Hw4 Task 2

Friday, October 11, 2024 11:47 AM

$$T_{uu} = \max(100 - 100 \cdot 1.1^2, 0) = 0$$

$$T_{ud} = \max(100 - 100 \cdot 1.1 \cdot 0.9, 0) = 1$$

$$T_{dd} = \max(100 - 100 \cdot 0.9^2, 0) = 19$$

Thus the price,

$$f = e^{-2 \cdot 0.08 \cdot 0.5}(0 + 2 \cdot 0.704 \cdot 0.246^2 \cdot 19) = 1.92$$

Lets verify put call parity,

$$C - P = S_0 - K e^{-rT}$$

$$9.61 - 1.92 = 100 - 100 e^{-0.08} = 7.69$$

Here put call parity is satisfied