+4:00

Quiz B for 1:00 Class: 04/10/13 Name Key

Assume that Accidental Petroleum's stock price currently equals $35 per share and that its stock price will rise by $6 or fall by $4 each of the next two years. If the risk-free interest rate is 1% per year, what is the value today of a call on Accidental with a strike price of $30 that expires in two years?

Wall Street Journal Questions are on the back of this page.

0 | 1 | 2

$K=30$
$S=35$

$S_u = 41 = 35+6$

$S_{uu} = 47 = 41+6$
$C_{uu} = 17 = 47-30$

$S_{ud} = S_{du} = 37 = 41-4 = 31+6$
$C_{ud} = C_{du} = 7 = 37-30$

$S_d = 31 = 35-4$

$S_{dd} = 27 = 31-4$

+1 $\Delta_u = \dfrac{17-7}{47-37} = +1$ 5

+1 $B_u = \dfrac{7-1(37)}{1.01} = -29.7030$ 5

+1 $C_u = 41(1) - 29.703 = 11.2970$ 5

+1 $\Delta_d = \dfrac{7-0}{37-27} = +0.7$ 5

+1 $B_d = \dfrac{0-0.7(27)}{1.01} = -18.7129$ 5

+1 $C_d = 31(.7) - 18.7129 = 2.9871$ 5

+1 $\Delta = \dfrac{11.2970 - 2.9871}{41-31} = +0.8310$ 9

+1 $B = \dfrac{2.9871 - 0.831(31)}{1.01} = -22.5481$ 6

+1 $C = 35(.8310) - 22.5481 = 6.5366$ 5