

UNIVERSITY OF TEXAS AT AUSTIN

Quiz #13

Straddles. Strangles.

Problem 13.1. (2 points) A zero-width, zero-cost collar can be created by setting both the put and call strike prices at the forward price.

Solution: TRUE

Problem 13.2. (2 points) You believe that the volatility of a stock is higher than indicated by market prices for options on that stock. You want to speculate on that belief by buying and/or selling at-the-money options. You should buy a strangle.

Solution: FALSE

Problem 13.3. (2 points) Strangles are financial positions designed to hedge against decreasing prices of the underlying asset. *True or false?*

Solution: FALSE

Problem 13.4. (5 points) An investor buys an \$850-strike, two-year straddle on gold. The price of gold two years from now is modeled using the following distribution:

\$800, with probability 0.35,

\$850, with probability 0.4,

\$925, with probability 0.25.

What is the investor's expected payoff?

- (a) About \$11.25
- (b) About \$23.00
- (c) About \$23.75
- (d) About \$36.25
- (e) None of the above.

Solution: (d)

$$50 \times 0.35 + 75 \times 0.25 = 36.25$$

Problem 13.5. (5 points) An investor buys a two-year (\$800, \$900)-strangle on gold. The price of gold two years from now is modeled using the following distribution:

\$750, with probability 0.45,

\$850, with probability 0.4,

\$925, with probability 0.15.

What is the investor's expected payoff?

- (a) About \$23.25
- (b) About \$25.00
- (c) About \$26.25
- (d) About \$37.50
- (e) None of the above.

Solution: (c)

$$50 \times 0.45 + 25 \times 0.15 = 26.25.$$