) \times (\$15{,}000{,}000) / (1.05 \times \$260{,}000)$$

The manager should short 55 of the futures on the mid-cap index. Then, the manager should take a long position in the following number of contracts on the small-cap index:

$$72.00 = (1.6 - 0) \times (\$15{,}000{,}000) / (1.5 \times \$222{,}222)$$

Thus, the manager should take a long position in 72 of the contracts on the small-cap index.

(Module 7.5, LOS 7.f)

Question #18 of 20

Question ID: 1587630

A U.S. investor who holds a £2 million investment wishes to hedge the portfolio against currency risk. The investor should:

A) sell £2 million worth of futures for U.S. dollars.

B) sell $2 million worth of futures for British pounds.

C) buy £2 million worth of futures for U.S. dollars.

Explanation

The investor should sell £2 million worth of futures contracts for U.S. dollars. This will offset the existing long position in pound-denominated assets. In so doing, the investor has effectively fixed the exchange rate for pounds into dollars for the duration of the futures contract.

(Module 8.1, LOS 8.b)

Question #19 of 20

Question ID: 1587610

An investor has an $80 million diversified stock portfolio with a beta of 1.1. He would like to partially hedge his portfolio using S&P 500 futures contracts. The contracts are currently trading at $596.70 with a multiple of $250. Which of the following trades will reduce the portfolio beta by 50%?

A) Sell 295 contracts.

B) Buy 295 contracts.

C) Sell 590 contracts.

Explanation

The number of futures contracts required for the 100% risk-minimizing hedge (or to reduce the beta to zero) is computed as follows:

> Number of contracts = portfolio value / futures contract value × (target beta – current beta) = $80 million / ($596.70 × $250) × (0 – 1.1) = –590 contracts (sell contracts because the amount is negative)

Therefore, to reduce the portfolio beta by 50%, we simply use half this number of contracts, or 295 contracts.

(Module 7.5, LOS 7.e)

Question #20 of 20

Question ID: 1587595

Which of the following statements regarding cross-currency swaps is *least accurate*?

A) Principal payments are exchanged at the beginning of the swap's life, and again at the same exchange rate at the end. ✗

B) If the euro has negative basis against the dollar, the party paying euro interest will pay more than Euribor at each settlement date. ✓

C) **In a USD-EUR currency swap, the party receiving dollars at the swap's initiation will pay dollar interest over the life of the swap.** ✗

Explanation

In a currency swap, the motivation is to borrow in a cheap currency (low interest cost) and exchange it for the currency desired. The swaps are called cross-currency swaps if both legs' interest payments are based on floating indices (LIBOR, Euribor, etc.).

For example, a European company that requires USD funding may find it cheaper to borrow in euros and then exchange the euros for dollars using a currency swap— relative to borrowing directly in dollars.

The European company will then pay dollar interest and return the dollar principal at the swap's maturity. Note that the currency received on the swap at initiation determines the currency of the interest and principal that will be paid.

The initial principal on the swap is swapped at the initiation date and then again at the end of the swap's tenor. The same exchange rate is used on principal flows at the start and end of the swap's life to eliminate exchange rate risk.

Since 2007, covered interest rate parity (CIRP) has broken down. The result is a difference between interest rates in the currency swap and those used to compute currency forward rates. The dollar lending has attracted higher interest rates than suggested by CIRP. This results in the dollar in the currency swap having positive basis. Typically, basis is quoted on the other currency (foreign) rather than the dollar. Most currencies (but not all) have traded at a negative basis against the dollar since 2007. This means that there is a premium earned for lending dollars in a cross-currency swap. Note that –ve basis on a nondollar currency means the dollar has +ve basis.

For example, EUR − USD currency swap may be quoted at −20 bp. This results in the party paying the euro interest paying Euribor − 20 bp. Remember that the party paying the euro interest will be the party that lent the dollars at the initiation of the swap. Note that +20 bp could have been added to the dollar interest payments; however, in practice, it is typically deducted from the nondollar currency interest payments.

(Module 7.2, LOS 7.b)