homework #4 Swaption Volatility Bootstrapping

1. Find a few swaption prices (premiums) – if the quotes are in Black-volatility, then use the Black formula to get prices. Note that these are ATM swaptions so forward swap rates = strike rates. Also note that forward swap rates (e.g. $w_{1,2} = (1 - \Psi_{0,1,2}) / \Psi_{0,1,2}$).

2. Then use the lecture notes and the additional document to calculate the spot volatility v matrix and forward volatility ξ matrix. If you have enough contracts, you can plot the v surface.

Note that the easiest contracts are 1×1, 1×2, 2×1, etc.

due on 4/22 (<u>paper submission only</u>)