Discussion of
"Should Central Banks React to Exchange Rate Movements?
An Analysis of the Robustness of Simple Policy Rules under Exchange Rate Uncertainty" (by Timo Wollmershäuser)

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• Very stimulating paper.
  
  – Provides useful insights about the effects of open vs. closed economy policy rules in models with different exchange rate determination

  – Challenges existing literature on robust monetary rules

  – Main message: Exchange Rate Uncertainty provides a rationale for adopting an open economy policy rule.
Summary and some comments

- Baseline model close to the backwarding-looking Neo-Keynesian model by Ball (1999)

- However, nominal exchange rate is forward looking and expectations determined.

- UIP cum persistent risk premium.

- Loss function composes (equally weighted) the unconditional variances of inflation and output.

- Monetary policy minimizes losses by choosing response coefficients in different closed and open economy interest rate rules (6 Rules).

- Open economy rules perform slightly better (however what does actually slightly mean???)

- I like very much part 2.3. Gains of commitment (as in Woodford (1999)) because central bank responses to the lagged exchange rate.
– However, the response to $q_{t-1}$ is identical to responding to $i_{t-1}$, because exchange rate is solely interest rate determined (see equation (5)) and only forward looking agents are the foreign exchange market participants.

– Why are people in the financial markets more rational than in the goods market???

– MAIN CONTRIBUTION: Checking whether closed or open economy rules are more robust to different degree of exchange rate uncertainty (model and parameter uncertainty).

– 6 Models...but one objective function (?????)

– Monetary policy continues to use the baseline model to determine the policy rule.

– Figure 4. show the loss function generated by the rules for different model and parameter specification.
– Results: Open Economy rules perform better....

– However, no report on the individual components of the loss function.....

● Critical Look

– Get back to the point before: 6 models, but 1 loss function.

– If the MPC disagrees about the model, it may also disagree about objective

● Unfair...i.e. if (we) worry about micro foundations:

– Weights in the loss function would be different for different structural model

– AND also functional form of the loss function would be different
— New Keynesian model with Price stickiness only

\[ \pi_t = \beta E(\pi_{t+1}) + \lambda m c_t \]

Expected utility of rep. HH can be approximated by

\[ L = E_0 \left\{ \sum_{t=0}^{\infty} \beta^t \left[ \pi_t^2 + \lambda y_t^2 + \phi_i^2 \right] \right\} \]

— If we allow for indexation to lag inflation prices

\[ L = E_0 \left\{ \sum_{t=0}^{\infty} \beta^t \left[ (\pi_t - \gamma \pi_{t-1})^2 + \lambda y_t^2 + \phi_i^2 \right] \right\} \]

— If model with habit persistence

\[ L = E_0 \left\{ \sum_{t=0}^{\infty} \beta^t \left[ \pi_t^2 + \lambda (y_t - \delta y_{t-1} - y^*)^2 + \phi_i^2 \right] \right\} \]
• Fair Criticism

  – OK, no microfoundation

  – But is the model robust to different weights in the given loss function

  – Some own simulations:

    – Model 4 ($\nu = 0.5$)

      \[
      \begin{array}{cccc}
      \text{var}(\pi) & \text{var}(y) & L (\lambda = 1) & L (\lambda = 0.2) \\
      \text{R1} & 1.37 & 2.94 & 4.3 & 1.96 \\
      \text{R2} & 1.71 & 2.09 & 3.8 & 2.12 \\
      \text{R6} & 1.55 & 2.19 & 3.7 & 1.98 \\
      \end{array}
      \]

    – Is this a general result? Do open economy rules create higher inflation volatility?

    – Key: Forward looking behavior in the exchange rate market (see also Leitemo et al. (2002))

    – Closed Economy Taylor Rule
* A depreciation caused by a high interest rate differential feeds directly into CPI

* This induces an even higher (nominal) interest rate differential → even greater rate of depreciation

* CB responds again with raising the interest rate further

* Large volatility of output
  
  – Open Economy Rule: negative response to real exchange rate depreciation

* Negative policy response to RER implies that the response is below that of the Taylor Rule

* As a consequence output volatility is lower at the price of slightly higher volatility of inflation
– How to avoid this conflict?

* Discuss policy frontiers (vary $\lambda$ in the loss function)

* Apply minmax criteria (see Hansen and Sargent (2000) or von zur Muehlen (2001))