

What drives the German current account? And how does it affect the other Euro Area member states?

Robert Kollmann (ECARES, Université Libre de Bruxelles & CEPR)

Marco Ratto (JRC, European Commission)

Werner Roeger (DG ECFIN, European Commission)

Jan in't Veld (DG ECFIN, European Commission)

Lukas Vogel (DG ECFIN, European Commission)

The views in the presentation are personal and should not be attributed to the European Commission.

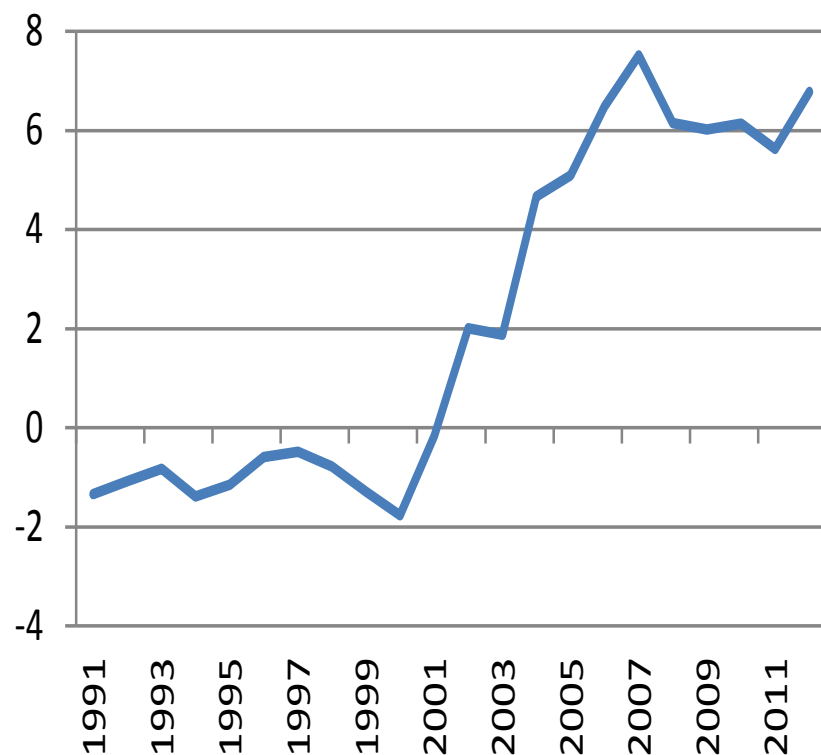
GERMAN (DE) current account since re-unification

Spectacular increase of CA surplus after launch of Euro (1999)

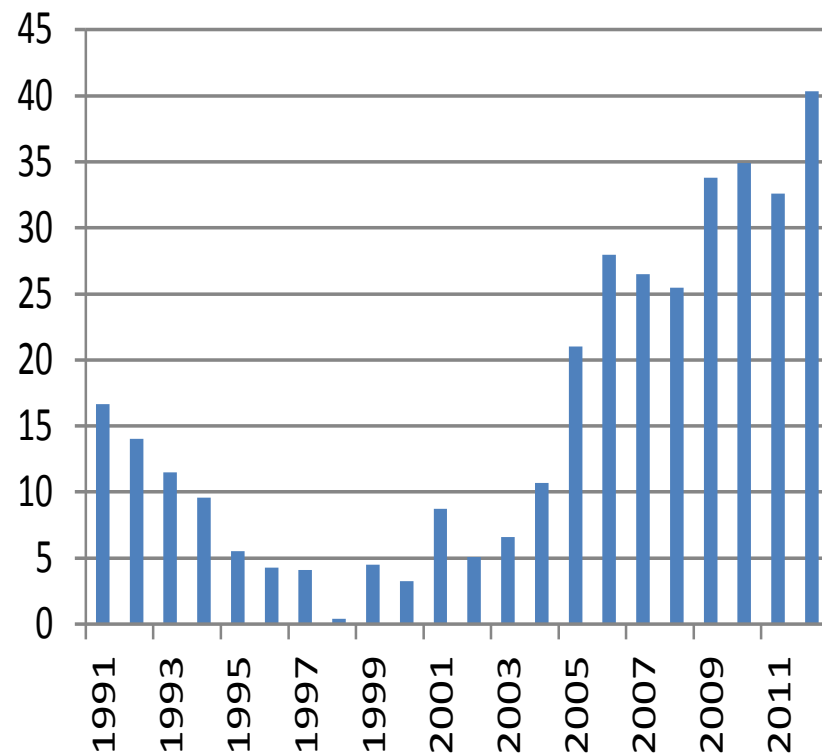
- slightly negative 1991-2000 (-1% GDP)
- strong rise 2002-2007 (+7.5% of GDP)
- stable 2008-12 (5%-6% of GDP)
- in same league as CAs of Japan & China

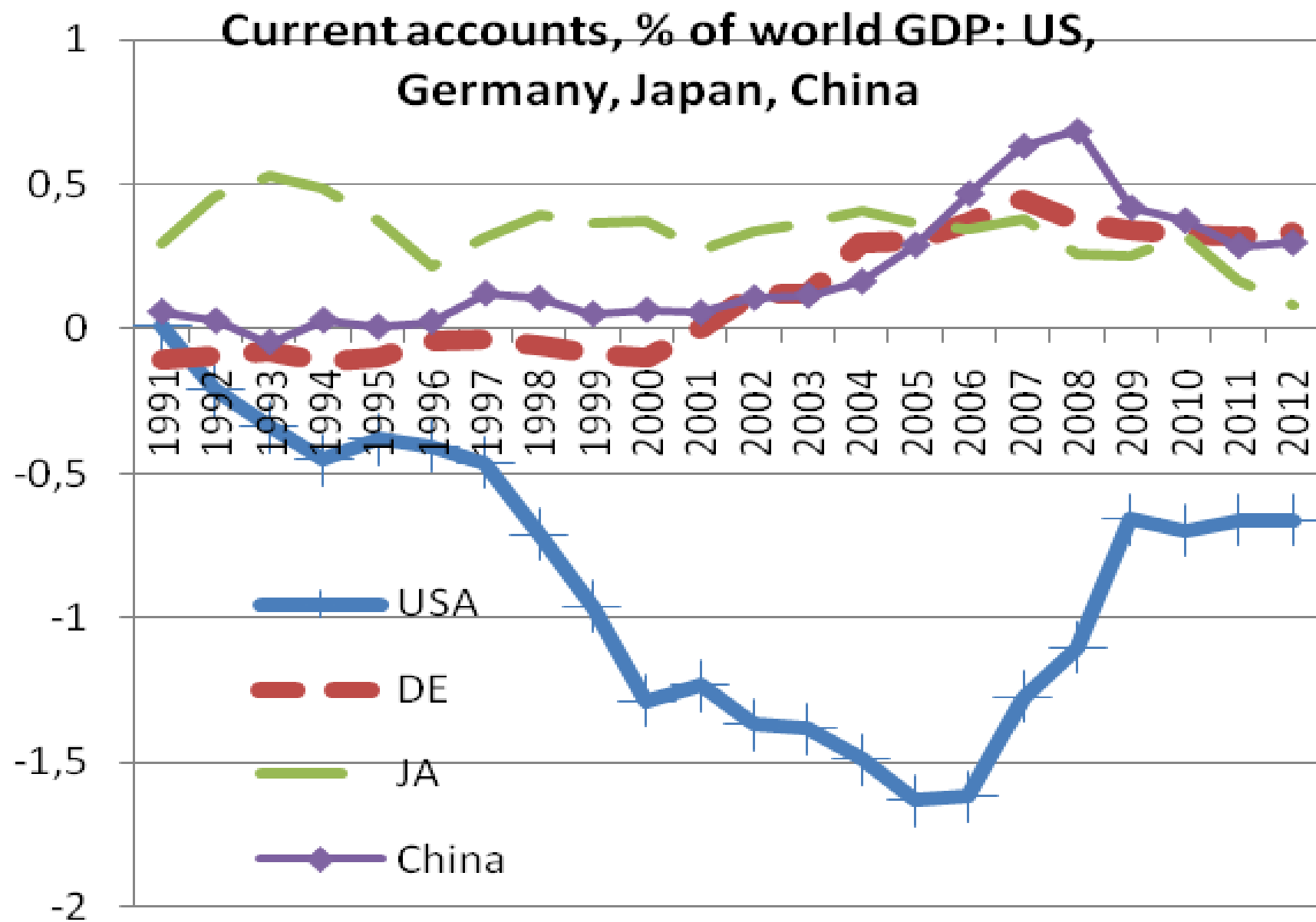
⇒ massive accumulation of Net Foreign Assets
(40% of GDP in 2012)

Current account (% of GDP)



NFA position (% of GDP)





- Policy debate:
 - ▶ Role of intra-EA external imbalances
 - ▶ Role of surplus countries in external adjustment

- Theory suggests
 - ▶ CA reflects domestic and foreign macroeconomic & financial shocks and structure of the domestic and foreign economies

 - ▶ Positive and normative evaluation of the CA:
need reliable quantitative DSGE model
for understanding of drivers
& transmission mechanisms

Contribution of paper:

- Develops and estimates 3-country DSGE model:
Germany (DE), Rest of Euro Area (REA),
Rest of the World (ROW)
- Housing market
- Government (distorting taxes)
- Nominal rigidities, financial frictions
- Demand & supply shocks in goods, labor, asset markets

Literature

- Analyses of CA in 2-country DSGE models

Yi (1993), Kollmann (1998), Erceg et al. (2006).

Calibrated (not estimated), no financial frictions,
no housing

- Jacob & Peersman (2013): estimated 2-country DSGE model of US CA: no financial frictions, no housing

Results:

German CA surplus driven by **succession** of shocks:

1) Increase in financial integration among EMU members \Rightarrow convergence of interest rates:

Rest of Euro Area interest rates \downarrow

DE interest rate \uparrow

\Rightarrow Investment in DE \downarrow ; Invest in Rest of EA \uparrow

2) Labor market reforms & wage restraint in DE

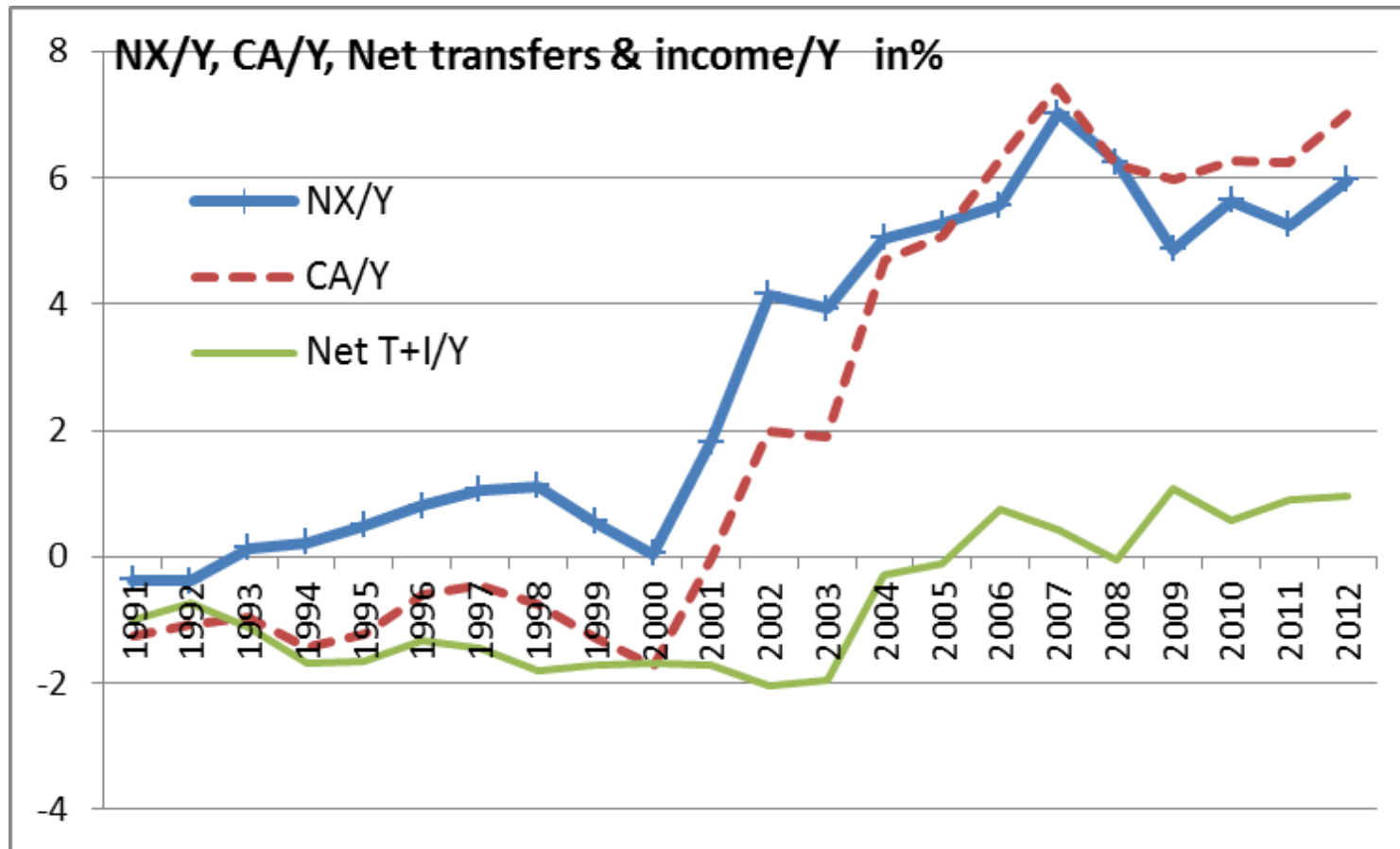
\Rightarrow DE competitiveness \uparrow

3) Growth in emerging economies: DE exports \uparrow

- **Shocks that drove the rise in German CA had a positive effect on GDP in Rest of Euro Area**
- Key shock transitory (or have transitory effect on CA): DE CA not likely to remain high
⇒ DE CA surplus is not 'structural'

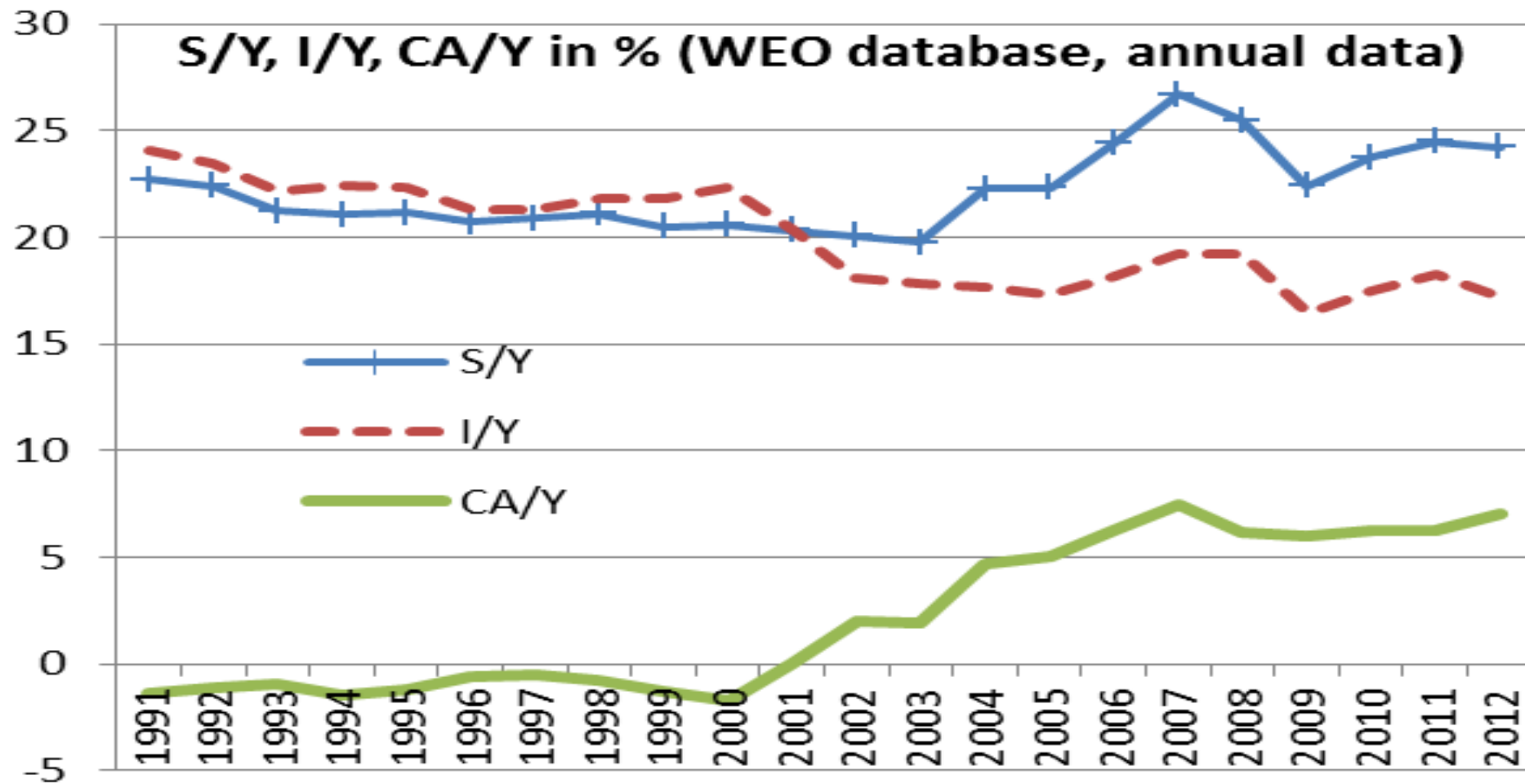
Facts

CA = trade balance + net transfers & income



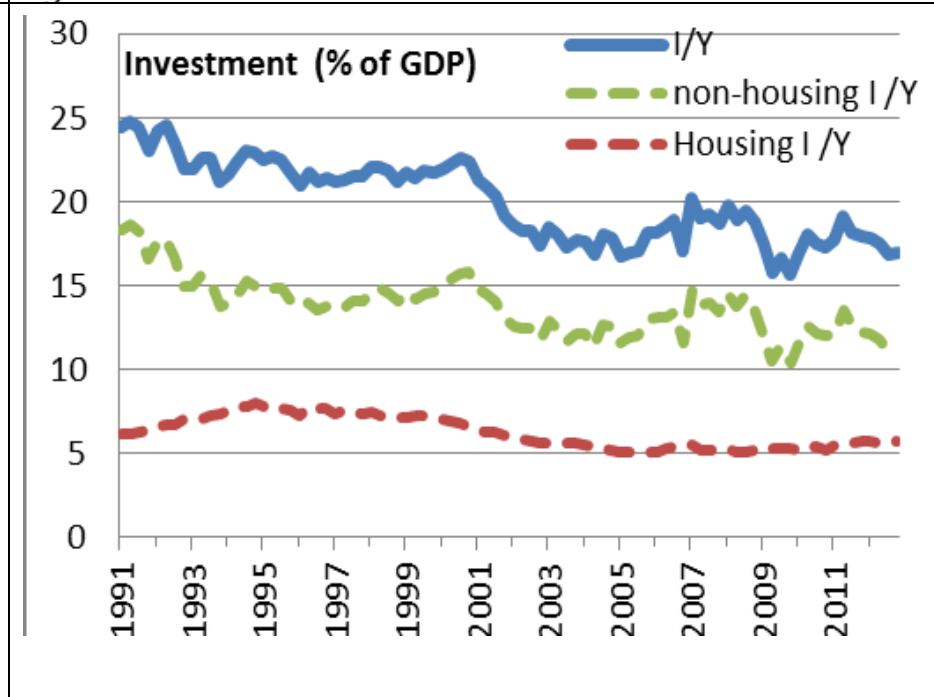
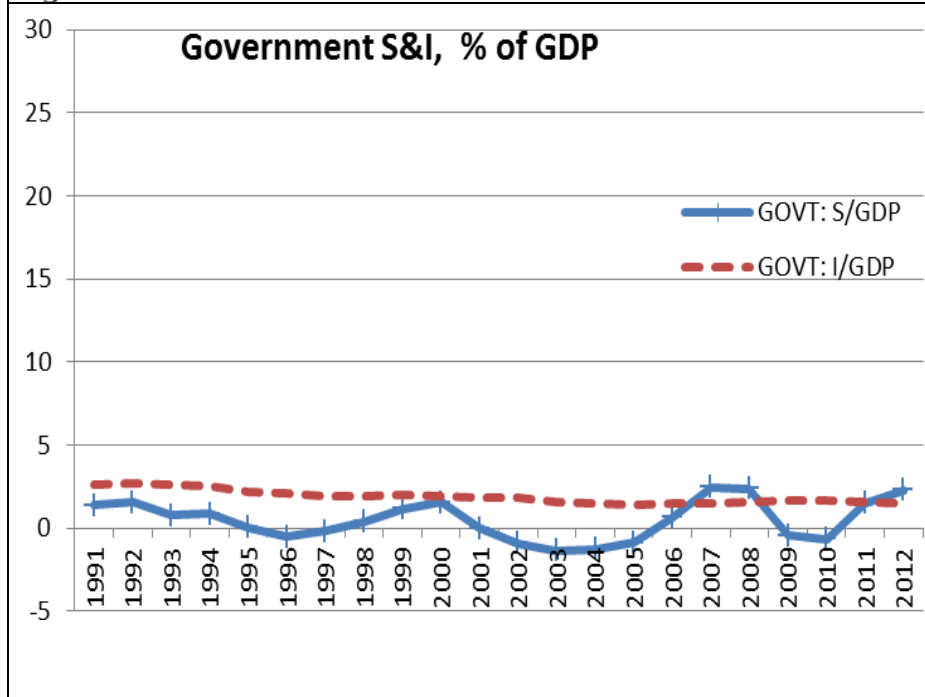
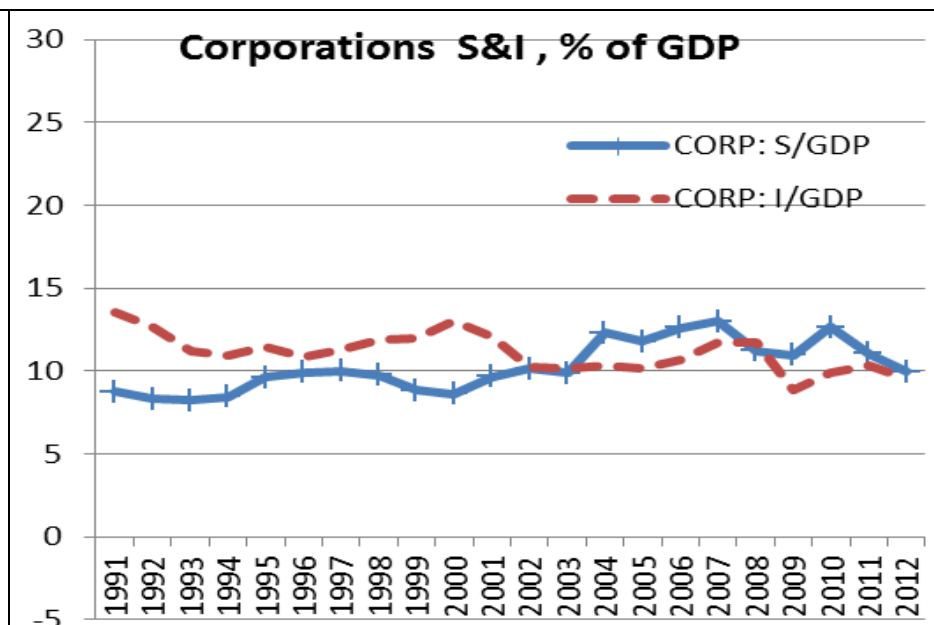
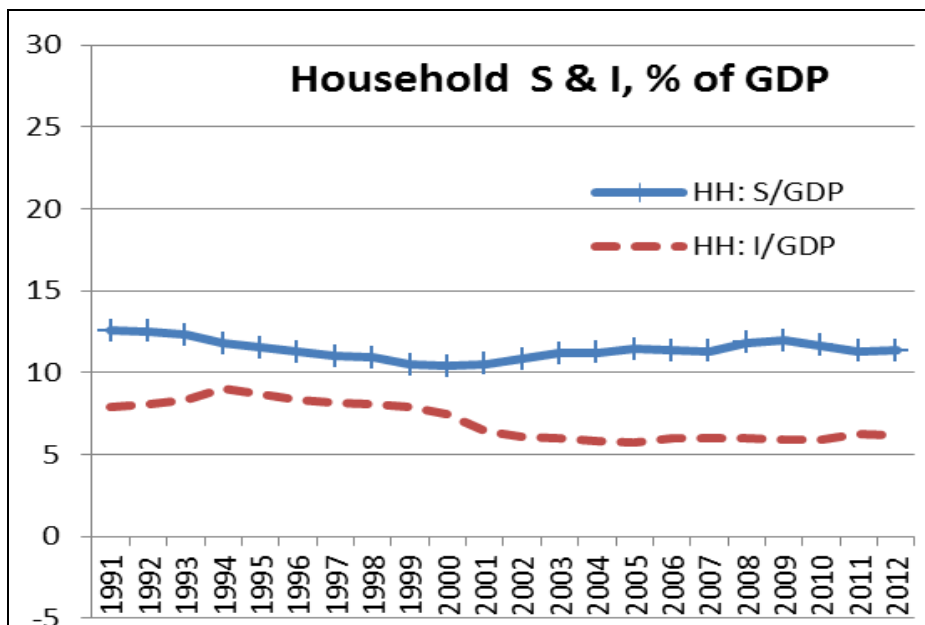
Close link between CA and TB dynamics

$$CA = S - I$$



S/Y: falls until 2003, then ↑

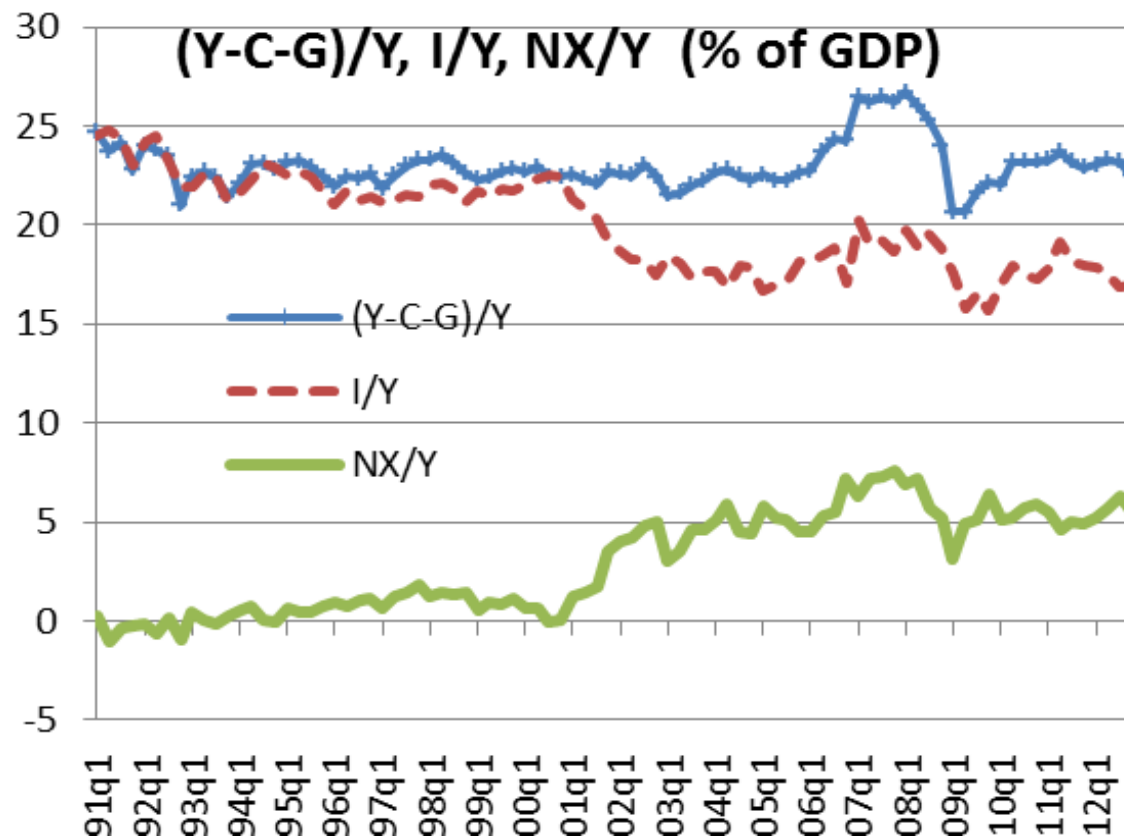
I/Y: trend ↓



Fall in I/Y : common to different sectors

Net Exports: $NX=Y-C-G-I$

$$NX/Y = (Y-C-G)/Y - I/Y$$



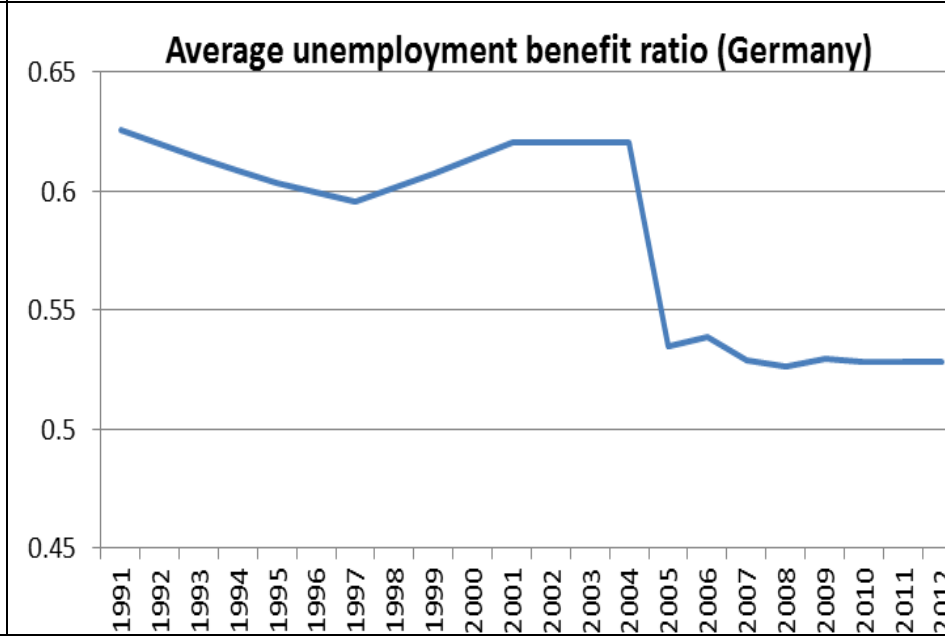
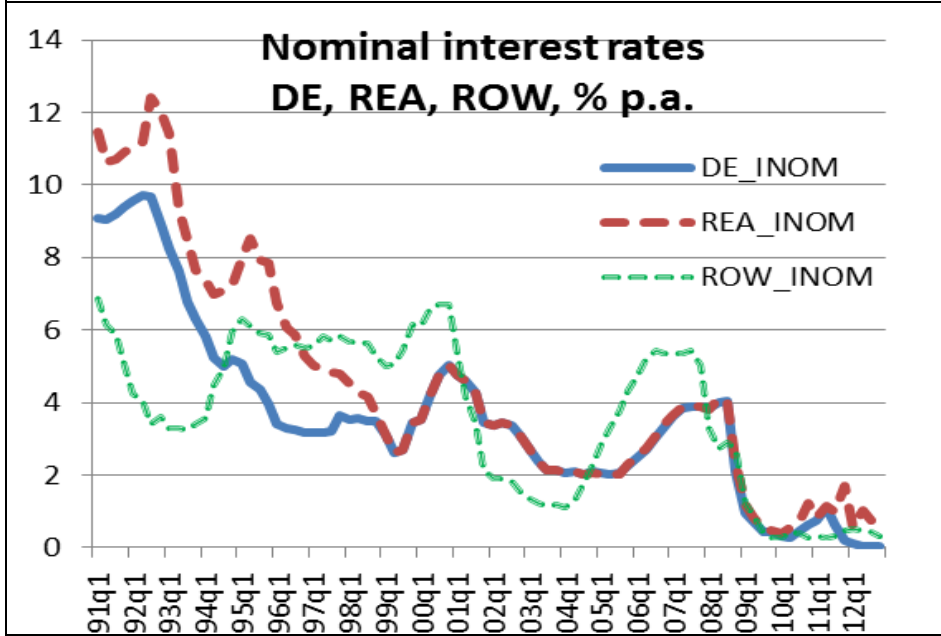
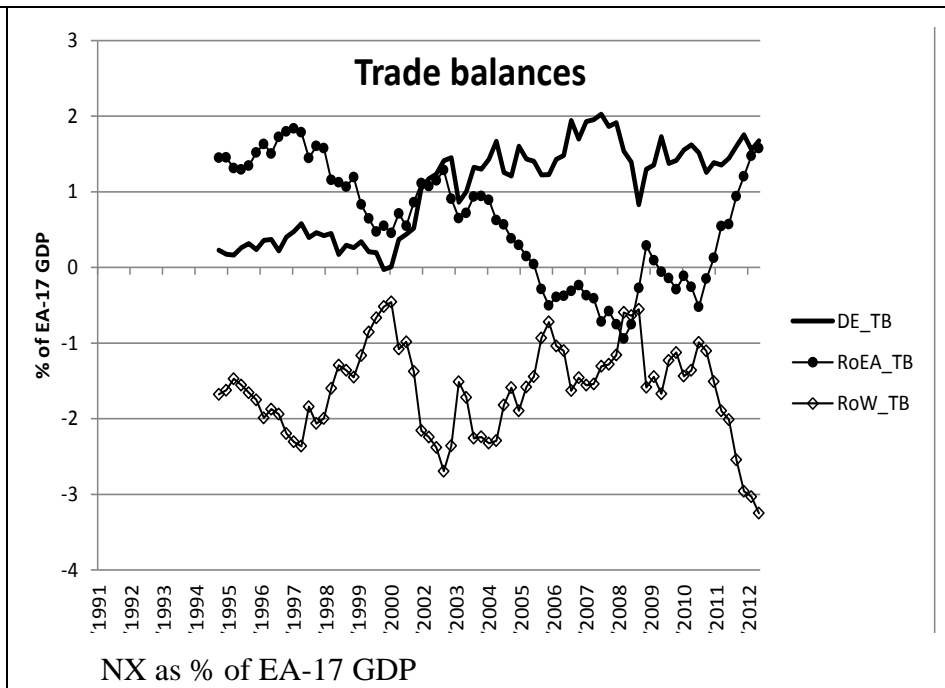
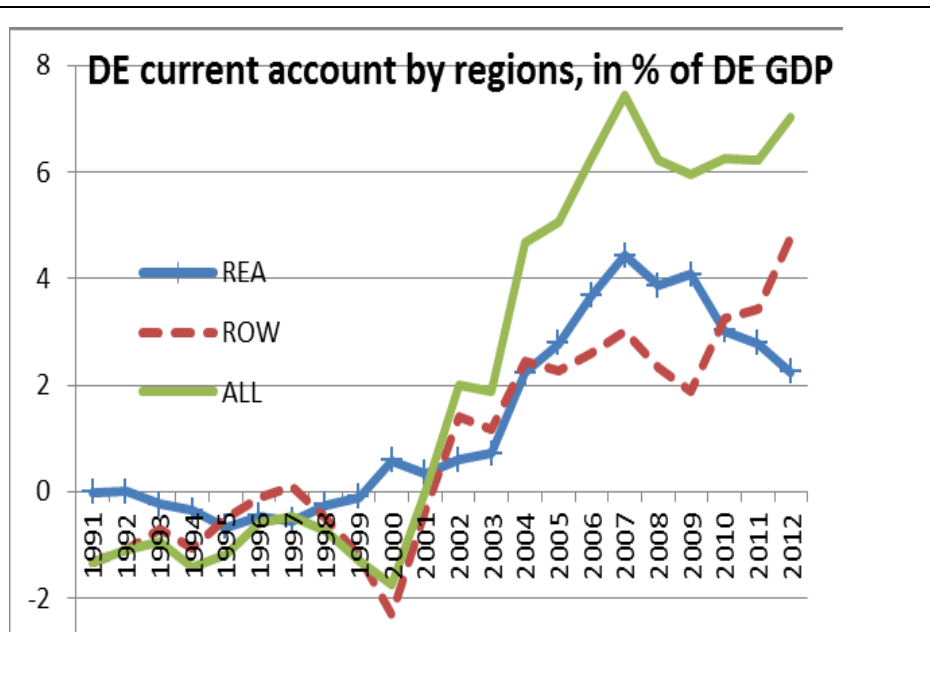
	Mean 1991-2000	Mean 2002-2012	Difference between mean 2002-2012 & mean 1991-2000
--	----------------	----------------	--

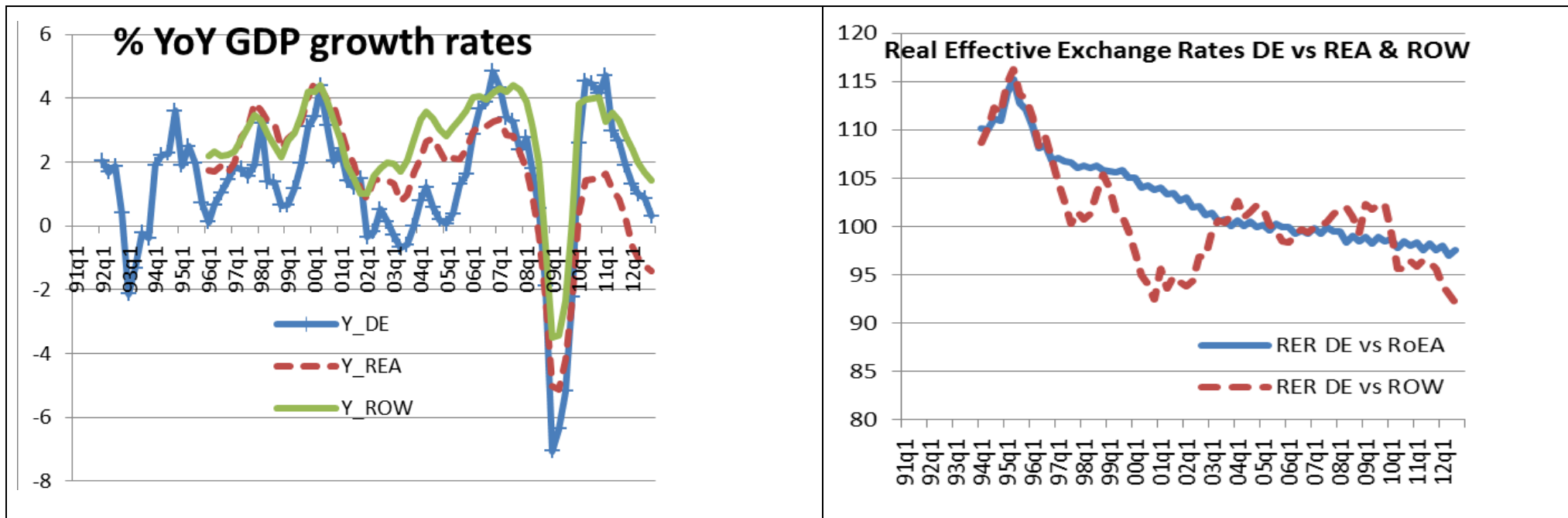
CA/Y	-1.1	5.3	6.4
NX/Y	0.5	5.3	4.8
(Net transfers & income)/Y	-1.6	-0.1	1.5
National S/Y	21.2	23.2	1.9
Household S/Y	11.5	11.4	-0.1
Corporation S/Y	9.1	11.4	2.4
Government S/Y	0.7	0.4	-0.4
National I/Y	22.3	17.9	-4.4
Household I/Y	8.2	6.0	-2.2
Corporation I/Y	11.9	10.3	-1.6
Government I/Y	2.2	1.6	-0.7
C/Y	57.9	57.8	-0.2
Housing I/Y	7.2	5.4	-1.8
Non-housing I/Y	15.1	12.5	-2.6
G/Y	19.3	19.0	-0.2

- **Decadal rise in CA/Y due to fall in I/Y**
- S/I matters for high frequency CA/Y fluctuations

STD of HP filtered variables:

S/Y	I/Y	CA/Y	Corr(S/Y,CA/Y)	Corr(I/Y,CA/Y)
1.32	0.99	1.30	0.71	-0.31



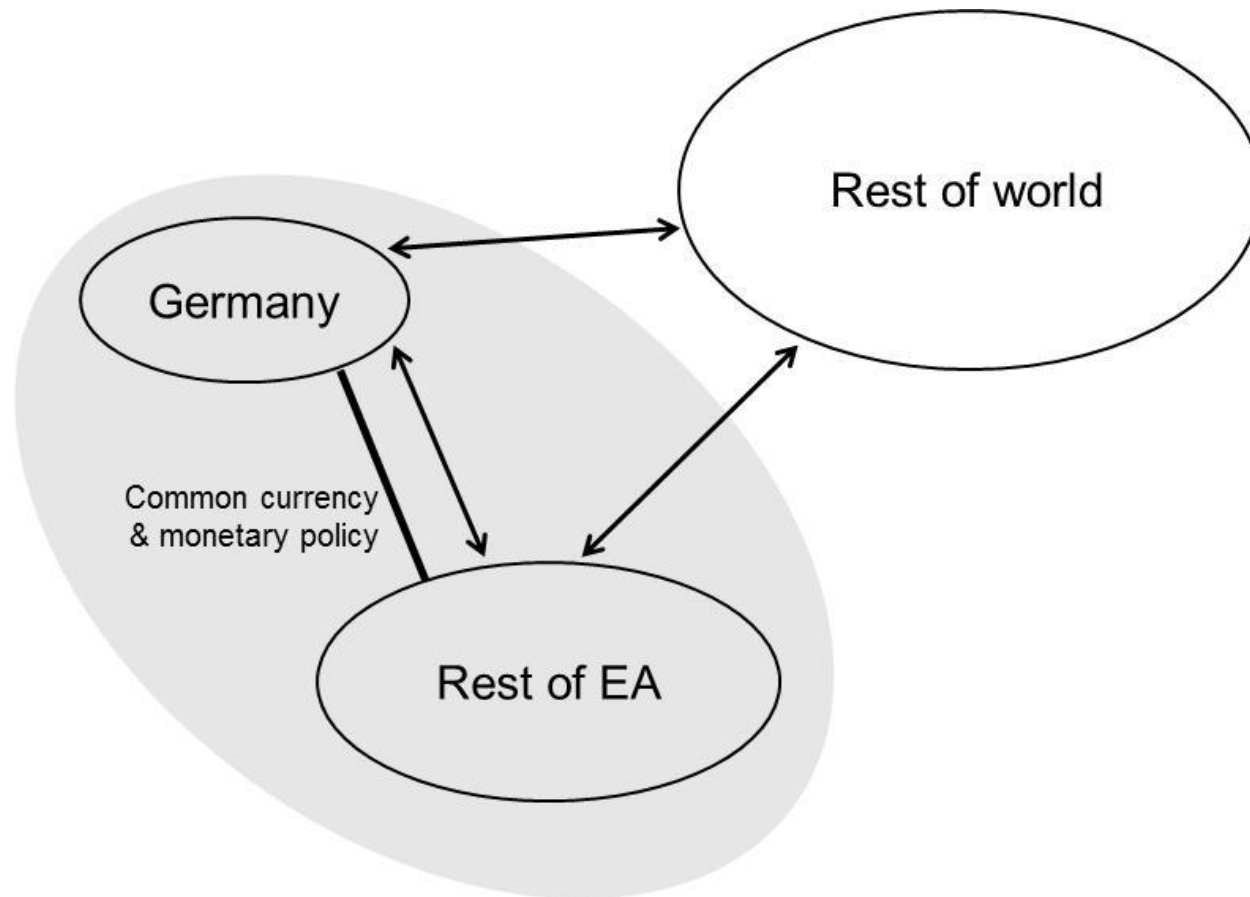


The Model

QUEST III: standard state-of-the-art open-economy DSGE model (Ratto et al. 2009)

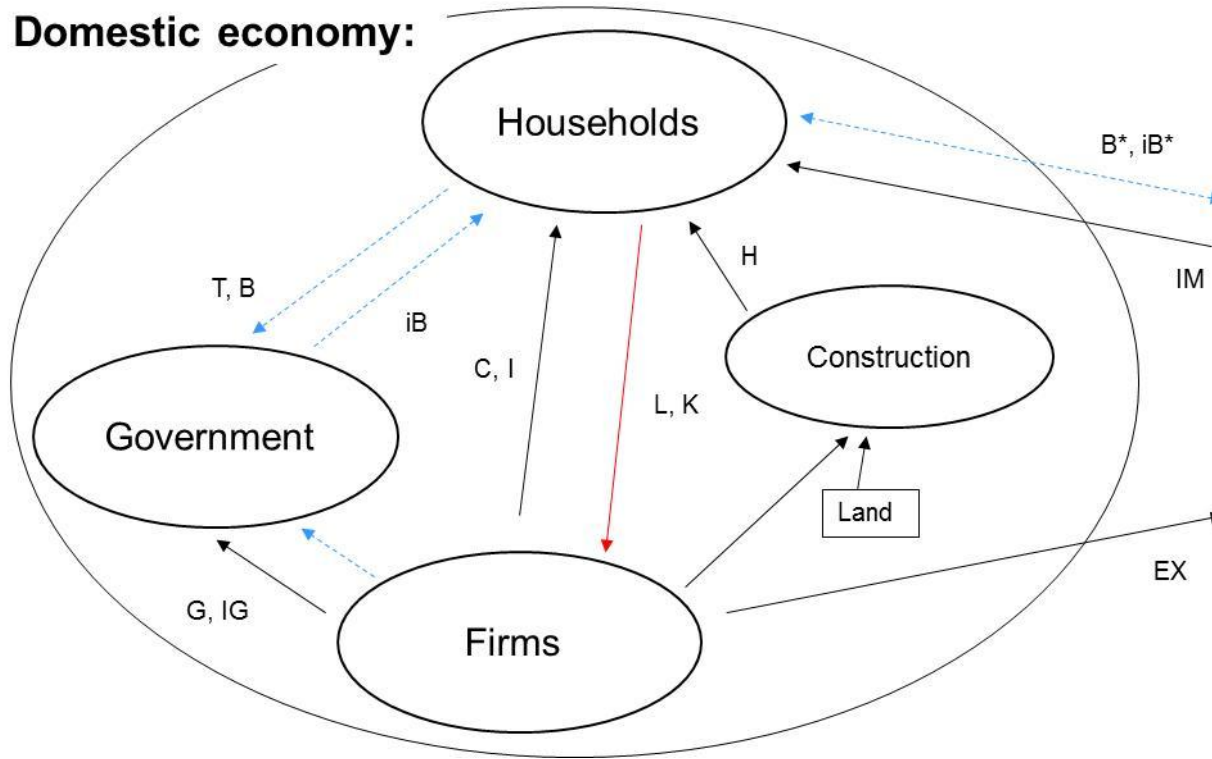
Estimation period: 1995q1-2012q4

● 3 regions (DE, REA, ROW)



● DE block

Domestic economy:



- Patient HH
- Impatient HH who face collateral constraint

$$(1 + r_t) B_t^c \leq \chi_t^c p_t^H H_{t-1}^c$$

Kiyotaki & Moore (1997), Iacoviello (2005)

● International financial market integration

Interest parity conditions with time-varying risk premia (ρ) linking DE, REA and ROW one-period nominal interest rates:

$$i_t^{DE} = i_t^{REA} + E_t \Delta \ln e_{t+1}^{DE, REA} + \rho_t^{DE, REA}$$

$$i_t^{EA} = i_t^{ROW} + E_t \Delta \ln e_{t+1}^{EA, ROW} + \rho_t^{EA, ROW}$$

$$i_t^{EA} = s^{DE} i_t^{DE} + (1 - s^{DE}) i_t^{REA}$$

$$\Delta \ln e_{t+1}^{EA, ROW} = s^{DE} \Delta \ln e_{t+1}^{DE, ROW} + (1 - s^{DE}) \Delta \ln e_{t+1}^{REA, ROW}$$

After 1999: $\Delta \ln e_{t+1}^{EA, ROW} = \Delta \ln e_{t+1}^{DE, ROW} = \Delta \ln e_{t+1}^{REA, ROW}$

Empirical measure of i_t^{ROW} is US federal funds rate, and EXR to ROW is EXR to USD.

$\rho_{\square}^{DE, REA}$ and $\rho_{\square}^{EA, ROW}$ are exogenous AR(1) processes.

Monetary policy in EMU: Taylor rule

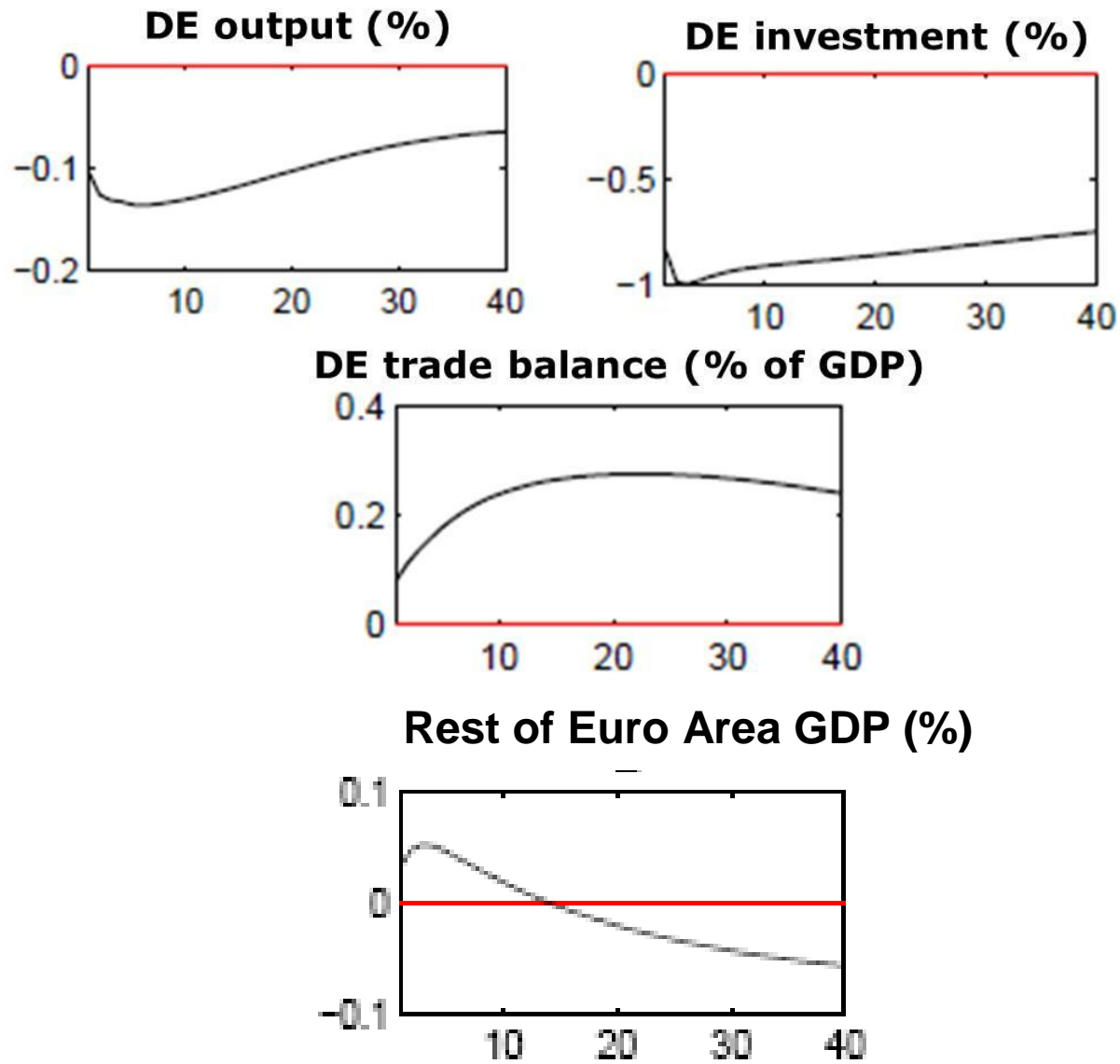
Results

Here, focus on 3 shocks that affected Germany during the estimation period:

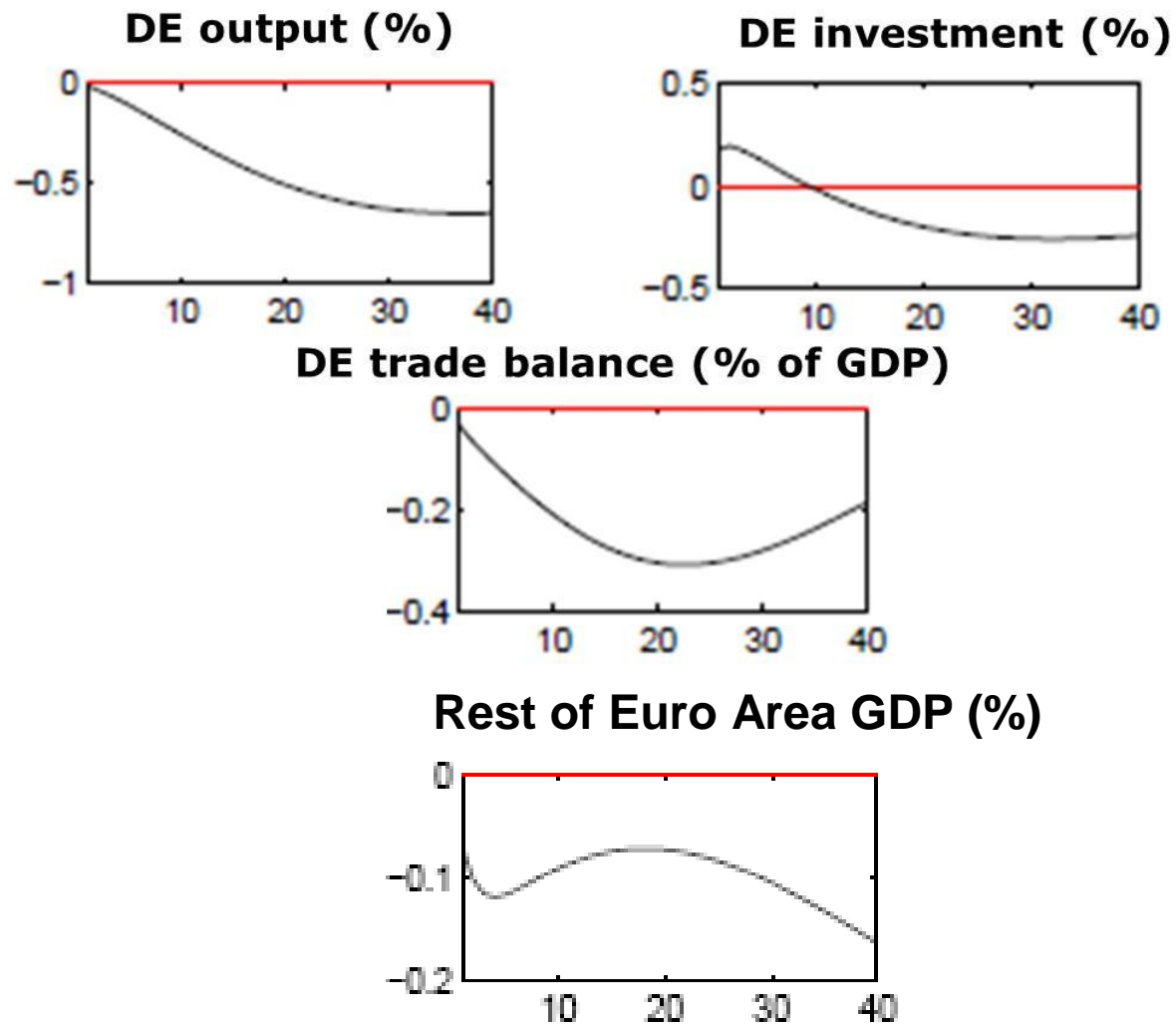
- Convergence of interest rates in EMU
- Labour market ('Hartz') reforms (reduction in benefit replacement rate)
- High foreign demand (increasing demand in REA and ROW)

● Convergence of DE & REA interest rates

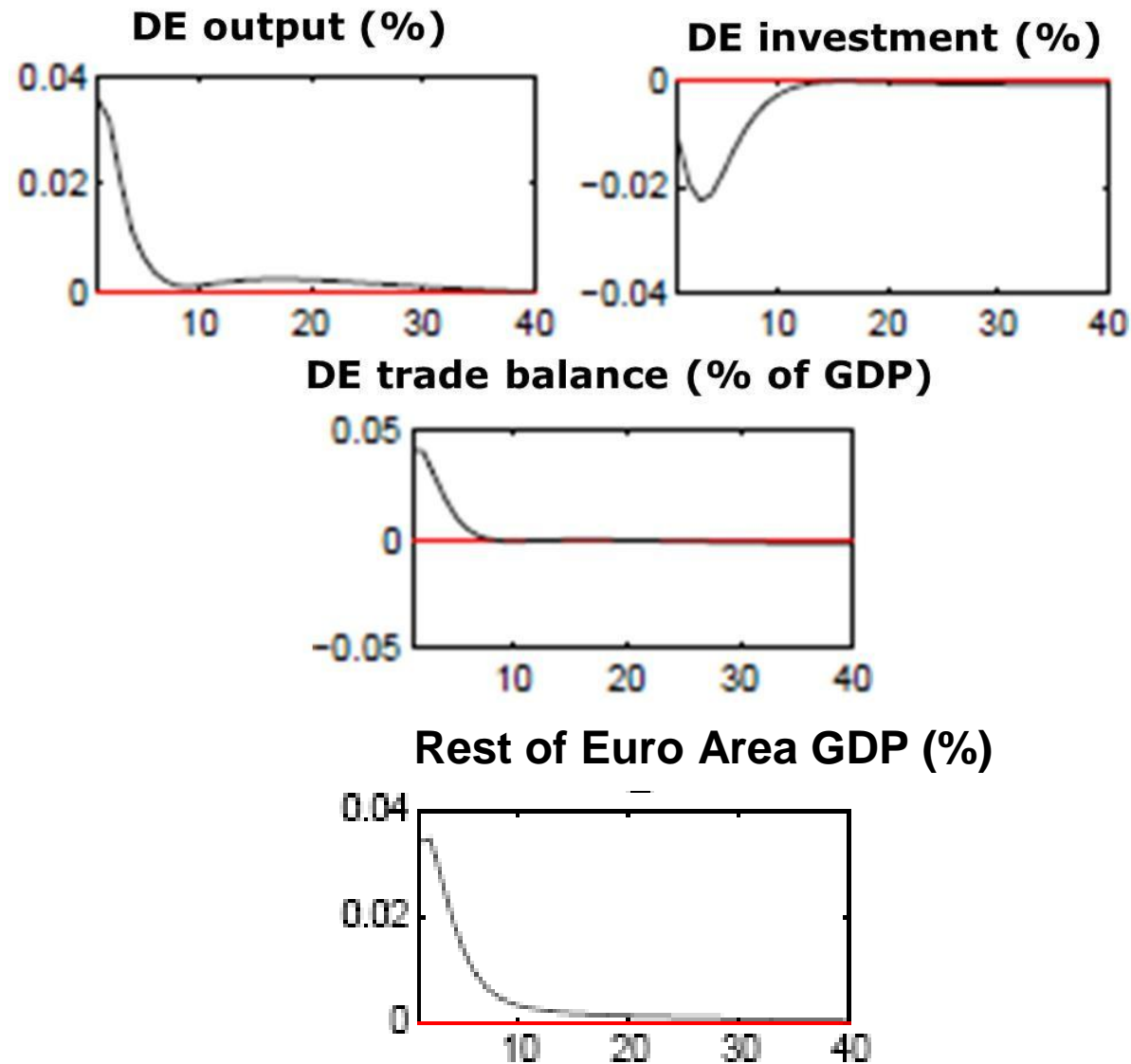
(Increase in DE vs. Rest of EA risk premium)



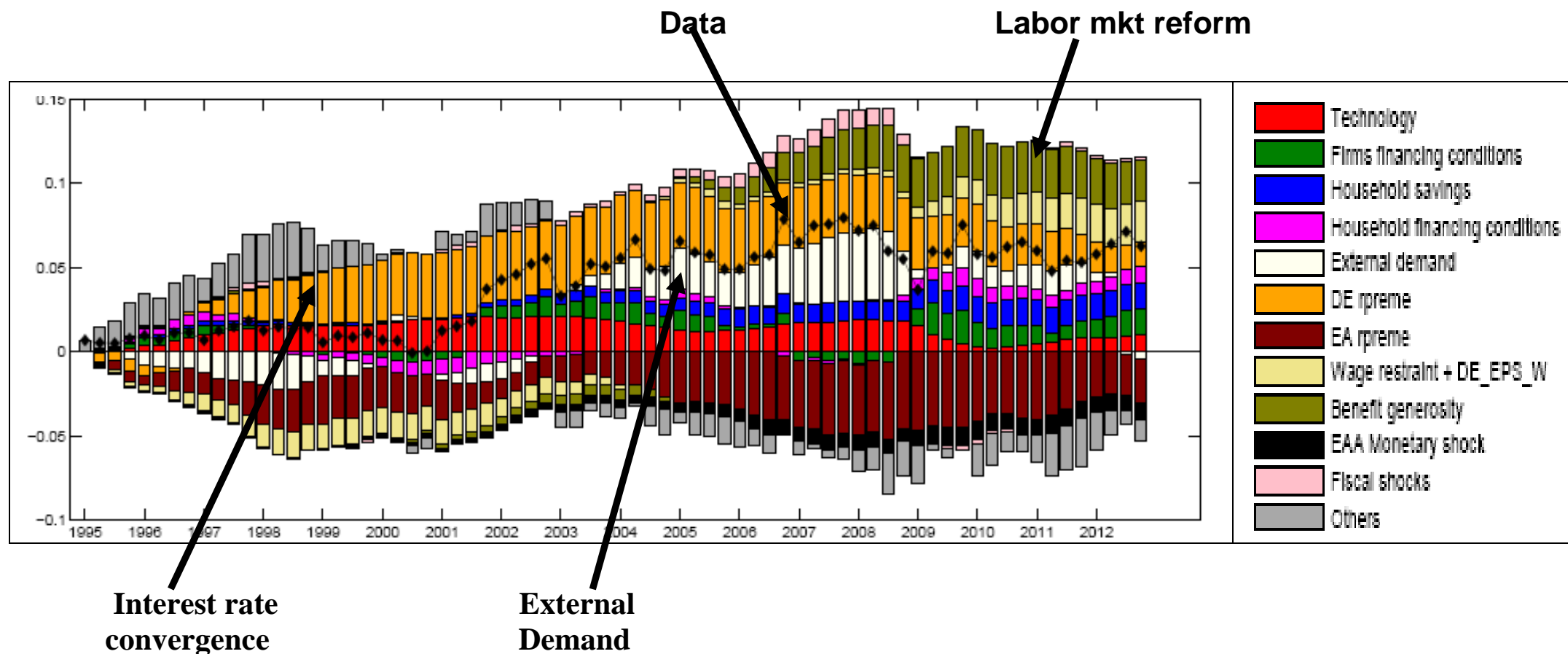
- **Higher benefit replacement rate
(reform: benefit reduction!)**



● Increasing foreign demand



Historical Decomposition: German Net Exports, as % of GDP



Trade balance (increase) 2001-2004:

- 1) Narrowing of interest rate gap within EA and Euro Depreciation**
- 2) Wage restraint in Germany starting around 2000**
- 3) Negative shock to Investment (firm financing conditions)**
- 4) Negative shock to household financing conditions**

Trade balance (remains high)2004-2008:

- 1) Rising world demand (increases TB)**
- 3) From 2005: Hartz reform (increases TB via a rise in savings)**

Offset by:

- 2) Euro appreciation (reduces TB)**
- 3) Firm financing conditions improve (reduces TB)**

Trade balance (remains high) 2009-2012:

- 1) Wage restraint (increases TB)**
- 2) Euro depreciates (Euro crisis) (increases TB)**
- 3) Household and firm financing conditions**

Offset by:

- 1) Declining German interest rates**
- 2) Persistent negative TFP shock (declining savings via declining GDP)**

Conclusions

- Increase of the German trade balance 2000-2003 cannot be attributed to a single shock.
- The persistently high German trade balance can be interpreted as a sequence of shocks that boosted the current account.
- Unless there are further shocks moving the trade balance upward we expect a gradual decline of the German current account surplus.