

# Corrected Problems 9.17 and 9.18

## Derivatives Markets, 2e

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January 3, 2006

17. In this problem we consider whether parity is violated by any of the option prices in Table 9.1. Suppose that you buy at the ask and sell at the bid, and that your continuously compounded lending rate is 1.9% and your borrowing rate is 2%. Ignore transaction costs on the stock, for which the price is \$84.85. Assume that IBM is expected to pay a \$0.18 dividend on November 8 (prior to expiration of the November options). For each strike and expiration, what is the cost if you
  - (a) Buy the call, sell the put, short the stock, and lend the present value of the strike price plus dividend?
  - (b) Sell the call, buy the put, buy the stock, and borrow the present value of the strike price plus dividend?
  
18. Consider the January 80, 85, and 90 call option prices in Table 9.1.
  - (a) Does convexity hold if you buy a butterfly spread, buying at the ask price and selling at the bid?
  - (b) Does convexity hold if you *sell* a butterfly spread, buying at the ask price and selling at the bid?
  - (c) Does convexity hold if you are a market-maker either buying or selling a butterfly, paying the bid and receiving the ask?