Discussion of: "Monetary Policy and Asset Prices with Infinite-Horizon Learning"

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Summary and Main Results

- The paper considers a New Keynesian model where households can trade equity shares of firms.
- Agents solve an infinite horizon optimization problem and are internally rational in the sense that they use first order conditions to pin down future variables within their control. However, they are learning about exogenous variables.
- The paper investigates whether in such an environment it is desirable for monetary policy to respond to asset prices
- The author finds that if the interest rate responds to asset prices with the right magnitude E-stability can be achieved with reasonable response coefficient to inflation. If there however is no response to stock prices a very large response to inflation is needed to obtain E-stability.

Contribution

- The result that monetary policy should respond to stock prices is in contrast to results from models that assume rational expectations and models that assume Euler equation learning.
- In these cases, monetary policy responding to stock prices is not beneficial and can even lead to indeterminacy.
- The paper therefore discusses an important, relevant issue, in which long horizon expectations matter.

Intuition of Results

- Results depend crucially on agents using a no arbitrage condition between stocks and bonds, to forecast future nominal interest rates.
- First of all, this removes a cause of instability that is present in Preston (2006). Here agents forecast future inflation and future nominal interest rate separately without using the Taylor rule, so that they can expect anything for future real rates.
- Secondly, it creates wealth effects of asset prices, causing agents to consume more if asset prices increase. A positive response of the nominal interest rate to these asset prices can therefore prevent overheating in this economy where it otherwise would not have had an effect.

Discussion: Transpartiy of the Taylor Rule

- When agents know the interest rate rule and use that to form expectation about the nominal interest rate, E-stability can be achieved without response to asset prices.
- As central banks become increasingly transparent it can be argued that people know that central banks use the nominal interest rate to fight inflation.
- Even if agents do don't know the exact coefficients of the rule, it might still be the case that they to some extend expect that higher future inflation implies higher future nominal interest rates.
- Perhaps more so then no arbitrage, since people in general associate interest rates with central banks more than with stock markets.

Discussion: Central Bank Expectations (1)

- In the above, the interest rate is set by a forward looking Taylor rule:

$$\hat{R}_t = \phi_\pi \tilde{E}_t^{cb} \hat{\pi}_{t+1} + \phi_y \tilde{E}_t^{cb} \hat{Y}_{t+1} + \phi_q \tilde{E}_t^{cb} \hat{Q}_{t+1}$$

- Here it is assumed that central bank expectations are equal to the average of the expectations of households: $\tilde{E}_t^{cb} = \int_0^1 \tilde{E}_t^j dj$.
- What would happen if the central bank formed its own expectations?
- These expectations might e.g. be more rational. But even if the central bank was learning in a similar way as households, at the least the central bank would know its own policy rule. Would that change results?

Discussion: Central Bank Expectations (2)

- When instead of a forward looking rule the central bank uses a contemporaneous Taylor rule, the model is always E-stable when the Taylor principle is satisfied, independent on the level of transparency.
- It therefor seems that E-unstability might arise through a feedback mechanism of expectations that do not follow the Taylor rule into the interest rate rule.
- When the central bank would take its own Taylor rule into account when forming expectations and using these into the forward looking rule, E-stability might return.