

# ECB FORUM ON CENTRAL BANKING

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**Giovanni  
Sciacovelli**



Northwestern  
University

**MONETARY POLICY  
TRANSMISSION  
THROUGH  
ADJUSTABLE-RATE  
MORTGAGES IN THE  
EURO AREA**



**EUROPEAN CENTRAL BANK**  

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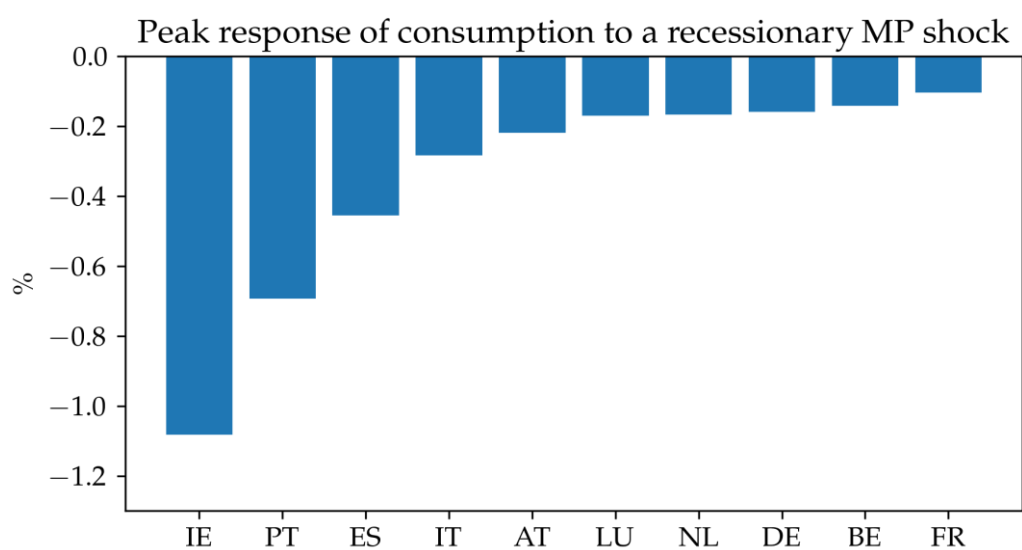
**EUROSYSTEM**

# Monetary Policy Transmission Through Adjustable—Rate Mortgages in the Euro Area

Giovanni Sciacovelli



Northwestern University



## MP transmission very heterogeneous in EA

- Challenges for ECB
- Critical to understand underlying drivers

## Mortgages:

- 75% of household debt in EA
- 48% are ARMs  $\Rightarrow$  MP rapidly affects mortgage payments
- Role in transmission: US  $\checkmark$ , EA  $\times$

## Research questions

- How does monetary policy transmission through ARMs work in the EA?
- Are ARMs relevant for transmission heterogeneity across EA countries?

## Evidence

### Goal:

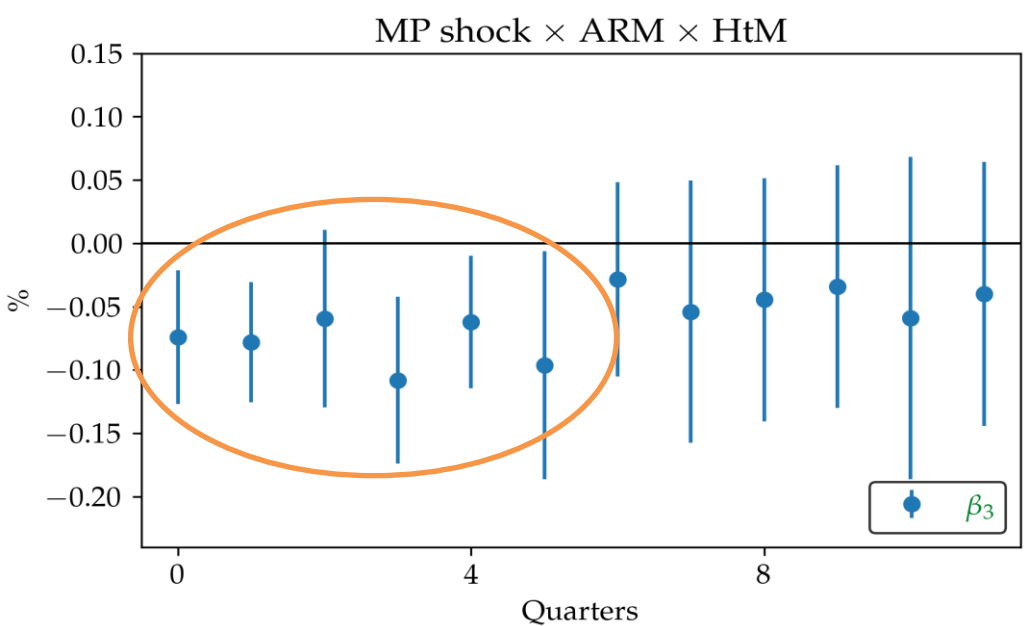
- Estimate relation between MP strength and ARM $\times$ HtM interaction

### Data:

- HFCS, exploit cross-country variation in ARM and HtM

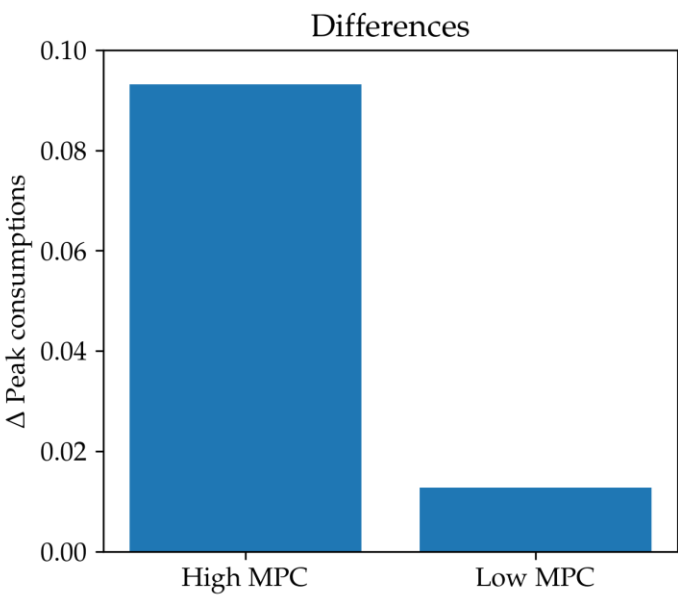
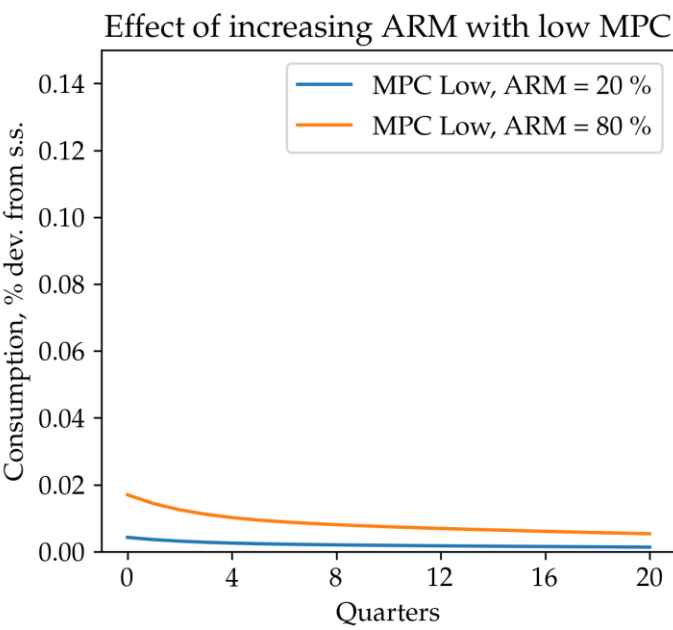
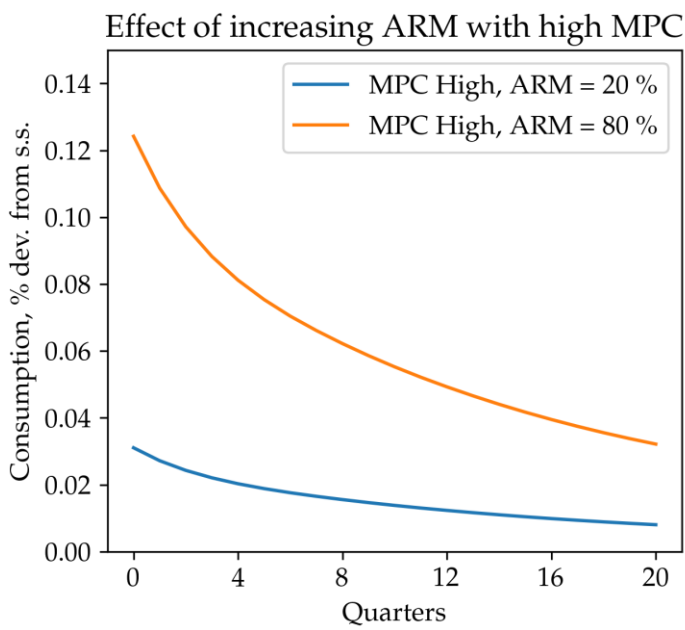
### Panel local projections:

$$y_{t+h}^c = \beta_0^h + \beta_1^h \epsilon_t^{MP} + \beta_2^h \epsilon_t^{MP} ARM^c + \beta_3^h \epsilon_t^{MP} ARM^c HtM^c + \beta_4^h \epsilon_t^{MP} HtM^c + \Gamma^h X_{controls}^c + u_{t+h}^c$$



## Quantitative model

- Heterogeneous households
- Housing and mortgage choices
- Fraction of households have ARMs



- Higher ARMs lead to significantly larger transmission in high MPC economies
- $\Rightarrow$  Rationale for empirical evidence

## Model-data comparison

### Data:

- Differences in max consumption in LP relative to Spain

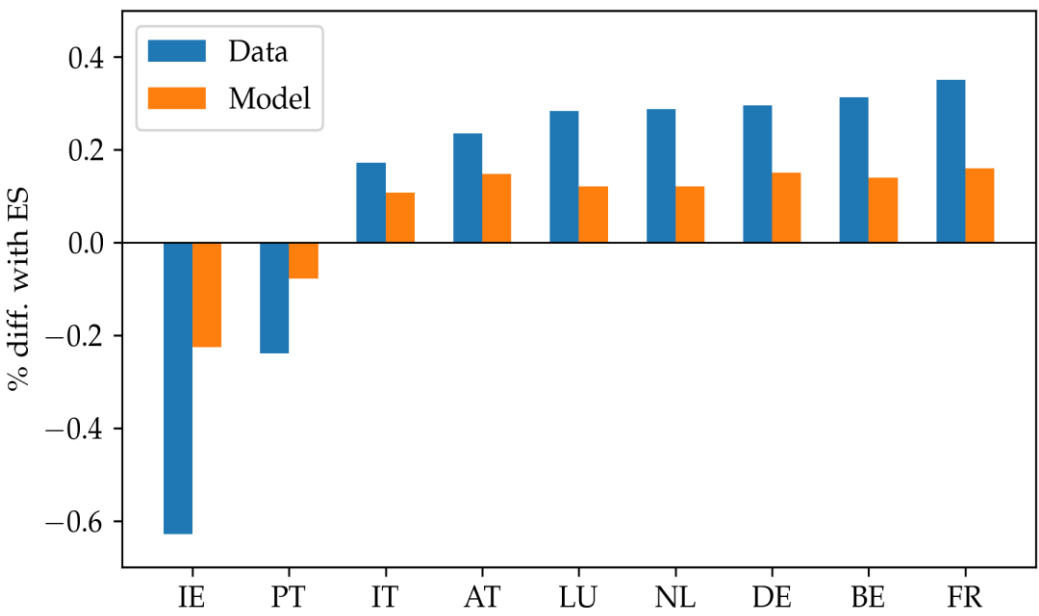
### Model:

- MP so that max Spanish consumption in model = data
- Counterfactual 1: modify ARM to match other EA countries
- Counterfactual 2: modify MPC to match other EA countries

$\Rightarrow$  Spain's counterfactual response with ARM transmission of other EA countries

### Comparison:

- Empirical and model-implied differences



- Differences in ARMs transmission capture 46% of differentials on average
- Differences in MPCs are crucial for this result

## Key takeaways:

- High MPCs are crucial for ARMs to be a powerful transmission mechanism
- ARMs play a critical role in explaining transmission differentials across EA countries