Discussion of "MONK: Mortgages in a New Keynesian Model", by Garriga, Kydland & Sustek

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1These slides represent the author’s views and not necessarily those of Banco de España or the Eurosystem.
Introduction

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1. aggregate & redistributive impact of
2. different MP shocks: "standard" (transitory) MP shock vs (very persistent) "inflation-targeting" shock
3. through two channels/rigidities: price stickiness vs LT nominal mortgages
4. under different mortgage contracts: FRM vs ARM
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(2) motivated by empirical importance of "Level-factor shock" for yield curve fluctuations

- Interpreted in macro-fin literature as $\pi$-targeting shocks
- model’s $\pi$-targeting shock has similar empirical properties as L-factor shock

Carlos Thomas (BdE)  Discussion of Garriga, Kydland & Sustek
Results

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- "Inflation-targeting" shock (very persistent ↑ in short-term rate)
  - has mostly redistributive effects
  - mostly through mortgage payments
  - benefitting borrowers under FRM, and lenders under ARM
The mortgage (income) channel: ARM vs FRM

- Real mortgage payments,

\[
\frac{R_t + \gamma_t \tilde{d}_t}{1 + \pi_t}
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- Persistent increase in \( i_t \) and \( \pi_t \). After impact period,

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\Delta \left( \frac{R_{t+1} + \gamma_{t+1}}{1 + \pi_{t+1}} \right) \approx \frac{\Delta R_{t+1}}{1 + \pi} - \frac{R + \gamma}{(1 + \pi)^2} \Delta \pi_{t+1}
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\approx \underbrace{\frac{\Delta R_{t+1}}{1 + \pi}}_{\text{Int. rate effect}} - \underbrace{(R + \gamma) \Delta \pi_{t+1}}_{\text{Fisherian effect}}
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- \(R + \gamma\) small, therefore
  - under ARM, \(\Delta R_{t+1} = \Delta i_{t+1}\) dominates
  - under FRM, \(\Delta R_{t+1} = 0\) for pre-existing loans, \(\Delta \pi_{t+1}\) dominates
Authors take seriously the importance of long-term nominal debt for HH decisions
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- LT debt: effect of current inflation (Fisherian effect) vs anticipated inflation; Nuño & Thomas 2018 ("OMP with HA")
Main comment

- Paper gives (too) much prominence to "inflation target shocks"
  - Interpretation of level factor as inflation-target shocks
  - Economic significance
  - Policy implications
  - Relevance for current environment

- Suggest slight change of focus
Inflation-target shock as model counterpart of level factor

- Level factor of yield curve interpreted as persistent shocks to inflation target
  - on the basis of statistical properties: (1) highly persistent, (2) moves both ST and LT rate, (3) high correlation with inflation
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- Standard Taylor rule,

\[ i_t = r^* + \bar{\pi} + \nu_{\pi} (\pi_t - \bar{\pi}) + \nu_y (y_t - y^*_t) \]
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- Any shock that persistently moves inflation and output gap in same direction
  - persistently moves short term rate in same direction
  - yields (1), (2) and (3)
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Economic significance of inflation target shocks

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- Taylor rule in GKS can be written as

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i_t = r^* + \nu \pi \pi_t + \eta_t - (\nu \pi - 1) \mu_t
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"Standard" shock \( \eta_t \) and "inflation-target" shock \( \mu_t \) are observationally equivalent.
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"Standard" shock \(\eta_t\) and "inflation-target" shock \(\mu_t\) are observationally equivalent.
- The analysis is rather about (very) persistent vs transitory MP shocks.
  - this distinction is indeed relevant, since each moves inflation in different direction.
Policy implications: the recent crisis

- Authors interpret MP response to recent crisis through the lens of the (ineffective) persistent MP shock in their model
  - after initial cut, policy rate kept constant for almost a decade
- Taking model-based interpretation even more literally: Fed would have reduced its inflation target
- Alternative, perhaps more plausible interpretation:
  - *Endogenous* MP response to large, persistent fall in inflation and output gap...
  - ... together with binding *effective lower bound* (ELB)
- My suggestion: construct crisis scenario (e.g. deleveraging shock) *cum* binding ZLB
  - and analyze in that context the role of ARM vs FRM, sticky prices vs mortgages, aggregate vs redistribution, etc.
Relevance in current environment

- Last two decades have witnessed low and stable inflation
- Major central banks have *explicit numerical* inflation targets
  - ECB, BoE...
  - Even US Fed since Jan 2012
- In this environment, inflation-target shocks may have become less important
- Again: perhaps put focus on endogenous MP response to (non-MP) shock in the vicinity of ELB
Conclusions

- Tractable, elegant NK framework with long-term nominal mortgages
  - in accordance with their importance for real-life HH behavior and MP deliberations
- Insightful results on a # of relevant issues
  - mortgage contract type (ARM vs FRM), aggregate vs redistributive effects, etc.
- Perhaps somewhat less emphasis on "inflation-target shocks"...
- ... and a bit more on endogenous MP response to crisis near ELB