

# Optimal Monetary Policy in the Euro Area

## Stefano Neri and Tiziano Ropele

Discussion

Pelin Ilbas

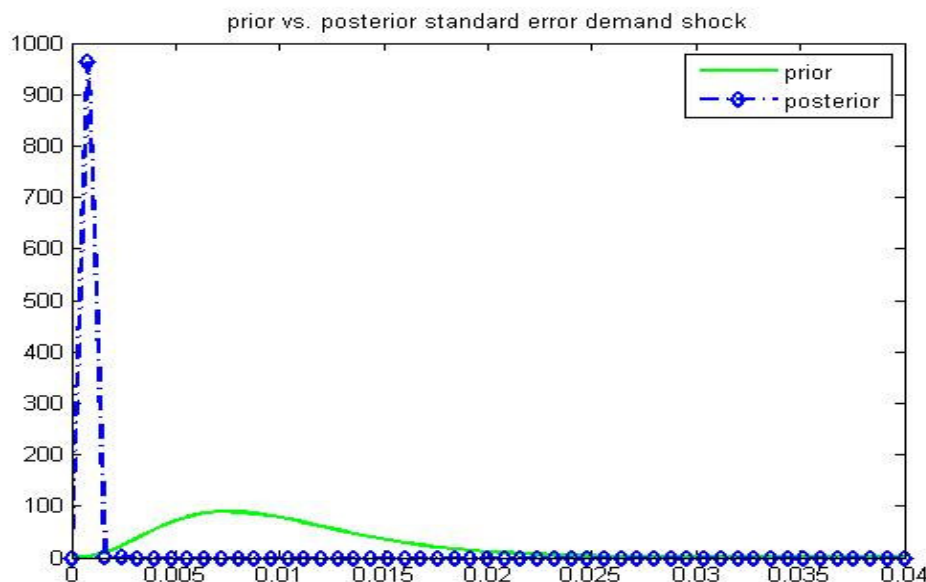
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# Summary

- Small-scale DSGE model (Ehrmann and Smets, 2003) estimated for the euro area.
- using **real time data**; results are compared to estimations with revised data.
- Both private agents and central bank are **imperfectly informed**; signal extraction problem.
- Additional source of persistence in the model.
- Very interesting paper, issues addressed are of practical relevance for policy makers.

# Bayesian estimation results

- Plot of the priors against the posterior distributions for standard errors is missing, e.g. demand shock (PI-EP):

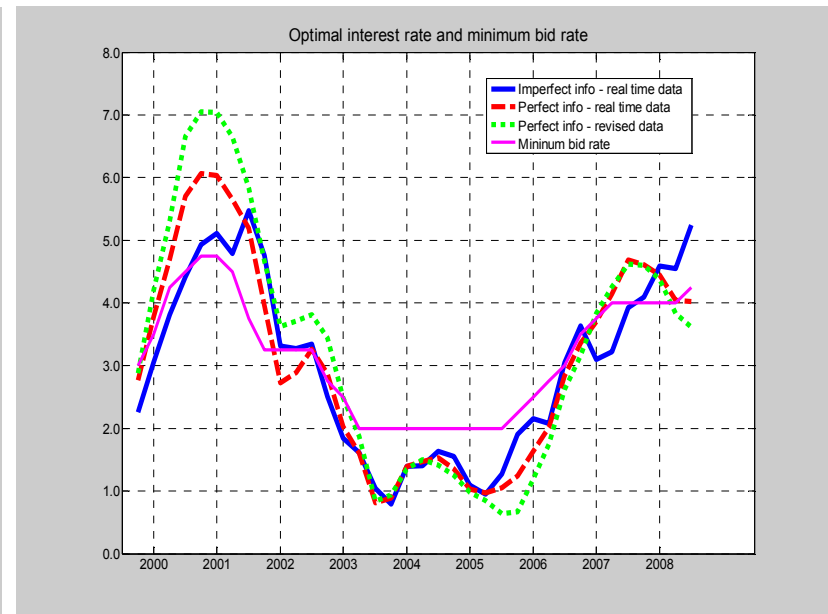
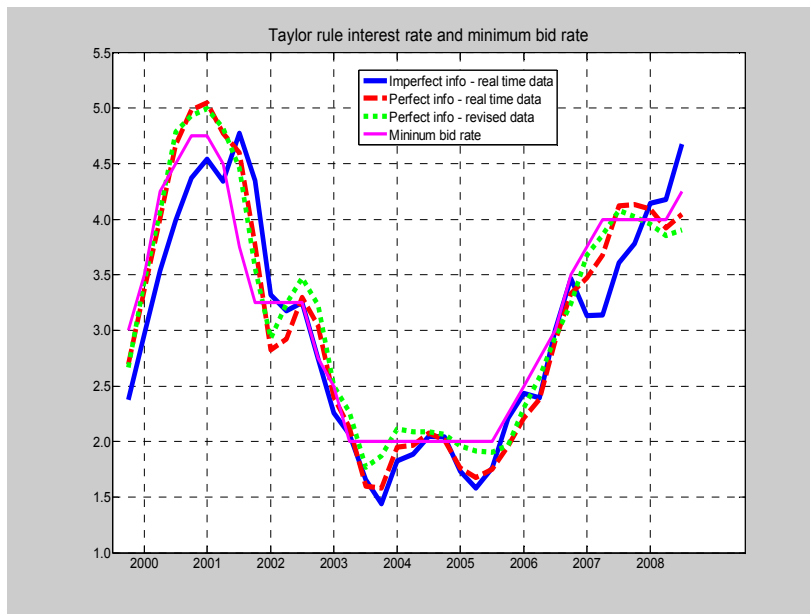


## Bayesian estimation results

- Posterior interval is very narrow, also for some structural parameters with revised data; Why?
- Data is extremely informative?
- Or the MH algorithm stuck around the mode and not exploring the tails of the distribution? Jump is too small?
- What is the value of the acceptance rate? Report details for convergence diagnostics!

# Policy Implications

In general, minimum bid rate relatively better captured by the Taylor rule than the optimal discretionary rule, especially in period 2002-2005. How sensitive are the results to the choice of both the loss function type and parameterization?



## The loss function

- Loss function:

$$W_t = \frac{1}{2} \left\{ \pi_{t,t-4}^2 + v_x (y_t - \bar{y}_t)^2 + v_R (R_t - R_{t-1})^2 \right\}$$

$$v_x = 0.25$$

$$v_R = 2$$

- Higher value for the interest rate differential than output gap deserves further justification as it affects dynamic implications; interest rate smoothing more important than output gap stabilization?

## The loss function

- Choice of loss function parameters should be better justified.
- Difficult to place in context (cfr. "dual mandate" of the Fed, to some extent support for non-inflationary growth at the ECB)...
- Period 2002-2005 might be better captured by the optimal rule with a different type of loss function or different parameterization.
- Sensitivity analysis might be useful.

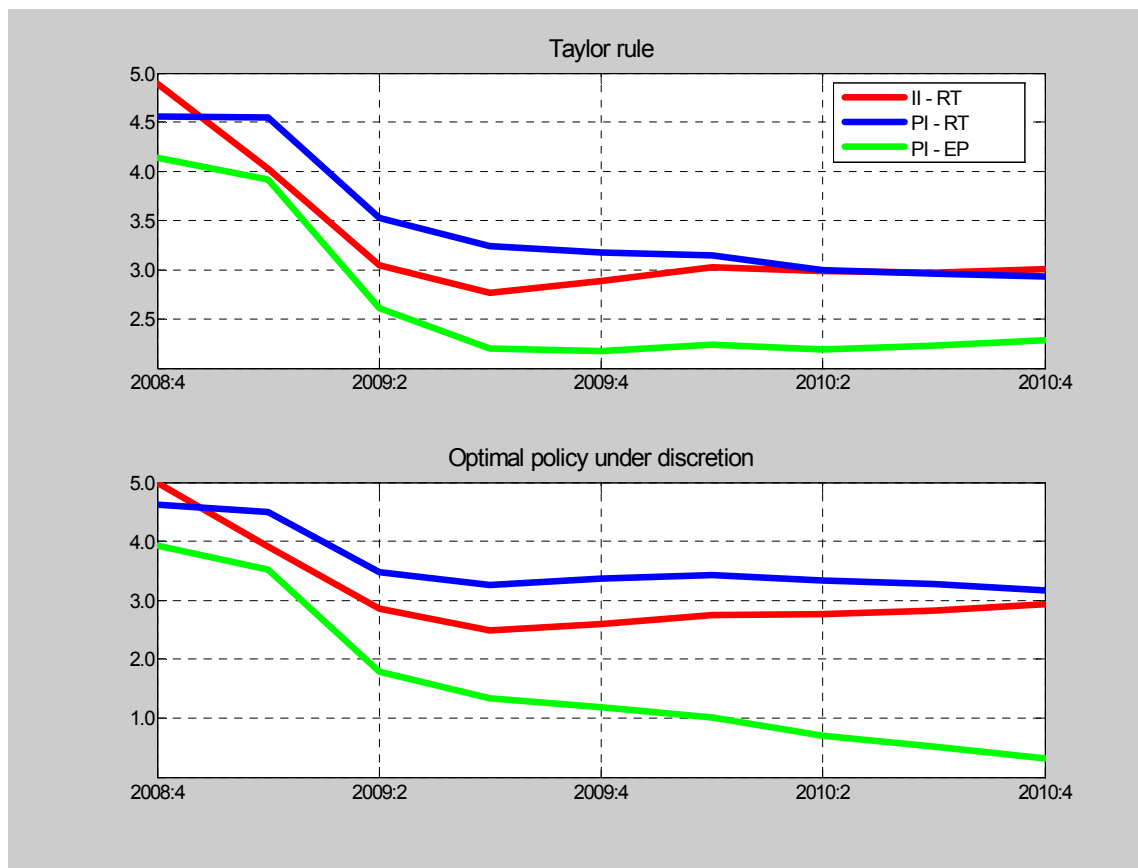
# Estimating the loss function under commitment in a popular medium-scale DSGE model

- Pelin Ilbas (2007): Estimating the medium-scale DSGE Smets and Wouters euro area model under optimal monetary policy under commitment, assuming the following period loss function:
 
$$\text{Loss}_t = \pi_t^2 + q_y (Y_t - Y_t^p)^2 + q_r (R_t - R_{t-1})^2$$
- Preference parameters  $q_y$  and  $q_r$  in loss function estimated jointly with structural parameters assuming monetary policy is committed. Consequence: which values for the past Lagrange multipliers?
- The Ilbas (2007) paper proposes a **new estimation methodology** from **timeless perspective**: use a **presample** to initialize the Lagrange multipliers. If the presample is long enough → Timeless perspective.

# Estimating the loss function under commitment in a popular medium-scale DSGE model

- Extension: Pelin Ilbas (2008) estimates a medium-scale DSGE model for the US under optimal policy, the timeless perspective. Can US monetary policy history be described by optimal behaviour? Answer: under Greenspan, yes.
- Results: output gap is a very important target variable, in addition to interest rate smoothing in the euro area. In the US, output gap difference (i.e. speed-limit targeting) is important under Greenspan era.

# Interest rate projections



## Interest rate projections

- When estimated with **real time data**, implied interest rate under both policies is lower with imperfect information. Does this result also hold up when model is estimated with revised data? Robust to dataset?
- In the case of perfect information estimated with **revised data**, both policies imply a significantly lower interest rate. Why? Comparison with the case imperfect information with revised data would give a more clear picture.
- Is there a data-effect or information-effect?

# Conclusions

- Robustness of the results to parameterizations of the loss function needs to be checked.
- Results imply that discretion displays history-dependence under partial information. It would be interesting to know to which extent the gains from commitment and size of stabilization bias are affected by the presence of limited information.
- Conclusions based on optimal policy conditional on discretion; looking at commitment would add a lot of value to the paper.
- Imperfect information framework and measurement issues; analysis of welfare consequences of speed-limit targeting (Orphanides et al., 2000), **AND** helps to provide better justification to the choice of discretionary approach in the paper (Walsh, 2003).
- Very interesting paper, relevant for monetary policy.