Question #1 of 10

Question ID: 1551829

An option trader expects that a telecommunications company will make a significant announcement tomorrow about its recent acquisition, either announcing large profits from the acquisition, or large losses. The company's shares are currently trading at $105. The news could cause a 20% change in the share price over the next week, after which the share price is expected to stabilize. Options with 1-week maturities are available. Which of the following strategies is *most appropriate* for the trader?

A) Bull call spread by buying a $105 strike call and selling a $126 strike call.

B) Long at-the-money straddle.

C) Short at-the-money straddle.

Explanation

Given that the trader is looking to take advantage of an increase in volatility with uncertain direction, a long straddle with at-the-money calls and puts is most appropriate. This is an expensive strategy but would be beneficial if the volatility is high.

A short straddle is a neutrality play and would result in potentially large losses under highly volatile share prices. A bull call spread does not allow the trader to benefit from a decline in share price.

(Module 6.12, LOS 6.j)

Question #2 of 10

Question ID: 1551827

An uncovered (short) put option position on an asset can be hedged by:

A) short selling the asset.

B) buying a call.

C) buying the asset.

Explanation

An uncovered short put position would obligate the put seller to buy the asset if the put is exercised. Hedging this position can be accomplished by (short) selling the asset.

(Module 6.12, LOS 6.i)

Question #3 of 10

Question ID: 1587556

Buying a call option on a short position in an underlying security has the same payoff structure at option expiration as a:

A) short call.

B) long put combined with a short call.

C) long put.

Explanation

A short position in a security gains value if the security price declines and loses value if the security price increases. Buying a call on the security hedges the risk of a price increase in the security. This position has the same payoff structure at expiration as a long put, which benefits from a price decline of the underlying security but is not exposed to a price increase of the underlying.

(Module 6.5, LOS 6.e)

Question #4 of 10

Question ID: 1587563

Linda Morgan is in a training program at a large investment bank. Currently, she is spending three months at her firm's derivatives trading desk. One of the traders, Jason Gover, CFA, asks her to compare different option trading strategies. Gover would like Morgan to pay particular attention to strategy costs and their potential payoffs. Morgan is not very comfortable with option models and must first investigate how to properly price European-style and American-style equity options. Gover has given her software that provides various analytical information. Morgan has decided to begin her analysis using two different scenarios to evaluate option behavior. Her scenarios are illustrated in Exhibit 1 and Exhibit 2. Note that all of the rates and yields are on a continuous compounding basis.

Exhibit 1

Exhibit 1	
Stock Price (S)	$100
Call Strike Price (X)	$100
Price	$5.51

Exhibit 2

Exhibit 2	
Stock Price (S)	$100
Put Strike Price (X)	$100
Price	$5.68

Gover instructs Morgan to consider using a straddle in which an at-the-money call and put option would be purchased. Assume all other variables remain identical.

Linda now wants to compute the breakeven points for the straddle using the options and underlying stock in Exhibits 1 and 2. Which of the following are the *closest* to the breakeven points for the straddle?

A) $88.81, $111.19.

B) $93.11, $106.89.

C) $95.58, $104.42.

Explanation

This is the exercise price plus/minus the maximum loss. Because the total cost of the straddle is $11.19, the breakeven points are $100 +/– 11.19.

(Module 6.6, LOS 6.f)

Question #5 of 10

Question ID: 1587645

Cristina has a long exposure to the Brazilian real (BRL) and wants to use options to hedge against a modest depreciation of the BRL. She is primarily concerned with keeping upside potential as well as minimizing the cost of buying options. Which of the following derivative positions will *best* achieve Cristina's objectives?

A) Put spread. ✓

B) Seagull spread. ✗

C) Collar. ✗

Explanation

Cristina can hedge a potential BRL depreciation with put options—although taking a long put option, especially if it is in the money, is expensive. Therefore, she can use a *put spread* to subsidize a portion of the cost of the long put. A put spread involves buying an out-of-the-money (OTM) put option and selling an even further OTM put option (e.g., the investor can buy a 40-delta BRL put and sell a 20-delta BRL put). The more OTM put will subsidize a portion of the long put's cost, although the investor loses downside protection below the more OTM put's strike price. If the BRL appreciates, the put options will be worthless, and the investor keeps all the upside potential.

A *collar* involves buying a put and selling a call with the same delta. The sale of the call subsidizes the cost of the long put. However, while the position provides downside protection, the short call position will limit the currency's upside potential.

A *seagull spread* essentially combines a put spread with a collar (buy an OTM put, sell a more OTM put, sell an OTM call); therefore, it achieves the objective of minimizing option costs but provides limited upside potential due to the short call position.

(Module 8.5, LOS 8.g)

Question #6 of 10

Question ID: 1587553

An investor who purchases a stock and wants the maximum price protection for her stock, but is also conscious of up-front cost, should enter into a protective put position using a(n):

A) in-the-money put option.

B) out-of-the-money put option.

C) at-the-money put option.

Explanation

Both the at-the-money and in-the-money put options will offer full price protection because they hedge against any stock price decline below the current stock price. However, the at-the-money put option will be cheaper.

While the out-of-the-money put option is the least expensive of the three, it does not offer full downside price protection—it comes into the money only below the put strike price.

(Module 6.4, LOS 6.c)

Question #7 of 10

Question ID: 1587594

If a manager shorts a forward currency contract to hedge the expected value of a foreign equity portfolio in one year, the worst-case scenario is if the portfolio's return is:

A) less than the expected value and the currency depreciates.

B) less than the expected value and the currency appreciates.

C) greater than the expected value and the currency appreciates.

Explanation

This should be obvious because a decline in the equity position is bad, and the short position in a forward currency contract hurts when the foreign currency appreciates. If the equity position falls short of the contracted amount, in addition to the loss from the decline in asset prices, then the manager will suffer a loss equal to the difference in the hedged amount and the actual equity value times the difference in the spot and contracted forward rate.

(Module 7.2, LOS 7.b)

Question #8 of 10

Question ID: 1587652

Which of the following statements regarding nondeliverable forwards (NDFs) is correct?

A) The controlled currency is usually a major currency.

B) The pricing of NDFs reflects supply and demand conditions.

C) NDFs usually have higher credit risk than regular forward contracts. ✗

Explanation

The pricing of NDFs does not necessarily follow covered interest rate parity; pricing reflects the supply and demand conditions in the offshore market, which may be different than the onshore market of the specific emerging-market country.

The *noncontrolled* currency is usually the USD or some other major currency. The controlled currency is the emerging-market currency.

The credit risk of an NDF is usually less than that of a regular forward contract because there is no delivery of the notional amounts required.

(Module 8.6, LOS 8.i)

Question #9 of 10

Question ID: 1587623

An investor has a cash position currently invested in T-bills but would like to "equitize" it by using S&P futures contracts. Which of the following trades will create the desired synthetic equity position?

A) Buying S&P 500 futures contracts. ✓

B) Selling S&P 500 futures contracts short. ✗

C) Selling the T-bills and buying S&P 500 futures contracts. ✗

Explanation

The trader can buy stock index futures and hold them in conjunction with T-bills to mimic a stock portfolio. So, we have the following:

Synthetic stock portfolio = T-bills + stock index futures.

(Module 7.5, LOS 7.f)

Question #10 of 10

Question ID: 1587606

Which of the following statements regarding variance swaps is *least accurate*?

A) The payoff on a volatility swap is convex, resulting in gains that increase in relative magnitude as realized volatility increases. ✓

B) The payoff on a variance swap is determined by the difference between actual volatility squared over a given period versus implied volatility squared.

C) The purchaser of a variance swap will profit if the realized volatility is greater than implied volatility.

Explanation

Volatility and variance swaps in practice are futures contracts rather than swaps. The payoff on a volatility swap is based on implied volatility versus actual (realized) volatility. The payoff on a variance swap is based on implied variance versus realized variance. Both swaps can be viewed as a bet on actual versus implied volatility.

The purchaser of both volatility and variance swap will benefit if realized variance or volatility is greater than the implied value. The implied volatility is derived from option prices.

$$\text{Payoff on a volatility swap} = (\sigma - K) \times \text{vega notional}$$

$$\text{Payoff on a variance swap} = (\sigma^2 - K^2) \times \text{variance notional}$$

where:

σ = realized volatility

K = implied volatility

$$\text{Variance notional} = \frac{\text{Vega notional}}{2 \times \text{Strike price (K)}}$$

The result of these payoff calculations is that a volatility swap generates a linear payoff, while a variance swap generates a convex payoff. The payoff on the variance swap is convex with volatility, which means that as realized volatility increases, the payoff increases at an accelerating rate.

Convexity is an attractive feature for the purchaser of the swap. For participants with equity exposures, purchasing the variance swap can help to offset tail risk. When volatility increases dramatically and equity values fall (the definition of tail risk), the decrease in the portfolio is offset by profits—increasing at an accelerating rate—on the variance swap.

(Module 7.4, LOS 7.d)