Computation of Dynamic Responses :

The IRFs (Impulse Response Function) are given by

$$\frac{\partial L_{t+h}}{\partial \varepsilon_{w,t}}$$

for $h \geq 0$ is the horizon of the response.

Let us consider

$$L_t = \lambda_1 L_{t-1} + \mu \widetilde{W}_t$$

With loss of generality, we omit the constant term $(1-\lambda_1)\bar{L}$. The parameter μ is given by

$$\mu = -\frac{1}{\beta b}\frac{1}{\lambda_2 - \rho_w}$$

The previous equation rewrites

$$(1-\lambda_1 B)(1-\rho_w B)L_t = \mu \varepsilon_{w,t} \Longrightarrow L_t = \frac{1}{(1-\lambda_1 B)(1-\rho_w B)}\mu \varepsilon_{w,t}$$