

QUESTION

Calculate the initial premium and the trading strategy for the asset/bond replicating portfolio for a European call option on the following data:

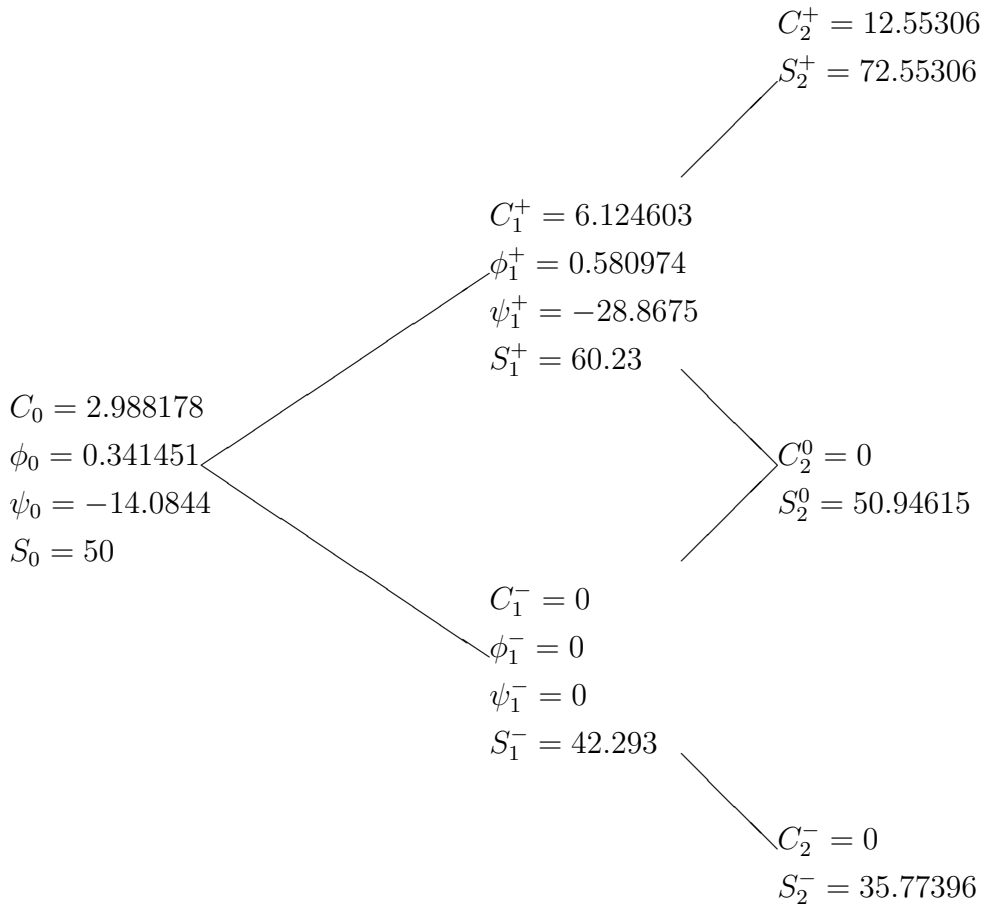
Strike \$60; Maturity 1 year, two intervals;  
 Continuously compounded annual risk-free rate 5%;  
 Volatility 25%; Current price \$50.

What do you notice about the way the premium behaves with strike price for a call option?

ANSWER

$k = \$60$ ,  $r = 0.05$ ,  $\sigma = 0.25$ ,  $S_0 = \$50$ ,  $U = 1.20460$ ,  $D = 0.84586$

Eurocall Summary:



$C_0$  decreases with  $k$  increasing.