Monetary and Macroprudential Policy in an Estimated DSGE Model of the Euro Area

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Discussion of Quint and Rabanal "Monetary and Macroprudential Policy in an Estimated DSGE Model of the Euro Area"

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- Use estimated model to assess effects of macroprudential policy
    - Counterfactual experiments, strength of DSGE framework

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  - At the same time, volatility in credit aggregates and housing prices reduced substantially by macroprudential policy (without affecting inflation and output volatility)
- Conclusion: "...introduction of macroprudential instruments is likely to have minor effects on main macroeconomic variables"

Discussion outline

- Model
- Policy Exercises
- Concluding Remarks

Model

Properties of Estimated Model

- Quint and Rabanal report some univariate statistics (std and autocorrelation of series) to assess the fit of the model in Tables 4 and 5, but more is needed:

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  - **Comovement in data between the regions**: e.g. $\text{cor}\left(p^D, p^{D^*}\right) = .6$, $\text{cor}(\Delta C, \Delta C^*) = .4$, $\text{cor}\left(\Delta I_R, \Delta I_R^*\right) = .1$, $\text{cor}(\pi, \pi^*) = .8$ and $\text{cor}\left(R^L - R, \left(R^L - R\right)^*\right) = .9$

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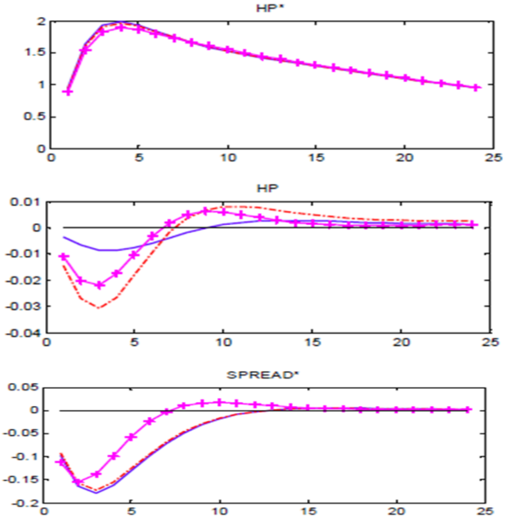
  - Is the estimated model consistent with these facts?

Var Decomp In Model Below, Impulses to Periphery housing dem shk to the right

	σ_ξ^D	$\sigma_\xi^{D^*}$
R	0.4	0.2
R^L	0.1	0.2
Δp^C	0.4	0.1
$\Delta \log C$	0.2	0
$\Delta \log Y^D$	51.2	0
Δp^D	48.4	0
R^*	0.3	0.4
R^{L^*}	0.2	0.1
Δp^{C^*}	0.1	1.2
$\Delta \log C^*$	0	0.5
$\Delta \log Y^{D^*}$	0	63.3
Δp^{D^*}	0	58.7



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  - Historical decompositions useful to distill out if financial factors key drivers in the recent recession

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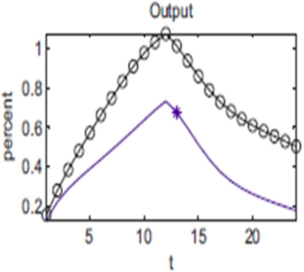
  - For instance anticipated high productivity growth that is subsequently not materializing
- Christiano et al. argues that this source of welfare reducing instability can be strongly mitigated if the central bank "leans against the wind" and responds to credit growth (beyond its role in constructing the inflation forecast)

Model

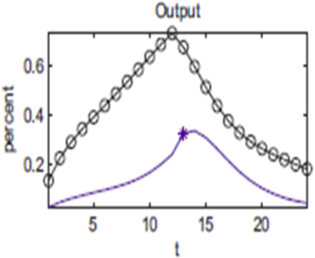
Boom-Bust Cycles in Christiano et al. (2008, 2010) Under Alternative Policy Assumptions

Effects of an anticipated technology shock in t=12 which does not materialize

Taylor-type rule (circle) and Ramsey policy (solid)



Ramsey policy (circle) and Taylor-type rule with credit growth (solid)



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  - If they do not change much, your model hardwires in the sufficiency of optimal monetary policy (macroprudential irrelevance)

- In Tables 6 and 7, Quint and Rabanal optimize the response coefficients in the policy rules when considering the usefulness of macro-prudential policies to stabilize a "Lars Svensson" type of loss function (i.e. discounted sum of inflation and output-gap volatility)

Policy Exercises

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  - Should result in more prominent role of macroprudential policy

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  - Given ECB policy, each region $k = p, c$ chooses γ_n to minimize

$$\Sigma_{t=0}^{\infty}\beta^t \left[\text{var}\left(y_t^k\right) + \lambda_{MP}\text{var}\left(cre_t^k\right)\right]$$

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  - Assume core is "Stackelberg leader", picks γ_n before periphery choose γ_n^*, both move after ECB

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A Couple of Additional Technical Points

- Need to make sure that movements in policy measures (R_t and $\eta_t \leftrightarrow R_t^L - R_t$) are reasonable

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- To remedy the comovement problem in the model, could compute variances as mean of N artificial samples generated by bootstrapping from the two-sided Kalman smoothed shocks rather than relying on asymptotic moments

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- To understand if the key results in the paper is "data or model driven", the authors need to conduct more rigorous model validation exercises
  - Before we know more along which dimensions the model does well, care needs to be taken with the policy implications
- Finally, I think extensions which relaxes the employed "No-News/No-learning" linear model framework are warranted