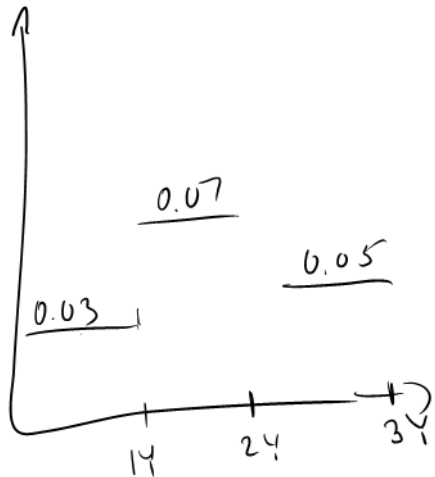


- PW constant hazard rates.
- IHP
- term structure



$$\sum_{i=1}^{54} \lambda_i = 0.20$$

$$v = 0.11 \quad \tau = ?$$

$$|\log(1-v)| \approx 0.12$$

$$0.12 \quad \cancel{<} \quad \lambda_{14} \quad 0.03$$

$$0.12 \quad \cancel{<} \quad \lambda_{14} + \lambda_{24} \quad 0.10$$

$$0.12 \quad < \quad \lambda_{14} + \lambda_{24} + \lambda_{34} \quad 0.15$$

$$2 = \tau < 3$$

$$t_{m-1} < \tau < t_m$$

$$\delta t = 0.5$$

$$\tau = 2.5$$

Data $X \rightarrow U$ Pseudo-samples

ΔCDS_1 | ΔCDS_2 | ... | ΔCDS_5

t	$\rightarrow u_1$	$\rightarrow u_2$		
$t+1$	$\rightarrow u_1$	$\rightarrow u_2$		
$t+2$				
...				
Obs.				

\bar{u}_1 | \bar{u}_2 | \bar{u}_5

\uparrow $u_{t, hist}$

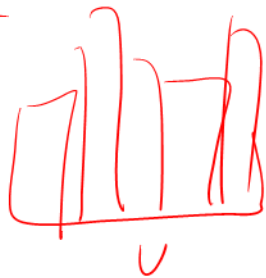
time series (μ, σ)
cross-panel.

$\Delta CDS \rightarrow Z$

$$Z = \frac{x - \mu}{\sigma}$$

$$U = \Phi(Z)$$

CDF





Linear Correlation



$$\rho(x) \approx 0$$

Q&A Document Rank Correlation $\begin{cases} \rho_s(x) \gg 0 \\ \rho_z(x) \gg 0 \end{cases}$

$$\underset{w^*}{\operatorname{argmax}} \quad w^T \bar{\pi} - d w^T \Sigma w$$

$$\bar{\pi} - 2d w^T \Sigma$$

$$\bar{\pi} = 2d \overset{\text{market index}}{\vec{w}} \Sigma$$

reverse - optimization

Min Var

$$\frac{d}{dw} = 0$$

$$w^* = \frac{\bar{\pi}}{2d} \Sigma^{-1}$$

optimise given