

$$\begin{array}{ccccccc}
& 1 & k & & x & i & \\
& \downarrow & \downarrow & & \downarrow & \downarrow & \\
H = & \left[\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ 1 & 0 & 0 & 0 \\ 0 & (1-\rho) & 0 & 1 \\ 0 & 0 & \rho & 0 \end{array} \right] & \leftarrow & \begin{array}{l} 1 \\ k \\ x \\ i \\ 1 \\ k' \\ x' \end{array}
\end{array}$$