

$$\begin{bmatrix} y_{1,t}^w \\ y_{2,t}^w \\ y_{3,t}^w \end{bmatrix} = \begin{bmatrix} \phi_{11} & \phi_{12} & \phi_{13} \\ \phi_{21} & \phi_{22} & \phi_{23} \\ \phi_{31} & \phi_{32} & \phi_{33} \end{bmatrix} + \begin{bmatrix} y_{1,t-1}^w \\ y_{2,t-1}^w \\ y_{3,t-1}^w \end{bmatrix} + \begin{bmatrix} \zeta_{y,1} \\ \zeta_{y,2} \\ \zeta_{y,3} \end{bmatrix}$$