

# Discussion of "MONK: Mortgages in a New Keynesian Model", by Garriga, Kydland & Sustek<sup>1</sup>

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<sup>1</sup>These slides represent the author's views and not necessarily those of Banco de España or the Eurosystem.

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- Garriga, Kydland & Sustek (GKS) propose a two-agent (lender-borrower) NK model with **long-term nominal mortgages** to study
  - 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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  - ③ through two channels/rigidities: **price stickiness** vs LT nominal **mortgages**
  - ④ under different mortgage contracts: **FRM** vs **ARM**
- (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

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- "Inflation-targeting" shock (very persistent  $\uparrow$  in short-term rate)
  - has mostly redistributive effects
  - mostly through mortgage payments
  - benefitting borrowers under FRM, and lenders under ARM

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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

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  - Gornemann Kuester Nakajima 2016, Auclert 2016, McKay Nakamura Steinsson 2017, Kaplan Moll Violante 2017, Challe 2017...
  - LT debt: effect of current inflation (Fisherian effect) vs anticipated inflation; Nuño & Thomas 2018 ("OMP with HA")

- 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

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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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- 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

- 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