The Rise and Fall of the Natural Interest Rate

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Overview of the Paper

- When either Phillips curve or IS curve are flat, LW estimate of r* becomes imprecise
- This source of uncertainty accounts for the huge SE bands around those estimates
- An alternative way of estimating r* is a univariate local-level model:

$$r_t - r_t^* = \alpha^r (r_{t-1} - r_{t-1}^*) + \varepsilon_t^r$$

$$r_t^* = r_{t-1}^* + \varepsilon_t^{r^*}$$

- This specification only relies on the assumption that the observed real interest rate reverts to the unobserved r* in the long run
- This model provides more precise estimates of r* than the LW filter

My Comments

1. Clarify the main contribution
2. Simulated data exercises
3. Exploring your definition of r*
4. Panel ECM exercise

Contribution of the Paper

- Dense literature on quantifying the decline in r* and estimating contribution of various factors
- You should avoid being seen as yet another paper in that literature
- Your main contribution is a novel methodology for estimating r*
- Your model is simple and transparent, and so easier to interpret
- The problem of wide error bands plagues most (all?) r* estimation methods, not just LW
- So you are bringing something important to the table
- Make this clear(er) from the very start - title and abstract!
- Though important to note that your estimates still have a 90% CI of roughly -1% to 3% - economically still a large error band

Simulated Data Exercises

- Your analysis begs the question: If the LW filter is not observable, is it right to dig into its properties using post-estimation diagnostics?
- For example, it's not clear that the point estimates of γ and κ are reliable if their true values are close to zero
- Seems natural to estimate the LW filter using simulated data with different DGPs
- For example, you could answer these questions:
  - How low is too low for the model to be observable?
  - How low is too low for the estimates to be sufficiently precise?
  - Is the local level model better at estimating the level of r*, or just more precise?
  - Are the models equivalent when γ and κ are not zero?
  - Is the local level model more robust to misspecification (as claimed)?
  - How bad are the local level estimates if the true interest rate gap isn't stationary?

(Re-)Defining r*

- Your model pins down r* by defining it is as the long run level of the observed real interest rate
- The paper slightly glosses over the fact that this is a new definition relative to LW, not just an alternative model for the same concept
- Of course in simple NK models, output gap closed and inflation at target will be consistent with all variables at their long run values
- But real interest rate at its long run value won't necessarily imply output gap closed and inflation at target
- For example, what about trade-offs between closing the output gap and stabilising inflation?
- You could be more transparent about this in the paper
- Perhaps the natural benchmark is not the LW model, but a simple low-pass filter

Panel ECM Exercise

- The panel ECM exercise should really be part of a separate paper
- The cross-country estimation of r* is already an application of your methodology and a good (citable) contribution
- The ECM doesn't even use those same estimates of r*
- Comments on this section:
  - The 'young share' is not just the baby-boom, but also driven by rising longevity (distinction is important as one is transitory the other is permanent)
  - While risk is an important factor to include, using the term spread is a poor choice
  - Not surprising that your demographic variable is the most important contributor, as it's the only one that follows the pattern of real ex-ante rates