Session 7
Sep. 27, 2018

note: there is a put-call parity

call price C

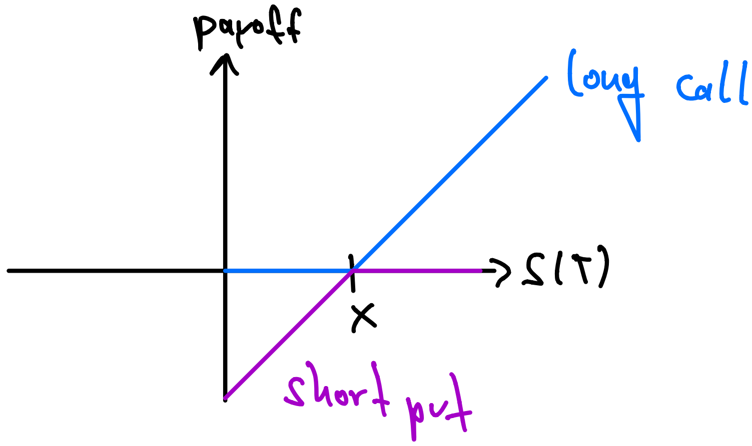
put price P

look at two possible portfolios:

- call, put with same stock (S), X, T

buy call, sell put, which costs $C-P$

payoff $= S(T) - X$



- replicating portfolio with 1 stock, borrow bonds worth X at time T

$\Rightarrow$ payoff $= S(T) - X$

$\Rightarrow$ cost $= S - e^{-rT}X$

no arbitrage $\Rightarrow$ both portfolios must have same price (since same payoff)

$$\Rightarrow C - P = S - e^{-rT}X$$