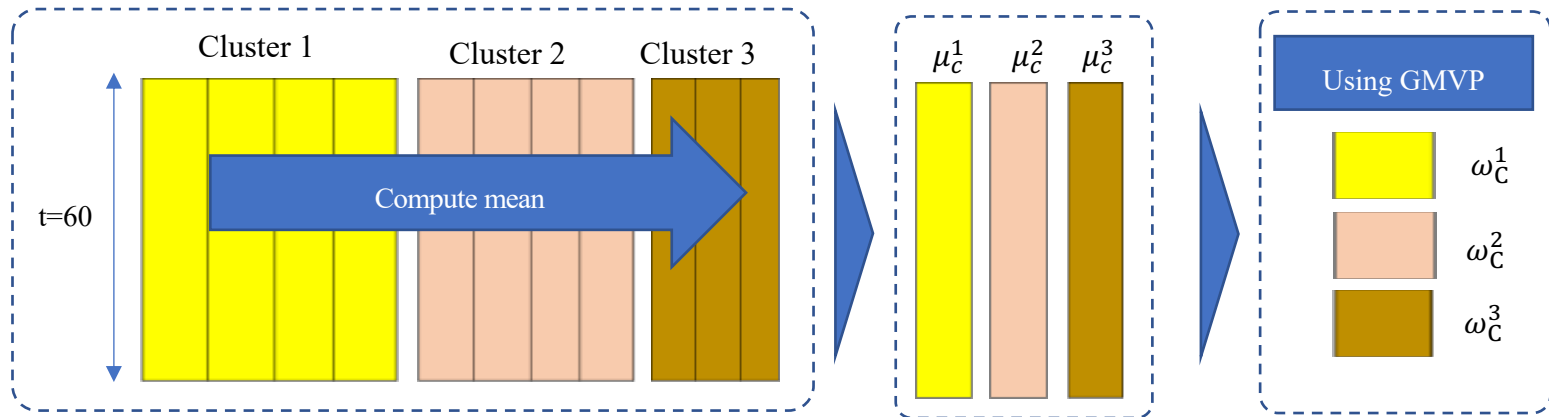


Asset Selection – One-by-n-Model₁



Using GMVP

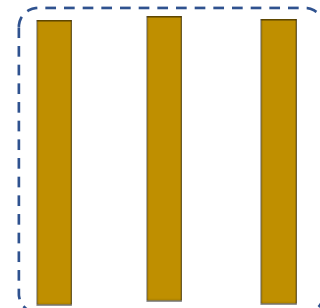
$$\begin{aligned} \omega_{gmvp} &= \underset{\omega}{\operatorname{argmin}} \quad \omega' \Sigma \omega \\ \text{st } \omega' 1_N &= 1 \\ \omega_{gmvp} &= \frac{\Sigma^{-1} 1_N}{1' \Sigma^{-1} 1_N} \end{aligned}$$

Cluster 3



ω_C^3

Weights of each assets



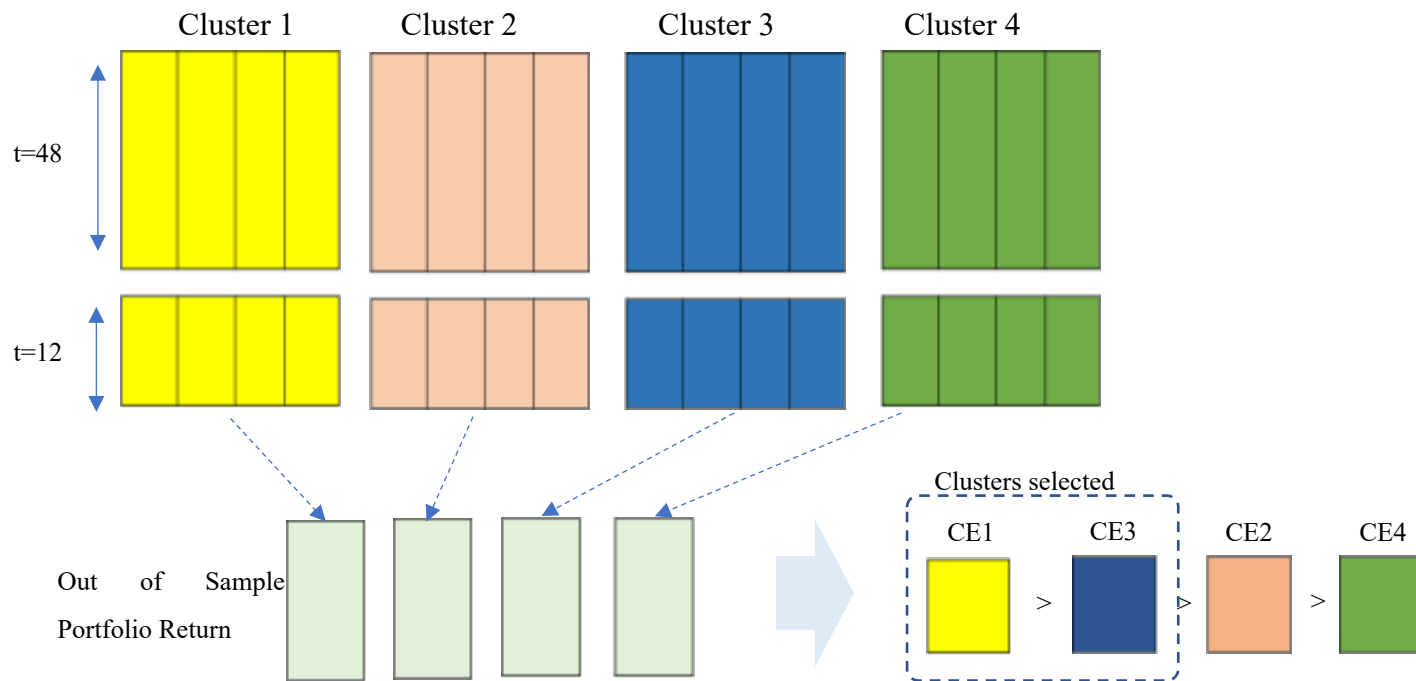
$\frac{\omega_C^3}{n_3}$

$\frac{\omega_C^3}{n_3}$

$\frac{\omega_C^3}{n_3}$

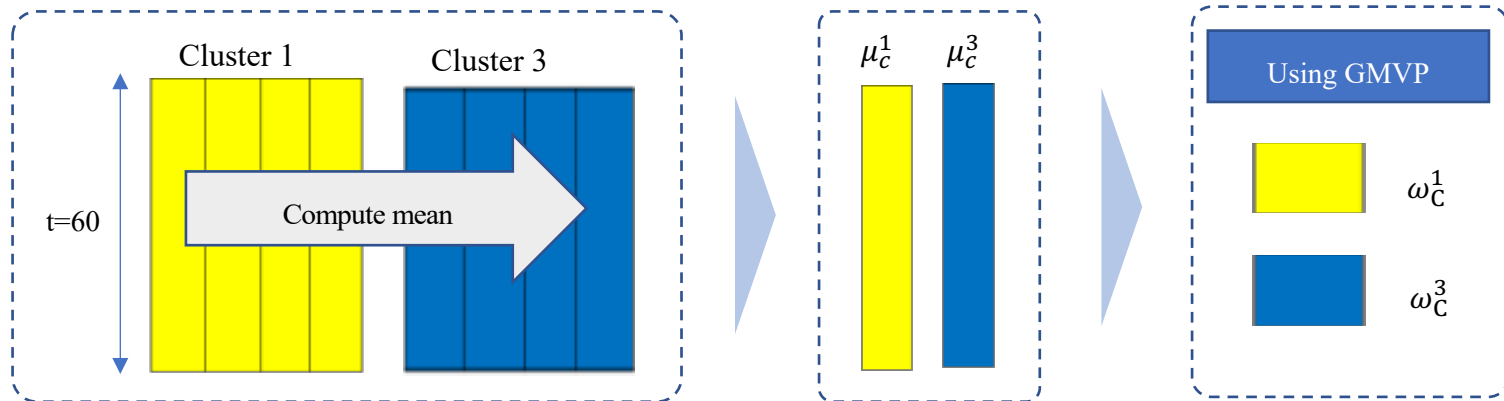
Asset Selection – One-by-n-Model2

Stage 1: Choosing the optimal clusters



Asset Selection – One-by-n-Model2

Stage 2: Finding the optimal weights of the assets

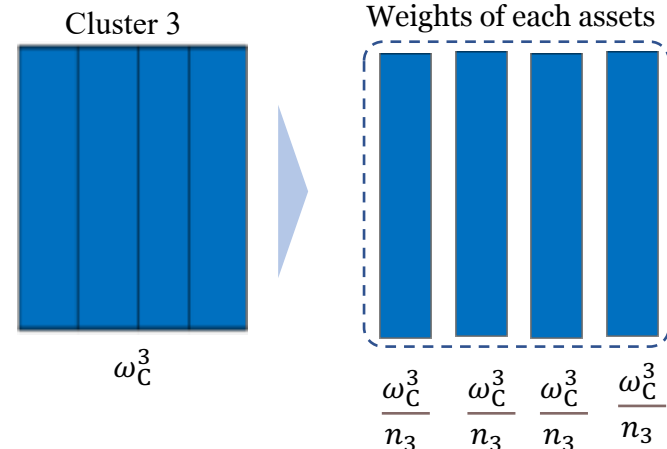


Using GMVP

$$\omega_{gmvp} = \underset{\omega}{\operatorname{argmin}} \omega' \Sigma \omega$$

$$\text{st } \omega' \mathbf{1}_N = 1$$

$$\omega_{gmvp} = \frac{\Sigma^{-1} \mathbf{1}_N}{\mathbf{1}'_N \Sigma^{-1} \mathbf{1}_N}$$



Asset Selection – SR-Model3

