Housing and the business cycle

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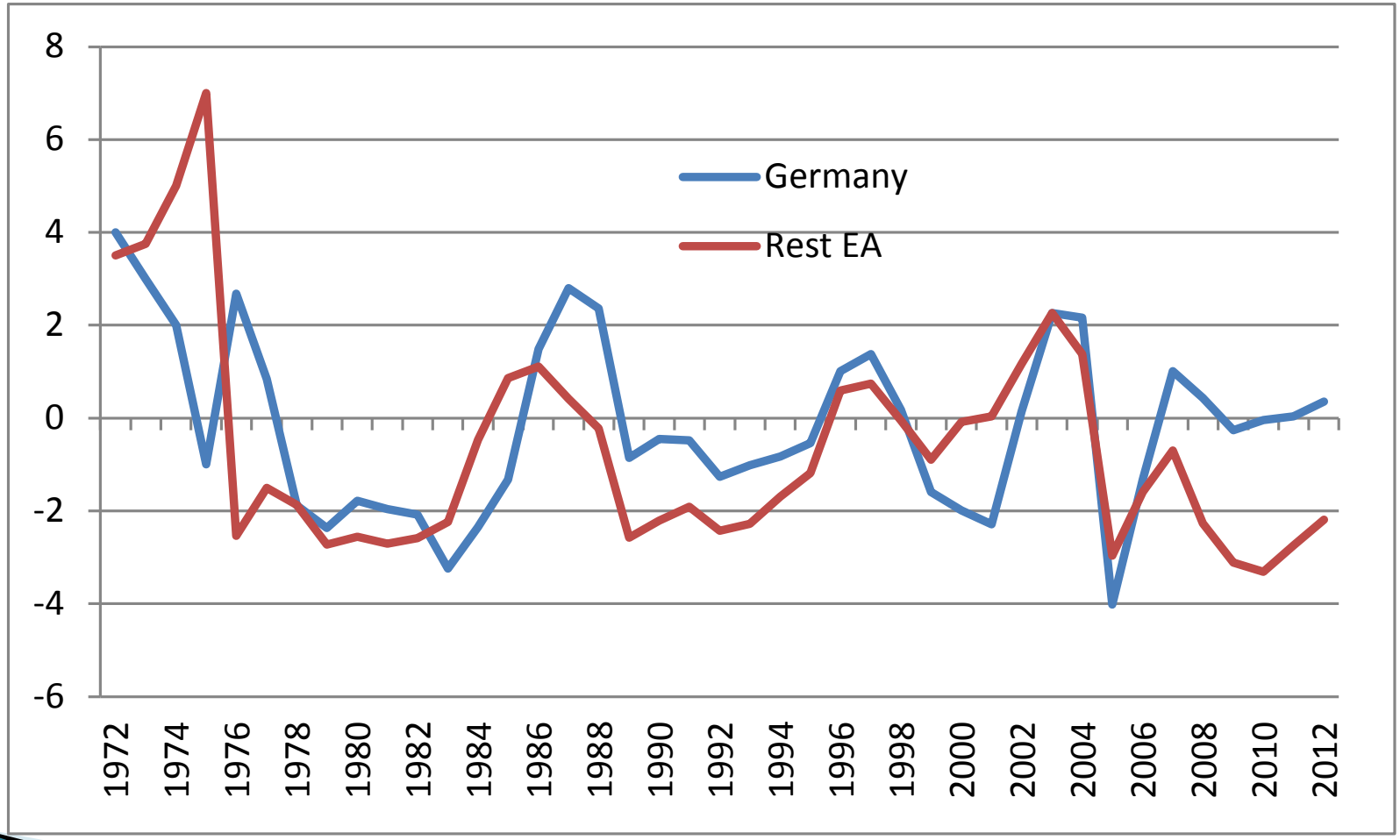
I prepared this presentation in a personal capacity and any views therein solely belong to me.

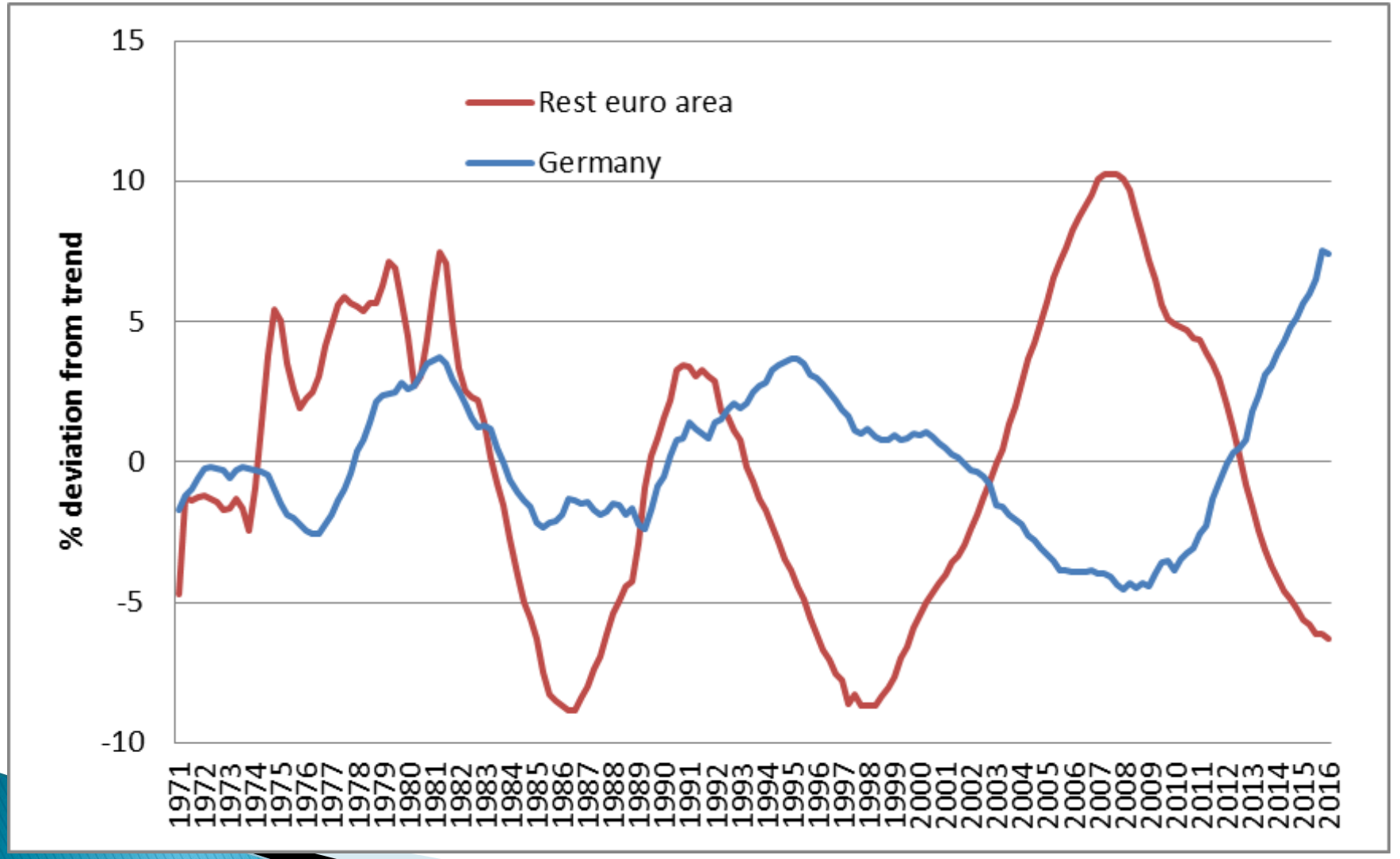
Main points

- Housing cycles were at the root of EMU's sovereign debt crisis
- Cyclical swings in house prices are getting bigger
- Macro-pru should focus on tax subsidies

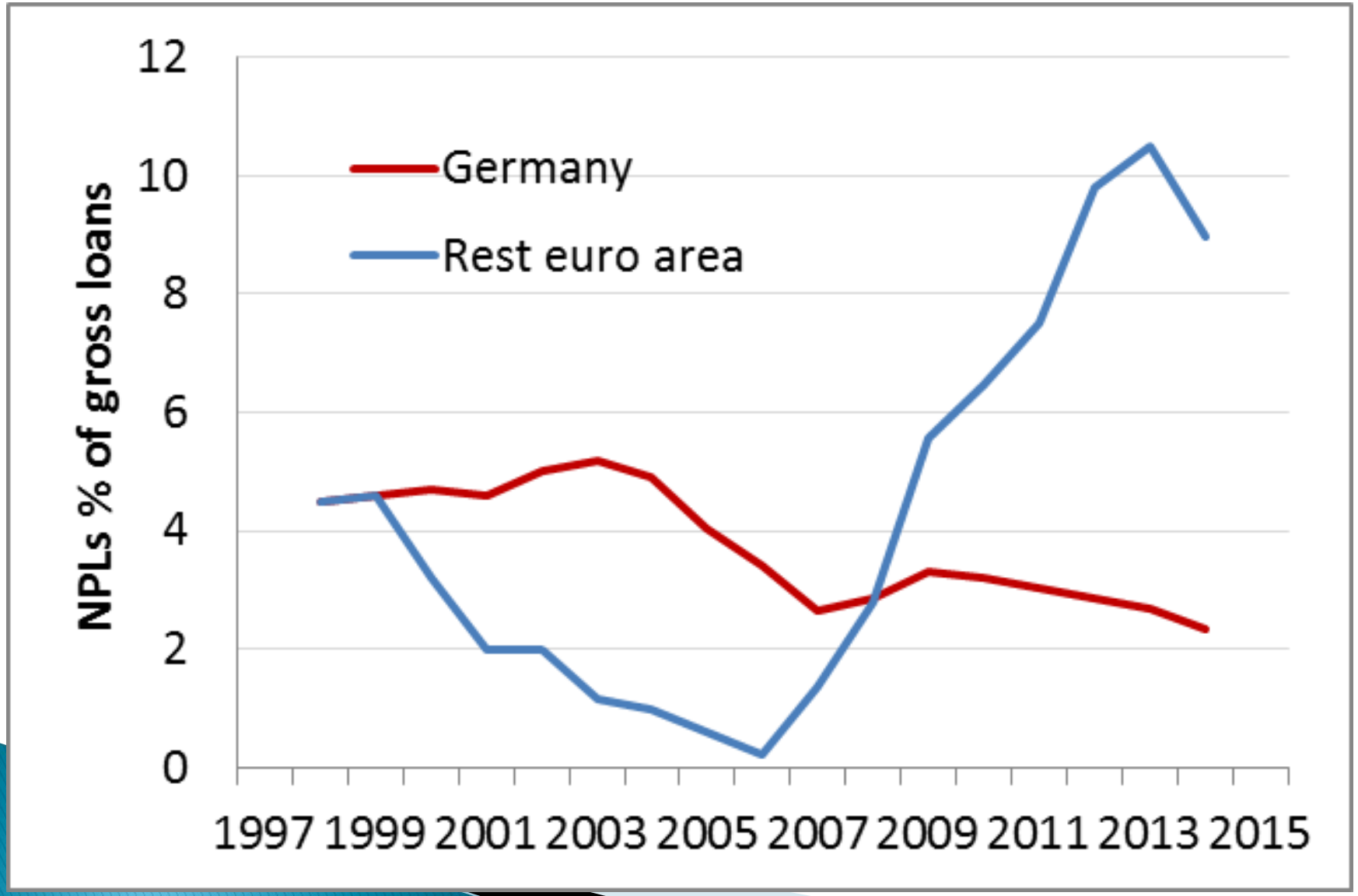
Output gaps are synchronised



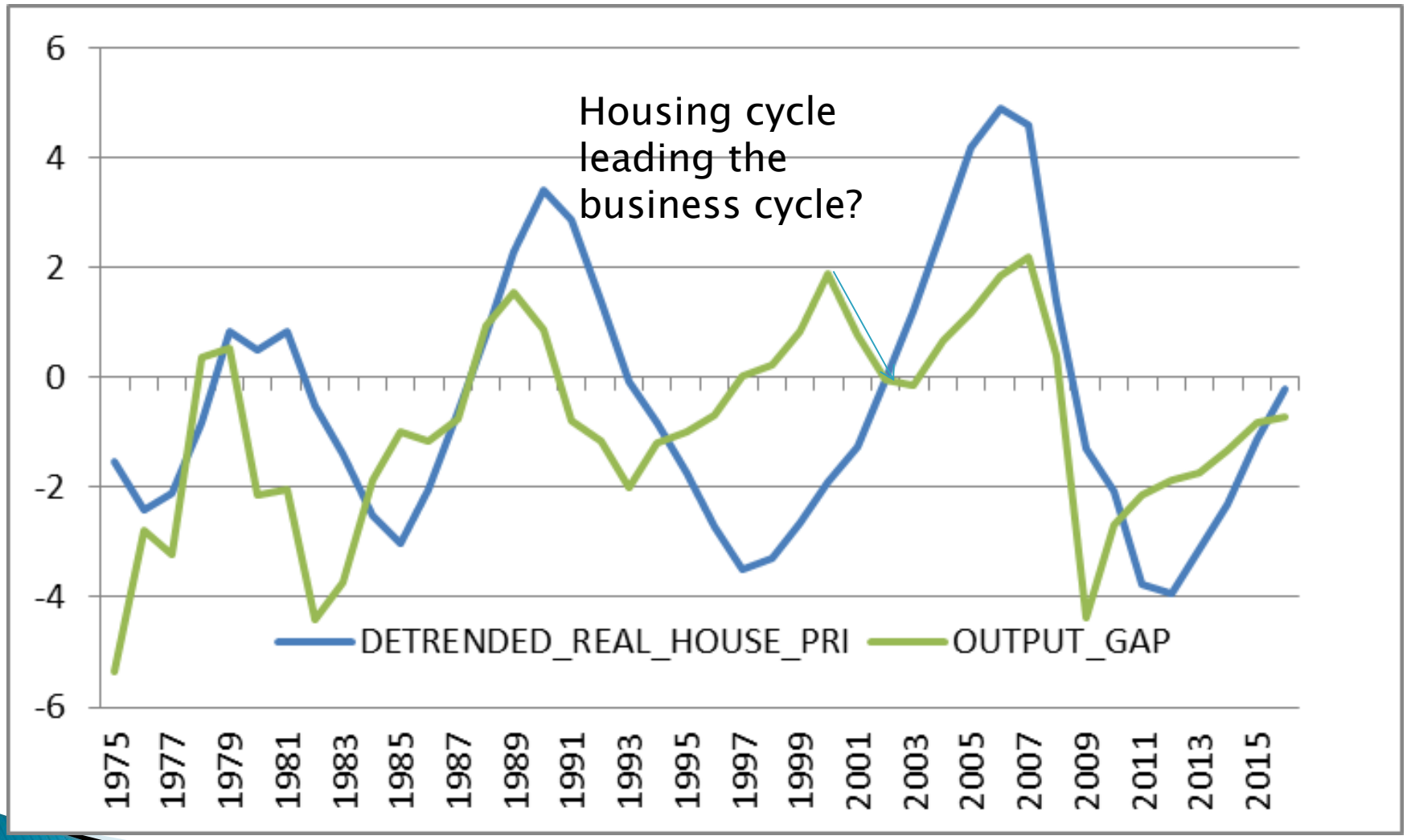
Housing markets not synchronised



This is reflected in diverging banking situations



Housing swings get bigger (G7 averages)



Why are housing swings getting bigger?

- Price expectations are adaptive: up when prices have been going up, down when they have been going down.
- The expected rate of change in house prices enters the demand for housing through two channels:
  1. Expected capital gains reduce user cost
  2. Better collateral eases credit constraints
- This may give rise to dynamic instability

A simple model

$$R(H) = \left[r(1 - t_{inc}) + t_{trans} + \delta - a\dot{P}_H / P_H\right]P_H$$

$$dR/dH < 0$$

Where:

H= housing stock

$R(H)$= marginal rental value of housing services

P_H= house price

r= interest rate

t_{inc} = income tax rate (deduction of mortgage interest)

t_{trans} = transaction tax rate (stamp duty)

δ= rate of depreciation

After re-arranging:

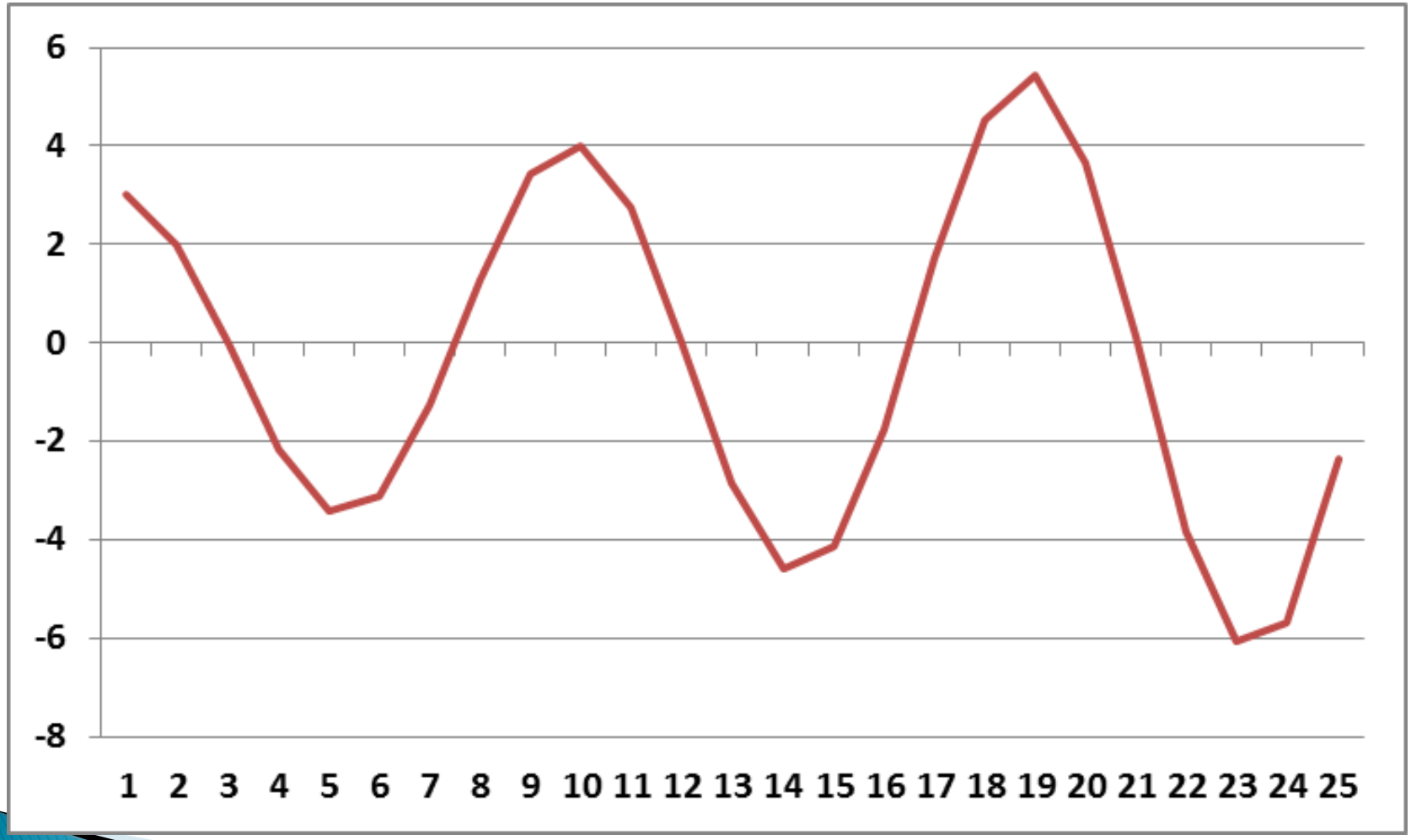
$$P_H = \frac{a\dot{P}_H + R(H)}{r(1 - t_{inc}) + t_{trans} + \delta}$$

This means that the higher t_{inc} and the lower t_{trans}, the greater will be the risk of dynamic instability.

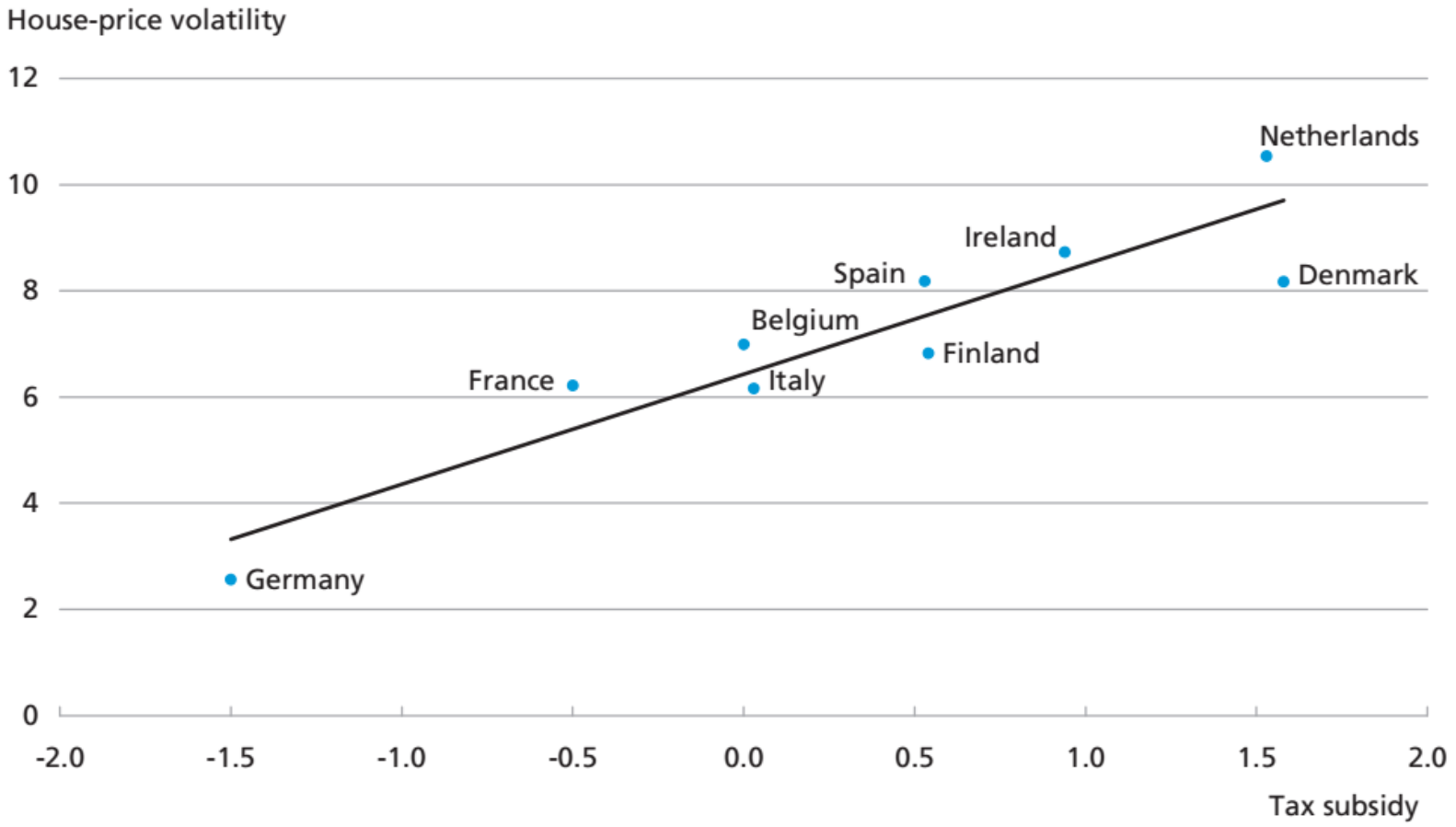
Estimation

Dependent Variable: DETRENDED_REAL_HOUSE_PRI				
Method: Least Squares				
Date: 11/01/16 Time: 20:05				
Sample (adjusted): 1978 2016				
Included observations: 39 after adjustments				
Variable	Coefficier	Std. Error	t-Statistic	Prob.
D(DETRENDED_REAL_HOUSE_PRI(-1))	0.514514	0.232505	2.212917	0.0337
D(DETRENDED_REAL_HOUSE_PRI(-2))	1.141711	0.237731	4.802532	0
GAPNASDAC(-1)	-1.78739	0.629024	-2.84153	0.0075
OUTPUT_GAP(-3)	0.435434	0.117669	3.700513	0.0008
C	0.056148	0.224862	0.249701	0.8043
R-squared	0.757943	Mean dependent v		-0.37408

Shock-response suggests dynamic instability



85% of the difference in house-price fluctuations across countries can be explained by tax treatment



Note: The tax subsidy for owner-occupied housing consumption is calculated in accordance with the tax rules and levels of interest rates in 1999. The regression line inserted is estimated using ordinary least squares ($R^2 = 0.847$).

Policy implications

- Reining in housing cycles necessary for:
  - Proper functioning of one-size-fits-all monetary policy in EMU
  - Reducing financial stability risks
  - Reducing intra-area imbalances
- Best way to tackle it is by reducing speculative behaviour
- Cutting tax subsidies/raising transaction tax for housing a promising instrument