Discussion: “Endogenous Uncertainty and the Macroeconomic Impact of Shocks to Inflation Expectations” by Guido Ascari

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Executive Summary

What does an inflation expectation shock do to the economy?

- Use a rich heterogeneous firm model to derive sign restrictions.
- Then use those restrictions on a VAR with narrative to estimate an expectation shock.
- After an increase in inflation expectations:
  - Economy experiences a contraction while inflation goes up.
  - The dynamics resembles that of a negative supply shock.
  - But, endogenous output uncertainty rises.
  - Similar to Jesper’s paper, shock impact is asymmetric with stronger effects from inflationary expectations shocks.
Comments

Where does this paper fit in literature?

- Endogenous versus exogenous uncertainty debate.

  Endogenous nature of output uncertainty resonates well with empirical results from Ludvingson, Ma, and Ng (AEJ: Macro, 2021).

  Uncertainty is endogenous due to mismeasurement – Straub and Ulbricht (R&R RESTUD).

  Bachmann and Moscarini (2012).

What is a **Shock to Inflation Expectations**? Theory

- In model:

\[ \mathbb{E}_t \pi_{t+1} = \pi^e_{t+1} e^{e_{\pi,t+1}}, \]

where \( \pi^e_{t+1} \) is the rational expectations.

→ A shock to inflation expectations is a particular departure from full rationality.

- Diagnostic expectations is an alternative.

- How well this modeling choice fares with survey evidence?
Comments

What is a **Shock to Inflation Expectations**? Theory

- Let’s look under the hood – a simplified Phillips curve

\[ \pi_t = \kappa x_t + \beta E_t \pi_{t+1} \]

where \( x_t \) is output gap.

- Using inflation expectation shock definition

\[ \pi_t = \kappa x_t + \beta (\pi_{t+1}^e + \epsilon_{\pi,t+1}) \]
What is a **Shock to Inflation Expectations?** Theory

- Let’s look under the hood – a simplified Phillips curve

\[ \pi_t = \kappa x_t + \beta \mathbb{E}_t \pi_{t+1} \]

where \( x_t \) is output gap.

- Using inflation expectation shock definition

\[ \pi_t = \kappa x_t + \beta (\pi_{t+1}^e + \epsilon_{\pi,t+1}) \]

BUT, replace using original Phillips curve

\[ \pi_t = \kappa x_t + \beta (\kappa x_{t+1}^e + \beta \mathbb{E}_t \pi_{t+2} + \epsilon_{\pi,t+1}) \]

\( \epsilon_{\pi,t+1} \) could be a shock related to output gap tomorrow. A news shock?
What is a **Shock to Inflation Expectations**? Empirics

- In data, it is partially identified with Volcker’s appointment 1979.Q3
- But there other relevant shocks:
  - Iranian revolution 1979.

Let’s look at the estimated inflation expectation shocks.
Expectation Shock

1973Q3- Oil Embargo
1973Q4- Oil Embargo

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1973Q3 - Oil Embargo
1973Q4 - Oil Embargo
1979Q3 - Volcker

Expectation Shock

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Comments

◦ How much do 1970s bring to analysis?

◦ Similar to fiscal policy shocks, there is an anticipation effect.

◦ Use insights from that literature to sharpen identification.
Comments

On endogenous uncertainty

- Endogenous uncertainty is a symptom of nonlinearities in the model.
- These nonlinearities arise from adjustment costs.
- Calvo and Rotemberg are not the same.
- Unorthodox monetary policy rule: growth and level output responses.
- There is an endogenous probability of exit for firms.
  Perturbation approach does not guarantee that probability is between 0 and 1.