

# People's QE: Monetary policy in eurozone and heterogeneous effect on housing costs

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Recent trends in the real estate market and its analysis  
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# Outline

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# Introduction

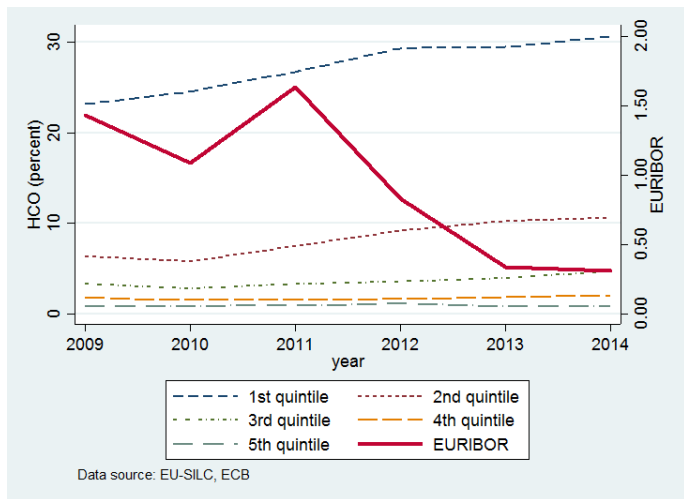
- ▶ calls for the "people's QE" from politics and academia in UK and eurozone (Labour, Blyth and Loneragan, Sandbu etc.)
- ▶ was it not people's QE?
- ▶ QE increased the asset prices, complex effect on overall economy
- ▶ low rates reducing interest payments... under certain conditions

# Introduction

Housing most tangible and most present utility in everyday life in Europe, very political

- ▶ mortgage debt 70% of total household liabilities (2009)
- ▶ real estate holdings 43% household wealth
- ▶ loans for house purchase 32% loans to households (2007)

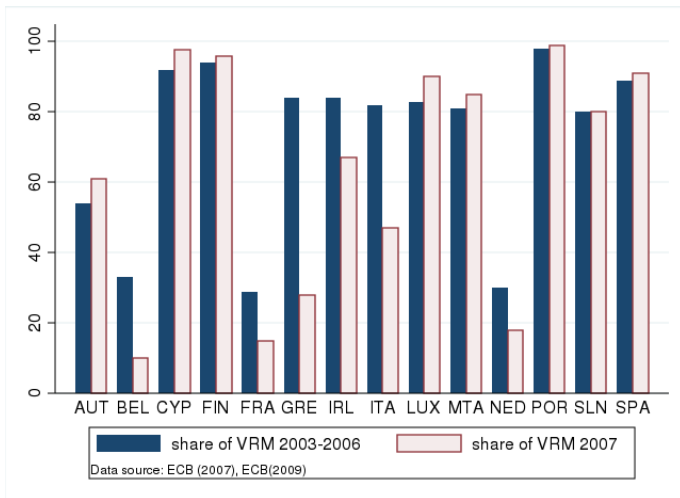
# Housing cost overburden rate



## Heterogeneity in income effect

- ▶ share of adjustable-rate mortgages (ARM)
- ▶ fixed-rate mortgages: failure to refinance
- ▶ (borrowing constraint, insufficient collateral, financial illiteracy...)

# Adjustable-rate mortgages



## Heterogeneity in wealth effect

- ▶ increase in house prices: wealth transfer from net lenders to net buyers of houses (Blot et al. 2015)
- ▶ this transfer, reduction in inequality, depends on the ability to issue debt and the change of interest burden for buyers (inability to refinance, share of ARM).



# Heterogeneity

Thus QE theoretically exerted a positive net income effect on

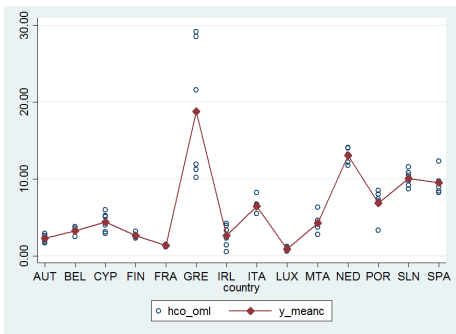
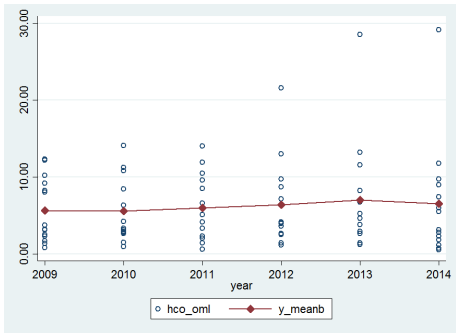
- ▶ adjustable-rate mortgage holders
- ▶ fixed-rate mortgage holders who were able to refinance (lower house price decline, less adversely effected by crisis)
- ▶ new borrowers where sufficient interest-rate pass-through occurred

## Importance for QE implications

- ▶ Heterogeneity in U.S. monetary policy effect: Hurst et al. (2015) region-dependent refinancing
- ▶ ECB Executive Board member Benoît Cœuré emphasized that inequality is relevant for central banks, “as monetary policy may have an impact on inequalities, and [...] stability is conducive to equity”
- ▶ MPC (Auclert 2015) Keys and Pope (2014) Di Maggio (2014)

# Methodology

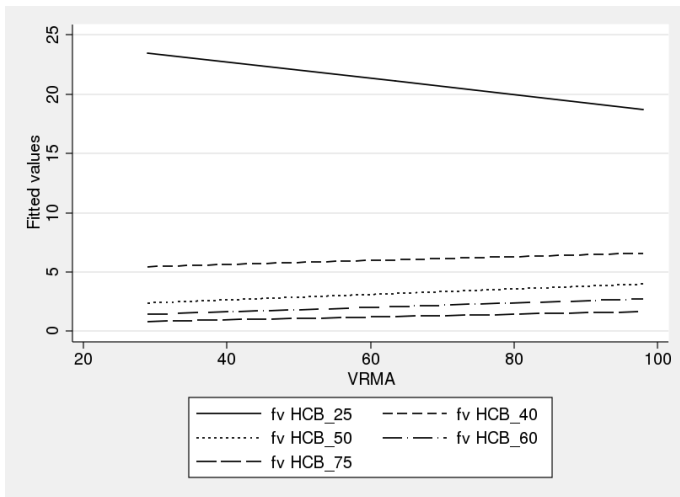
- ▶ the effect of QE on inequality will be approximated by identifying its impact on net interest income
- ▶ Hurst et al. (2015) changes in mortgage refinancing activity
- ▶ Babić (2016): change in housing cost (over)burden rate
- ▶ panel data, 14 countries, random effects GLS regression
- ▶ ARM, country-specific, allows testing for heterogeneous impact across countries



## Dependent variables

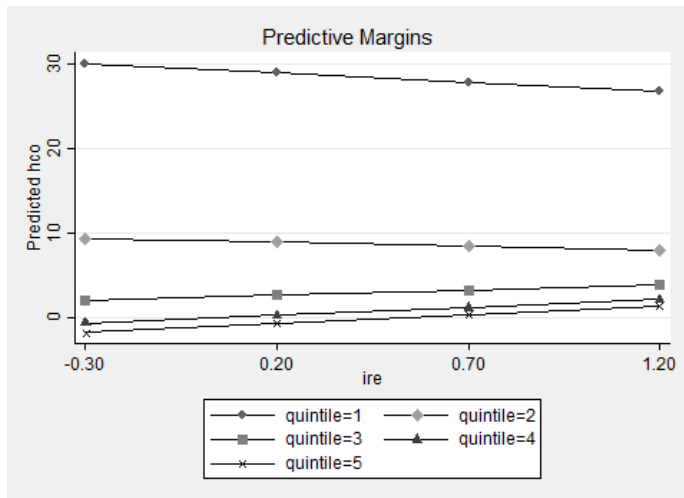
- ▶ HCB rate for home owners with an outstanding mortgage
- ▶ HCO rate for different income quintiles
- ▶ Share of home owners with outstanding mortgage

# Results



- ▶ ARM significant, negative, albeit small

# Results



- ▶ HCO and income quintiles

# Results

- ▶ house prices and unemployment insignificant: social security nets, small collateralized lending, long process of collateral enforcement (7y in Italy)



# Results

- ▶ Home ownership: surprisingly, ARM significant and negative
- ▶ one explanation: profitability of banks most adversely hit there, want to prevent maturity mismatch and borrowers lock in low rates

## Conclusion

- ▶ VRM as a proxy for interest rate pass-through: weaker and less significant for households with higher burden
- ▶ shortcoming: unavailable individual survey data; HCB not perfect measure of mortgage payments;

# Results

	(1)	(2)	(3)	(4)	(5)
	$HCB_{25}$	$HCB_{40}$	$HCB_{50}$	$HCB_{60}$	$HCB_{75}$
<i>VRMA</i>	-0.198*** (.0642)	-0.0394* (.0206)	-0.0550* (.0326)	-0.051** (.0232)	-.00 (.005)
<i>HPC</i>	-.009 (.097)	-.007 (.044)	-.017 (.027)	-.009 (.02)	-.015 (.01)
<i>UNE</i>	.00 (.034)	.00 (.01)	.00 (.00)	.00 (.00)	.00 (.00)
<i>IRE</i>	3.72 (3.07)	.82 (.98)	.19 (.38)	-.27 (.27)	.07 (.23)
<i>GAP</i>	-2.64*** (.698)	-1.19*** (.22)	-.24* (.14)	-.18* (.09)	-.36*** (.52)
Constant	23.32 (16.22)	4.77 (3.95)	1.548 (1.379)	.649 (.697)	.467 (.343)
Observations	84	84	84	84	84
Countries	14	14	14	14	14

Table 5: Regression results – regional variation in the *HCB*