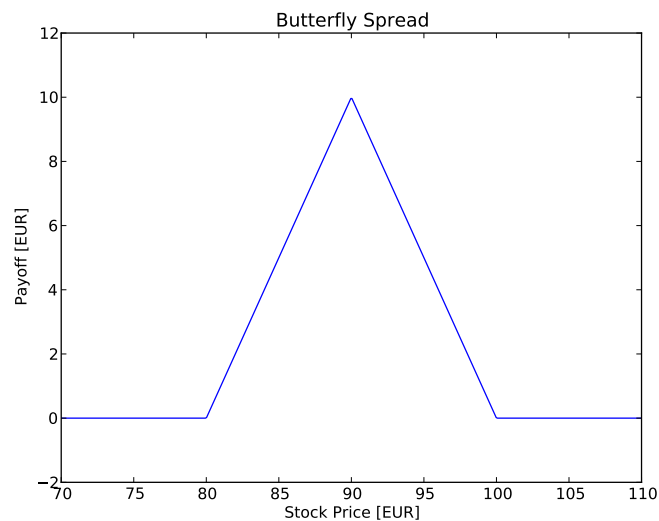


Derivatives Lab

Session 8

October 10, 2011

1. Implement the payoff-functions for a European call option and a European put option, and plot them for some strike price of your choice.
2. Find a linear combination of European put and call options which has the following payoff graph:



3. Implement the binomial tree model via backward induction.
4. Visualize your simulation using `imshow`. Think about an appropriate color map, how to mask the missing values (Hint: use Numpy's masked arrays), and how to best map the computed values into pixel coordinates.
5. Show that an American call option should be exercised at expiration for maximal profit.