SABR Project as of 10/11/17_Mengyang's part

1. Proved the strike price is a convex function of strike price; the 2nd derivative of option price V wrt. strike price K is the pdf of the underlying price at the expiry T.
2. Priced European option by inserting SABR log normal volatility in BS formula.
   Code: **Option Price with SABR log normal vol.py**
   Output file of implied volatility: **outvol.csv**
   Output file of option price: **outprice.csv**
3. Computed the 2nd partial derivative of option price V wrt. strike price K; identify the area of K where pdf goes negative
   Code: **Arbitrage Violation.py**
   Output file of p.d.f: **outpdf.csv**
   Plot of p.d.f varies wrt. different strike price and different tenor/expiries
4. Other output files during calibration:
   Parameters.csv
   vol difference.csv