

Guide to the programs for “The Consequences of Falling Behind the Curve: Inflation Shocks and Policy Delays under Rational and Behavioral Expectations,” by Mai Hakamada and Carl E. Walsh

January 2024

DELAY_POLICIES_JAN24.M solves the model by calling SOLVEMODEL.M for the $t+k$ forward and NOPOLICY.M for the equilibrium from the time of the shock at t until $t+k-1$, the last period before the policy rule kicks in. It also calls REFIGURES.M and CDFIGURES.M, which generate all the figures used in the paper for the rational expectations (re) case and the cognitive discounting (cd) case.

DELAY_POLICIES_JAN24.M loops over models (RE, CD), values of k , values of ρ_i , and ϕ_π .

Specify where you wish to save outputs and figures by changing lines 13 and 14 in DELAY_POLICIES_JAN24.M.

Central banks in major industrialized economies were slow to react to the surge in inflation that began in early 2021. The proximate causes of this surge were the supply chain disruptions associated with the easing of COVID restrictions, fiscal policies designed to cushion the economic impact of COVID, and the impact on commodity prices and supply chains of the war in Ukraine. We investigate the consequences of policy delay in responding to inflation shocks. First, using a simple three-period model, we show how policy delay worsens inflation outcomes, but can mitigate or even reverse the output decline that occurs when policy responds without delay. Then, using a calibrated new Keynesian framework and two measures of loss that incorporate a *balanced-approach* to weigh inflation and the output gap, we find that loss is monotonically increasing in the length of the delay. Loss is reduced if policy, when it does react, is more aggressive. To investigate whether these results are sensitive to the assumption of rational expectations, we consider cognitive discounting as an alternative assumption about expectations. With cognitive discounting, forward guidance is less powerful and results in a reduction in the costs of delay. Under either assumption about expectations, the costs of a short delay can be eliminated by adopting a less inertial policy rule and a more aggressive response to inflation. JEL: E31, E51, E52, E58, E61