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