SSEI

A positive NPV Training Center

ADVANCED FINANCIAL MANAGEMENT

CASE SCENARIO BASED MCQ QUESTIONS

CASE STUDY 1

Question 1:

A is correct.

A straddle is directionally neutral in terms of price; it is neither bullish nor bearish. The straddle buyer wants higher volatility and wants it quickly but does not care in which direction the price of the underlying moves. The worst outcome is for the underlying asset to remain stable.

Question 2:

C is correct.

To break even, the stock price must move enough to recover the cost of both the put and the call. These premiums total to $15.50, so the stock must move up at least to $115.50 or down to $84.50.

Question 3:

D is correct.

The price change to a breakeven point is 15.50 points, or 15.5% on a 100 stock. This is for three months. Ignoring compounding, this outcome is equivalent to an annualized rate of 62% on XYZ stock, found by multiplying by 12/3 (15.5% × 4 = 62%).

CASE STUDY 2

Question 1:

A is correct.

Since an option has an asymmetric payoff, higher volatility always increases an option price since the chance of a high payoff from the option is increased without significantly increasing the downside risk.

Question 2:

C is correct.

An investor would purchase a straddle when they expect a large movement in the price of a stock, but are unsure of the direction.

Question 3:

C is correct.

Since a long straddle consists of a long position in a call and a put option, the owner of these options has a right but not an obligation to exercise so the option payoff can never be negative. Therefore, the worst payoff resulting from this strategy is zero. Do not confuse the maximum loss with the payoff at expiration.

Question 4:

B is correct.

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

CASE STUDY 3

Question 1:

A is correct.

Since the stock price at option expiration ($70) is lower than the exercise price of the call option ($93), the option holder will not exercise his option. Therefore, the payoff will equal zero.

Question 2:

B is correct.

On Day 60 (the expiration date of the put option) the stock price ($80) is lower than the exercise price of the put ($82). Therefore, the put option holder will choose to exercise his option, and the payoff to the option writer will equal −$2.

Question 3:

A is correct.

The stock price at option expiration ($70) is lower than the exercise price of the option ($93). The call option holder will choose not to exercise his option, which would leave the call option writer with a zero payoff.

Question 4:

C is correct.

The put option holder will exercise his option and receive a payoff of $2 (exercise price minus stock price at option expiration). However, since the cost of the put was $6, the option holder makes a loss of $4 on his overall position.

Question 5:

C is correct.

The call option holder will not exercise his option, as the exercise price is greater than the stock price at option expiration. The option holder makes a loss of $2 (the call option premium) on his overall position.

Question 6:

C is correct.

The current stock price equals $77, while the call option's strike price is $93. This option is out-of-the money, as immediate exercise (if possible) would result in a negative payoff for the option holder.

Question 7:

A is correct.

The current stock price equals $80, while the put option's strike price is $82. This option is in-the-money, as immediate exercise (if possible) would result in a positive payoff for the option holder.

Question 8:

B is correct.

Since the call option is currently out-of-the-money, most of its value must be composed of time value.

Question 9:

A is correct.

Since the put option is currently in-the-money (intrinsic value = $5), most of its value is composed of intrinsic value.

Question 10:

B is correct.

Using put call parity, the price of the European call can be determined as:

$C = \$6 + \$77 - \$82/(1 + 0.05)^{60/365} = \$1.655$

CASE STUDY 4

Question 1:

B is correct.

A fiduciary call is composed of a call option and the zero coupon riskless bond used in deriving put-call parity.

Using put-call parity:

$C + X/(1 + RFR)^T = \$4 + \$97 = \$101$

Question 2:

C is correct.

Using put-call parity:

$C = \$4 + \$97 - \$100/(1 + 0.05)^{3/12} = \$2.212$

Question 3:

A is correct.

An American put option must be worth at least as much as the European put option. Therefore, it cannot be worth less than $4.

CASE STUDY 5

Question 1:

C is correct.

$S^{+} = Su = 80 \times (1 + 0.26) = 100.80$

$c^{+} = \text{Max}(0, S^{+} - X) = \text{Max}(0, 100.80 - 87) = \$13.80$

Question 2:

A is correct.

$S^- = Sd = 80 \times (1 - 0.20) = 64$

$c^- = \text{Max}(0, S^- - X) = \text{Max}(0, 64 - 75) = \$0$

Question 3:

B is correct.

$\pi=(1+r-d)/(u-d)$ $\pi=(1+0.08-0.8)/(1.26-0.8)=0.608$ $1-\pi=1-0.6087=0.3913$

Question 4:

A is correct.

$c=[\pi c^{+} + (1-\pi)c^{-}]/(1+r)$ $c=[0.06087(13.8)+0.3913(0)]/1.08=\$7.78$