$$\begin{array}{c|c} A_1 & A_2 \\ \hline 1 & a_1 & a_2 \\ \hline \sigma_1 & \sigma_2 \end{array} \cdots \begin{array}{c} A_{\mathcal{L}} \\ \hline a_{\mathcal{L}-1} & 1 \\ \hline \sigma_{\mathcal{L}} \end{array}$$