

$$\mathbf{d}_{YLD} = \begin{matrix} & \text{H} \\ & \text{S1} \\ & \text{S2} \\ \text{DOC} \\ \text{DS} \end{matrix} \begin{pmatrix} 0 \\ \mathbf{dwS1} \frac{1}{r\Delta_t} (1-e^{-r\Delta_t})\Delta_t \\ \mathbf{dwS2} \frac{1}{r\Delta_t} (1-e^{-r\Delta_t})\Delta_t \\ 0 \\ 0 \end{pmatrix}$$

$$\mathbf{d}_{YLL} = \begin{matrix} & \text{H} \\ & \text{S1} \\ & \text{S2} \\ \text{DOC} \\ \text{DS} \end{matrix} \begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \\ \frac{1}{r} (1-e^{-rEx(a(t))}) \end{pmatrix}$$