

**GROUP CASE #2 (Hand in a single write-up per group of 3 or 4)**

**The Keller Fund's Option Investment Strategies Questions**

**DUE DATE: May 3, 2006 (no late assignments accepted)**

1. To analyze the profit and loss possibilities inherent in the option investment strategies, please perform the following analyses for call and put options on Lotus common stock that mature in February 1994 and that have an exercise price of \$55 per share.

(a) Compute net profits and losses per share (actual dollar profits and losses, not rates of return) at expiration (February 19, 1994) for the following investment strategies:

- Buying a call option on Lotus's stock;
- Writing a call option on Lotus's common stock;
- Buying a put option on Lotus's common stock;
- Writing a put option on Lotus's common stock.

Hint: Start by calculating the profit or loss per share assuming that, by February 19, 1994, Lotus's common stock is selling at, say, \$60 per share. Repeat this calculation for several other possible stock prices at the time of expiration that span a wide range above, below and at the exercise price of \$55 per share (e.g., \$45, \$50, \$55, \$65, and so on).

(b) For each of the option investment strategies listed above, draw a graph relating possible profits and losses per share to Lotus's stock price at the time of expiration. Put profits and losses per share on the vertical axis of your graph and stock prices on the horizontal axis.

(c) Compute profits and losses per share, and graph them against stock prices for the strategy of buying a share of Lotus's common stock at \$55 per share and holding it until February 19, 1994.

2. Study the graph created in your answer to question 1. Which of the various strategies examined offers the greatest upside return? The least upside return? The greatest downside potential? The least downside potential? Which is likely to produce better investment returns more often? In your opinion, which strategy is the most aggressive? Which is the most conservative? In general, are investment strategies involving options risky or safe?

3. If you owned Lotus's stock, but were concerned about the possibility of bad news, how might you use options to protect yourself against the risk of a price decline?

4. Buying a share of Lotus's stock at \$55 per share while simultaneously writing (selling) a call option with an exercise price of \$55 per share is called a "covered call" (also a "buy-write") investment strategy. What is the relationship between covered call positions and selling put options? Do the quoted put and call option prices appear to be consistent with this relationship?

5. Suppose that on January 18, 1994, Lotus's stock was valued at \$75.00 per share instead of \$55.00. What is the very least you would expect to pay for the February 1994 call option exercisable at 55? What is the most? In general, what factors should enter into a determination of the appropriate price to pay?

6. Compare the prices of options on Lotus's stock and those on AT&T's. Why are options with identical exercise prices and maturity dates, and written on stocks with identical prices, selling for different prices? Do options on one of these two stocks provide investors with superior investment opportunities in comparison to the other?