$$\underbrace{\begin{bmatrix} \text{ss\_level} \end{bmatrix}(t)}_{\boldsymbol{\eta}(t)} = \left(\underbrace{\underbrace{\begin{bmatrix} \text{drift\_ss\_level\_ss\_level} \end{bmatrix}}_{\mathbf{A}}}_{\text{DRIFT}} \underbrace{\begin{bmatrix} \text{ss\_level} \end{bmatrix}(t)}_{\boldsymbol{\eta}(t-1)} + \underbrace{\begin{bmatrix} 0 \end{bmatrix}}_{\underbrace{\mathbf{b}}_{\text{CINT}}} \right) +$$

$$cholsdcor\left(\underbrace{\underbrace{\begin{bmatrix} \text{diffusion\_ss\_level\_ss\_level} \end{bmatrix}}_{\mathbf{G}}}_{\text{DIFFUSION}} \right) \underbrace{\begin{bmatrix} W_1 \end{bmatrix}(t)}_{\mathbf{W}(t)}$$

$$\underbrace{\begin{bmatrix} W_1 \end{bmatrix}(t)}_{\mathbf{W}(t)} \sim \mathrm{N}\left(\begin{bmatrix} 0 \end{bmatrix}, \begin{bmatrix} 1 \end{bmatrix} \right)$$

$$\underbrace{\begin{bmatrix} \text{ss} \end{bmatrix}(t)}_{\mathbf{Y}(t)} = \underbrace{\underbrace{\begin{bmatrix} 1 \end{bmatrix}}_{\mathbf{\Lambda}}}_{\text{LAMBDA}} \underbrace{\begin{bmatrix} \text{ss\_level} \end{bmatrix}(t)}_{\boldsymbol{\eta}(t)} + \underbrace{\begin{bmatrix} \text{manifestmeans\_ss} \end{bmatrix}}_{\underbrace{\boldsymbol{\tau}}_{\text{MANIFESTMEANS}}} + \underbrace{\begin{bmatrix} \text{manifestvar\_ss\_ss} \end{bmatrix}}_{\underbrace{\boldsymbol{\Theta}}_{\text{MANIFESTVAR}}} \underbrace{\begin{bmatrix} \epsilon_1 \end{bmatrix}(t)}_{\boldsymbol{\epsilon}(t)}$$

$$\underbrace{\begin{bmatrix} \epsilon_1 \end{bmatrix}(t)}_{\boldsymbol{\epsilon}(t)} \sim \mathrm{N}\left(\begin{bmatrix} 0 \end{bmatrix}, \begin{bmatrix} 1 \end{bmatrix} \right)$$

cholsdcor = Function converting lower tri matrix of std dev and unconstrained correlation to Cholesky factor.

See Driver & Voelkle (2018) p11.