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## Chooser option, simple

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$$C_t = \max(C_T, P_T)$$

$$C_T = \max(S_T - X, 0)$$

$$P_T = \max(X - S_T, 0)$$

A simple chooser option gives the owner the right to choose at some point in the future ( $t$ , before expiration  $T$ ) whether the option is to be a vanilla call or put option. The choice is made based on which of the two vanilla options is the most expensive at the time of choice.

### Symbol list:

$C_t$	Value of the chooser option at the choice date
$t$	Choice date. At this date a choice between a call or put is made
$T$	Expiration date of the call and put
$C_T$	Value of the call option at expiration
$P_T$	Value of the put option at expiration
$K$	Strike (exercise) price