

Normal

fat tail

tcs  
2 parameter  
formula

Empirically  
better

$SD = \infty$

$$S(t) \quad dt$$

$$S_{i+1} - S_i = \mu S_i \Delta t + \sigma S_i \sqrt{\Delta t}$$

$$dS = \mu S dt + \sigma S dV$$

$$\frac{dS}{dt} = \mu S + \cancel{\frac{\sigma^2 S^2}{2 dt}}$$

$$\frac{dS}{dt} = \mu S$$

$$S = S_0 e^{\mu t}$$

S.D.E.  $\rightarrow d\sigma = \frac{1}{\sigma} dt + \frac{1}{\sigma} dX$

Hester

$$d\_\_ = \_\_\_\_\_\_ dt + \_\_\_\_\_\_ dX$$



$$dS = \mu S dt + \sigma S dX$$



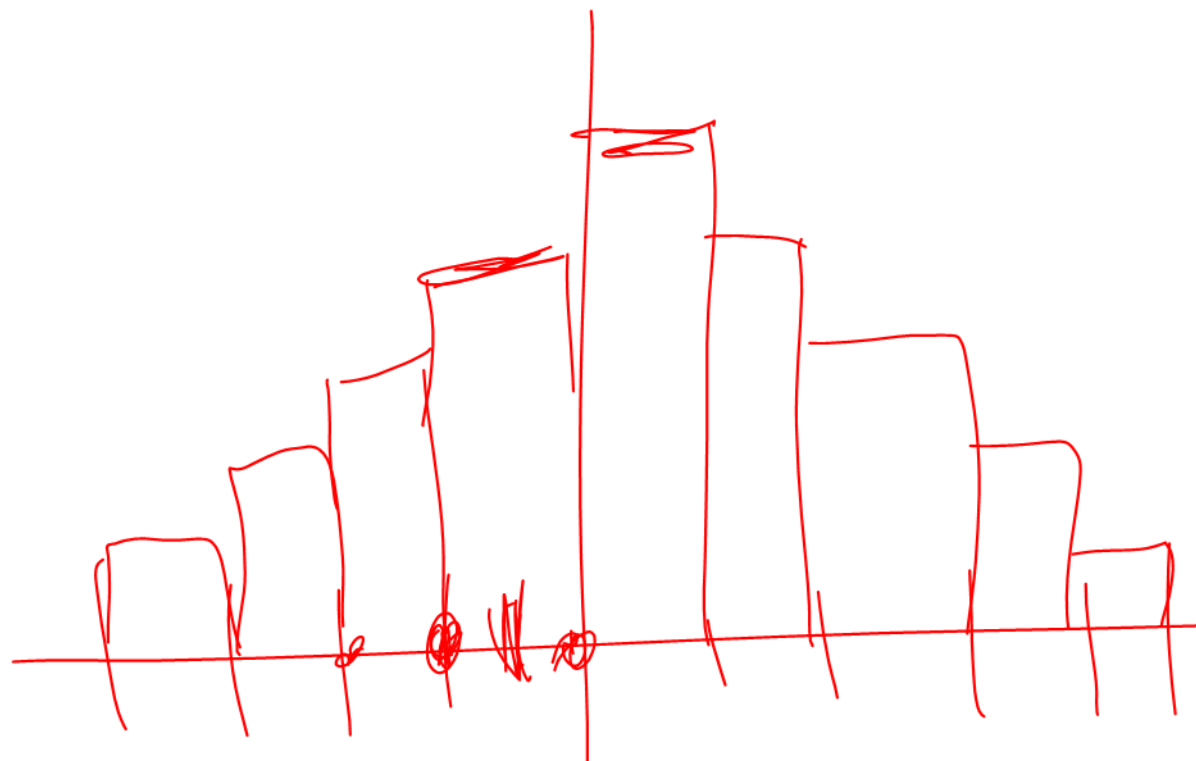
$\rightarrow$   $\left( \frac{dS}{S} \right) = \mu dt + \sigma dX$

$d\sigma = \frac{dS}{S} dt + \frac{?}{\sigma} dX$

SDT



CR  
Vasicek  
1st Lee  
Hull & White



0	0
1	
2	
3	
4	
5	
6	
7	
8	
9	















