Appendix to Current Policy Perspectives 25-11: 'Transitory or Persistent? What the Frequency of Price Changes May Tell Us about Inflation'

To analyze the persistence and degree of spillover of shocks to inflation in the flexible and sticky sectors and generate the impulse responses presented in this brief, we estimate the following bivariate vector-autoregressive (VAR) system of equations ordering sticky CPI inflation first and flexible CPI inflation second:

$$\Pi_t^{sticky} = \Sigma_{j=1}^{j=6} \alpha^j \Pi_{t-j}^{sticky} + \Sigma_{j=1}^{j=6} \beta^j \Pi_{t-j}^{flexible} + \Sigma_{j=1}^{j=6} \gamma^j u_{t-j} + \epsilon_t^{sticky}$$

$$\Pi_t^{flexible} = \mu^0 \Pi_t^{sticky} + \Sigma_{j=1}^{j=6} \mu^j \Pi_{t-j}^{sticky} + \Sigma_{j=1}^{j=6} \nu^j \Pi_{t-j}^{flexible} + \Sigma_{j=1}^{j=6} \chi^j u_{t-j} + \epsilon_t^{flexible}$$

This setup has two implications. First, a 1 percentage point shock to flexible CPI inflation leads to a 1 percentage point rise in flexible CPI inflation in the period of the shock. In all future periods, the flexible CPI response is estimated endogenously in the VAR. Second, a 1 percentage point shock to flexible CPI inflation leads to a 0 percentage point change in the sticky CPI in the period of the shock (given the VAR ordering). In all future periods, the sticky CPI response is estimated endogenously in the VAR.

For the pre-pandemic sample analysis, we estimate the VAR over the 1998–2019 period. For the extended sample analysis, we estimate the VAR over the 1998–2024 period, excluding March through August 2020 due to the large transitory spike in the unemployment rate during those six months. We also exclude those months when they appear in the sample of the recursive regression estimations.