

$$\begin{array}{ccccc}
V^* & \xrightarrow{\phi_{T,\mathcal{E}'}} & V^* & \xlongequal{\quad} & V^* \\
\ell_{\mathcal{E}'} \swarrow & \uparrow \phi_{M,\mathcal{E}} & \ell_{\mathcal{E}'} \swarrow & \uparrow \phi_{M,\mathcal{E}} & \uparrow \ell_{\mathcal{E}} \\
V^* & & V^* & & \\
\uparrow \ell_{\mathcal{E}} & & \uparrow \ell_{\mathcal{E}} & & \\
K^{n+1} & \xrightarrow[a \mapsto Ta]{} & K^{n+1} & \xrightarrow[a \mapsto Ma]{} & K^{n+1}
\end{array}$$