Discussion of "Optimal Monetary Policy with Uncertain Private Sector Foresight"

by Christopher Gust, Edward Herbs, David López-Salido

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New Keynesian model with **finite-planning horizons** (Woodford, 2018)

Rational expectations

$$\pi_t = E_t \sum_{i=0}^{\infty} \beta^i (\kappa y_{t+i} + u_{t+i})$$

$$y_t = -\sigma E_t \sum_{i=0}^{\infty} \beta^i (i_{t+i} - \pi_{t+i+1} - r^e_{t+i})$$

FPH: Finite planning horizons (k)

$$\pi^k_t = E_t \sum_{i=0}^{k} \beta^i (\kappa y^{k-i}_{t+i} + u_{t+i}) + \beta^{k+1} v_{pt}$$

$$y^k_t = -\sigma E_t \sum_{i=0}^{k} \beta^i (i^{k-i}_{t+i} - \pi^{k-i}_{t+i+1} - r^e_{t+i}) + v_{ht} - \sigma E_t \pi^0_{t+k+1}$$

continuation values: $v_{pt+1} = (1-\gamma_p) v_{pt} + \gamma_p \pi_t$

$v_{ht+1} = (1-\gamma_h) v_{ht} + \gamma_h (y_t + \sigma \pi_t)$

- Key differences: finite-depth forward planning and coarse value-function learning
  - Trade-off between information about the current/future states vs the cost of understanding it
- Endogenous persistent fluctuations in output and inflation, possible "inflation scares"
  - Gust et al. (2022): NK-FPH successful empirically

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This paper

1. What is the optimal monetary policy (OMP) under discretion?

   More aggressive to inflation than under RE to preempt inflation scares

2. How does uncertainty about FPH changes OMP?
   - FPH with (k_0, k_1) and time-varying stochastic weights ω_t

   OMP is state-contingent and disproportionately more aggressive when uncertainty is high

Main suggestion: Use model to explore practical challenges for monetary policy

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What kind of MP framework can help against inflation scares?

- Feedback between trend and cycle decreases with CB's weight on output gap λ

$$E_t \Pi_{t+1}^{k-1}(v_{pt}, u_t) = \underbrace{\left[\frac{\lambda \rho_u}{\lambda + \kappa^2} \sum_{i=0}^{k-1} \left(\frac{\beta \lambda \rho_u}{\lambda + \kappa^2} \right)^i \right] u_t}_{\text{Cycle}} + \underbrace{\left(\frac{\beta \lambda}{\lambda + \kappa^2} \right)^k v_{pt}}_{\text{Trend}}$$

- Case for frameworks with larger weight on inflation stabilization (Rogoff, 1985)
- Novel result because FPH stabilization mechanism is different from RE
  - RE: expectations of countercyclical MP stabilize current π_t, y_t
  - FPH: stabilization of current π_t, y_t reins in LR expectations v_{pt}, v_{ht}
- Central banks regularly revise their inflation mandates
  - RBNZ added second mandate in 2018 and reversed it in 2023

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Should CBs look through cost-push shocks in a shock-prone world?

Rational expectations

- Proportionate response to π_t

$$i_t = a_\pi E_t \pi_{t+1} + \ldots$$

- Committing to Taylor rule improves π_t, y_t
  - Expectations channel

Finite planning horizons

- Disproportionate response when uncertainty is high

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Stabilization benefits are front-loaded under FPH

- Taylor rule may not always be better
  - Taylor rule has no legs because LR expectations depend on π_t, y_t
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- Environments with front-loaded stabilization benefits call for disproportionate MP action
  - Beaudry, Carter, Lahiri (2023), Gáti (2024), Karadi et al. (2024)

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- Flexibility of MP framework especially useful in face of novel shocks

Role of expectations in inflation surge and subsequent disinflation

- **Nakamura, Riblier, Steinsson (2025)**:
  - If LR expectations are anchored, credible CB can look through inflationary supply shocks
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  - Longer-term inflation expectations changed little during covid period
- **Coibion-Gorodnichenko (2025)**: "bad luck followed by good luck" story
  - Short-term expectations important—they were unanchored ("selective inattention" to MP)
  - Unanchored expectations and supply shocks can explain surge + disinflation
  - Monetary and fiscal policies played little role
  - **"[C]entral banks should focus on reducing inflation as rapidly as they can"**
- **NK-FPH model is well placed for contributing to this discussion**
  - Fit NK-FPH model to inflation surge and subsequent disinflation
  - How much did monetary policy matter (vs good/bad luck)?
  - Could monetary policy have done better by pre-emptive aggressive action?

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Expand discussion of uncertainty

- Uncertainty matters quantitatively for *some* parameterizations
  - In current version uncertainty seems to play secondary role
- Focus on uncertainty to motivate disproportionate CB response to π_t
  - Explore sources of uncertainty, e.g., $v_{pt+1} = (1 - \gamma_{pt})v_{pt} + \gamma_{pt}\pi_t$
  - Opposite from Brainard (1967): multiplicative uncertainty—less aggressive action

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