$$\begin{array}{ccc}
\mathbf{C}_1 & \xrightarrow[\mathbf{MonCat}]{f_1} & \mathbf{D}_1 \\
{\scriptstyle F}\Big\downarrow\ \mathbf{MonCat} & \mathbf{MonCat} & \Big\uparrow{\scriptstyle G} \\
\mathbf{C}_2 & \xrightarrow[f_2]{\mathbf{MonCat}} & \mathbf{D}_2
\end{array}$$