The Future of the Euro

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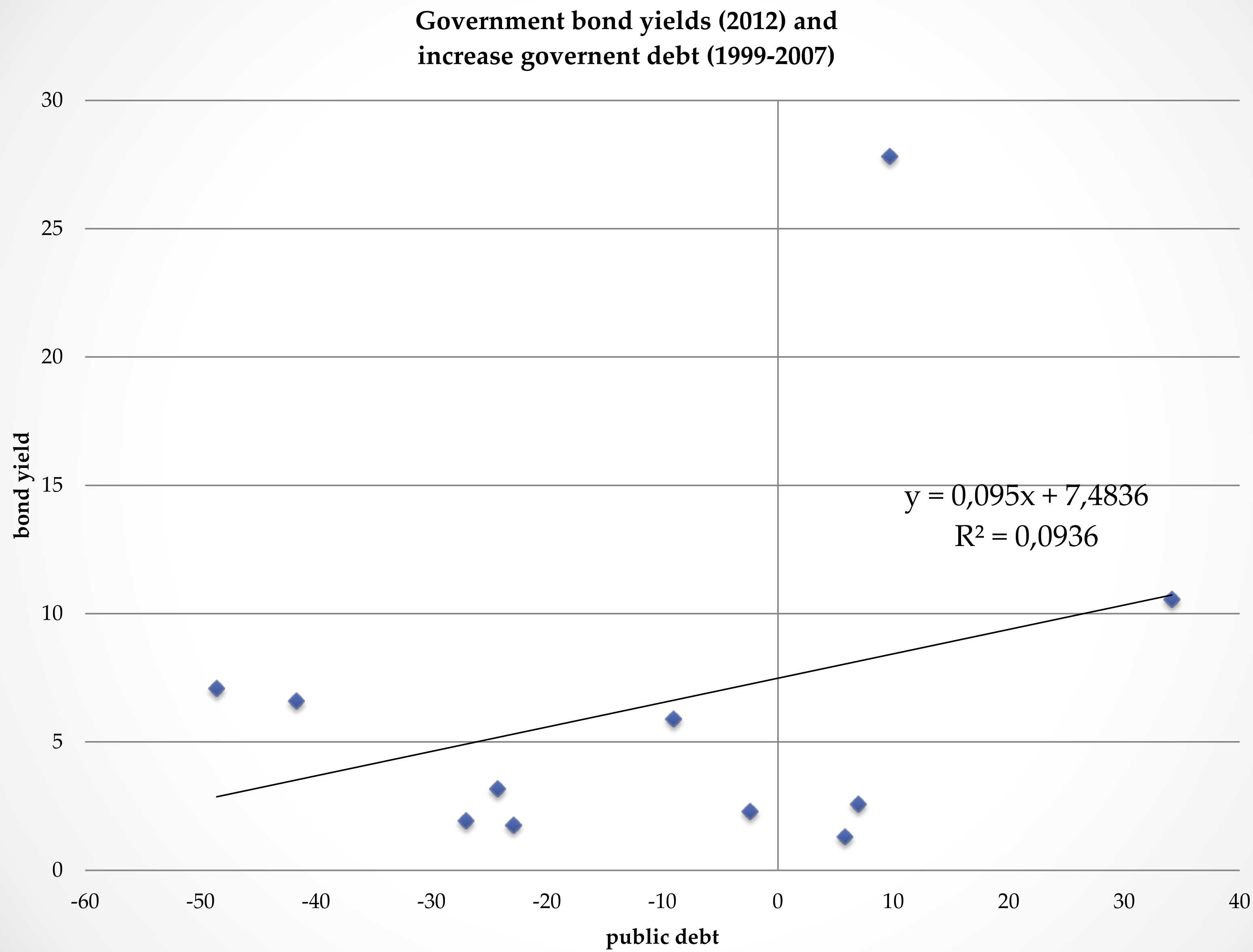
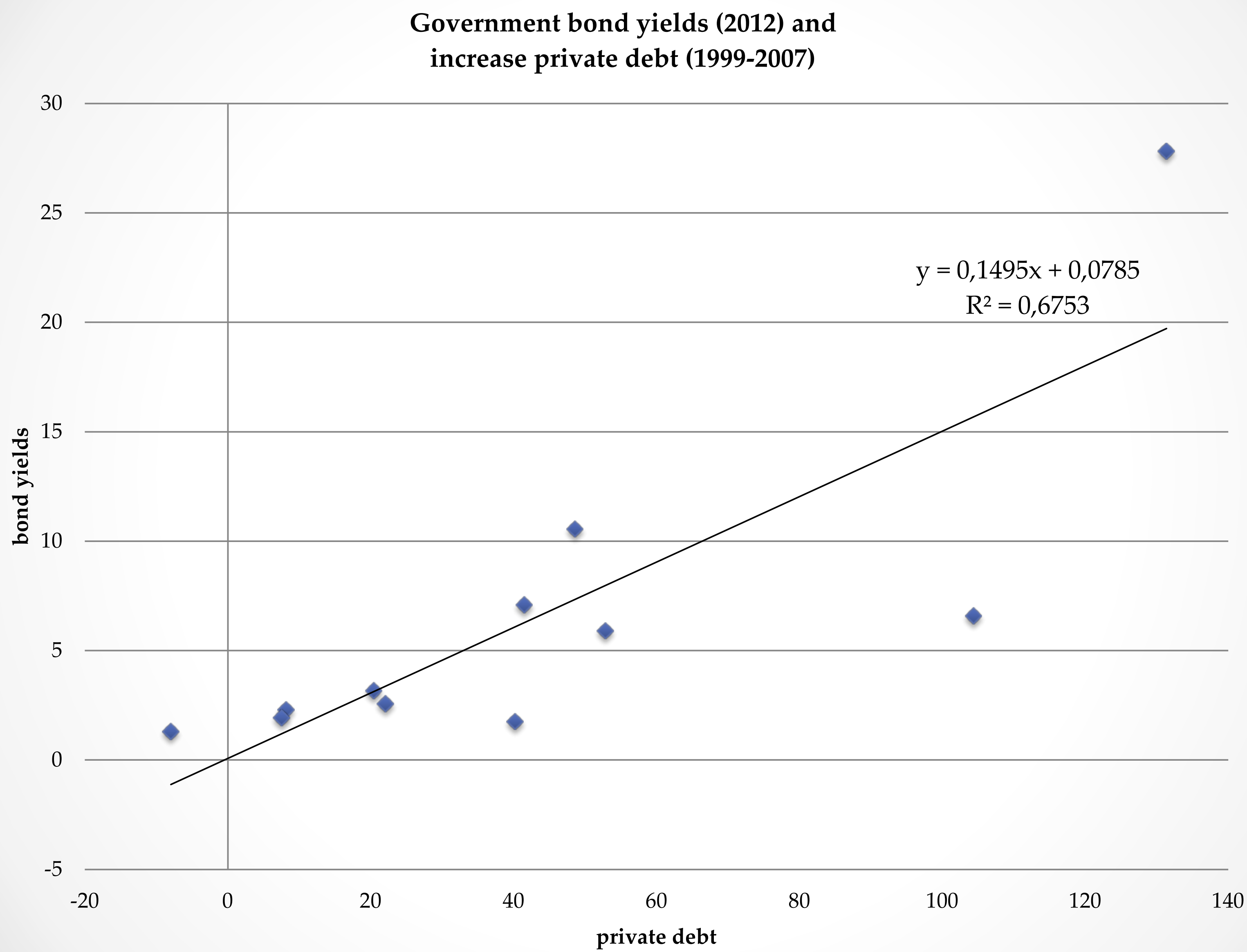
Outline of presentation

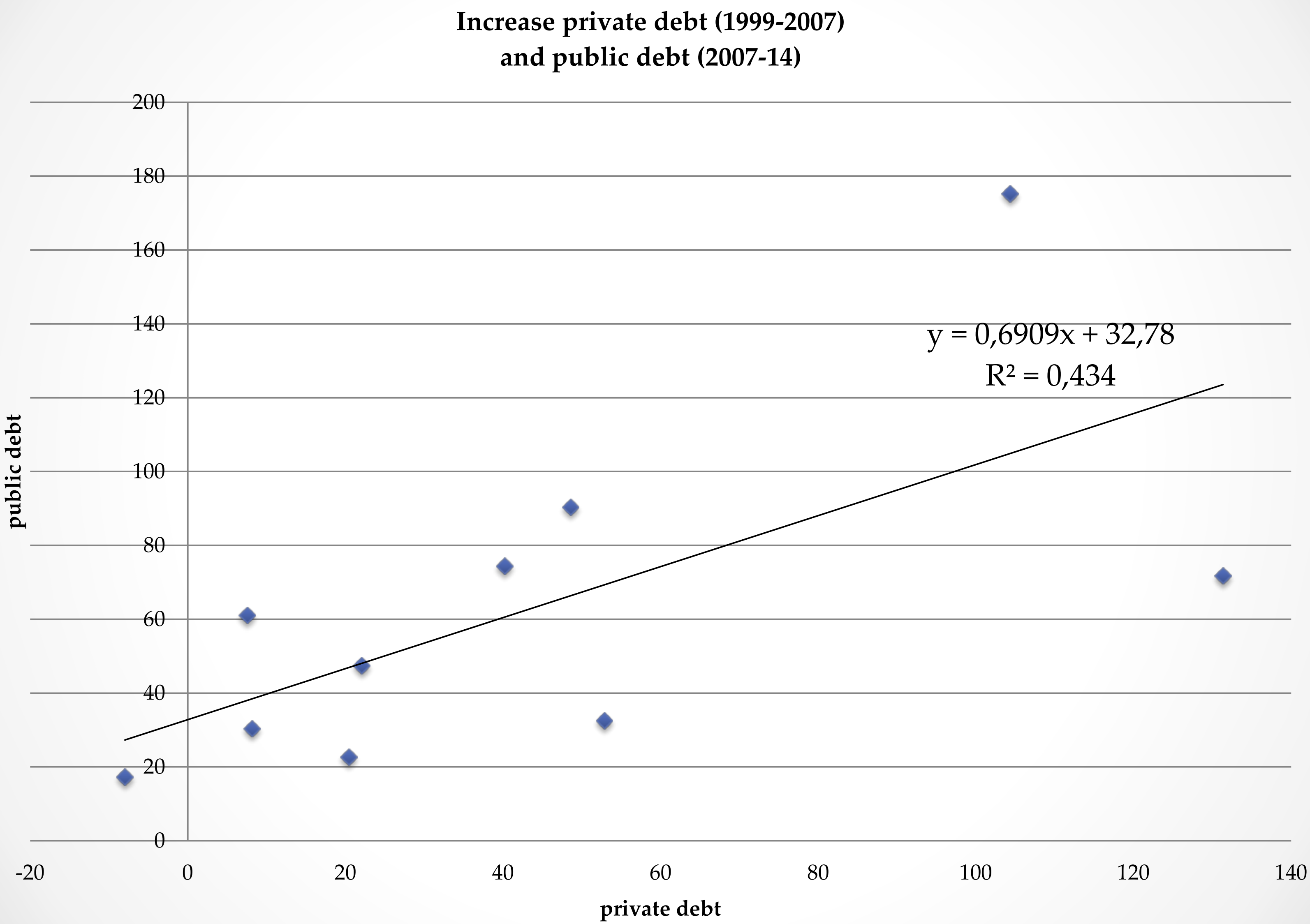
- Diagnosis of the crisis
- Legacy of the sovereign debt crisis: high debt and stagnation
- Design failures in the Eurozone
- Future of the Eurozone
    - Short-term: how to get out of stagnation
    - Long-term: redesigning the eurozone

Diagnosis of the crisis

- What explains sovereign debt crisis of 2010-12 better?
  - Public debt accumulation prior to crisis?
  - Or private debt accumulation prior to crisis?

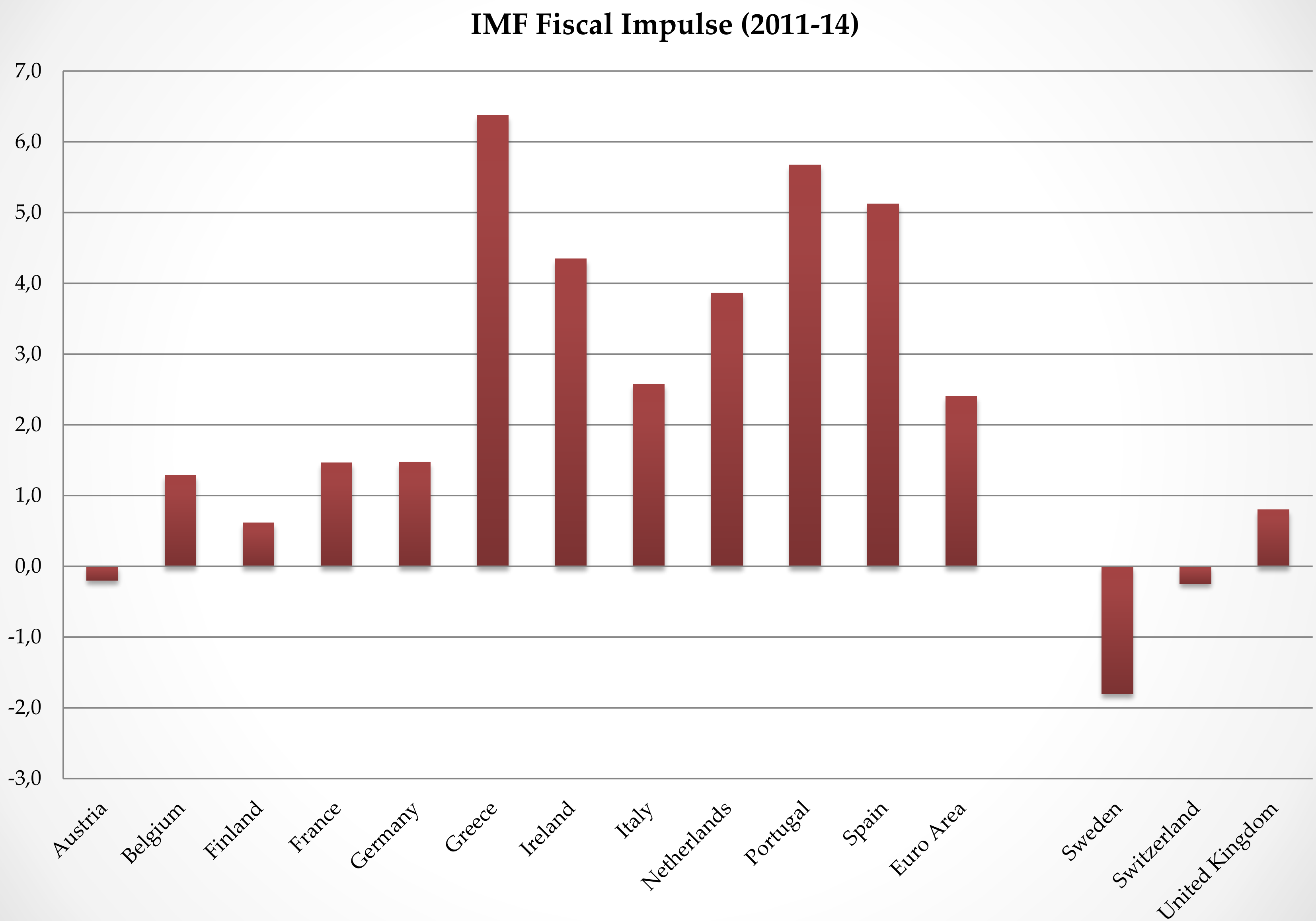

Government bond yields (2012) and
increase governent debt (1999-2007)
30
25
20
15
10
5
0
-60
-50
-40
-30
-20
-10
0
10
20
30
40
bond yield
public debt
y = 0,095x + 7,4836
R² = 0,0936


Government bond yields (2012) and
increase private debt (1999-2007)
y = 0,1495x + 0,0785
R² = 0,6753
bond yields
private debt
30
25
20
15
10
5
0
-5
-20
0
20
40
60
80
100
120
140

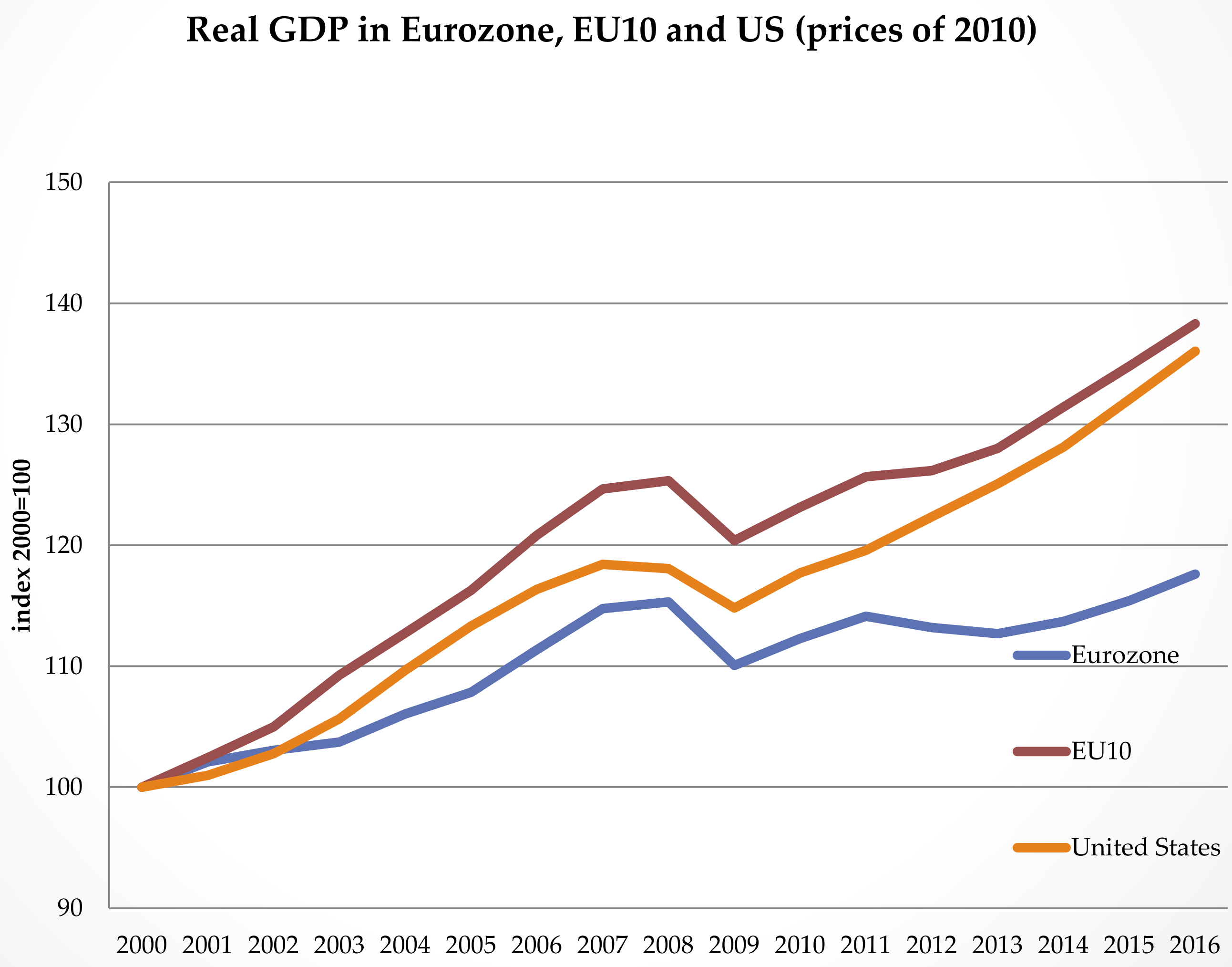


Increase private debt (1999-2007)
and public debt (2007-14)
200
180
160
140
120
100
80
60
40
20
0
-20
0
20
40
60
80
100
120
140
public debt
private debt
y = 0,6909x + 32,78
R² = 0,434

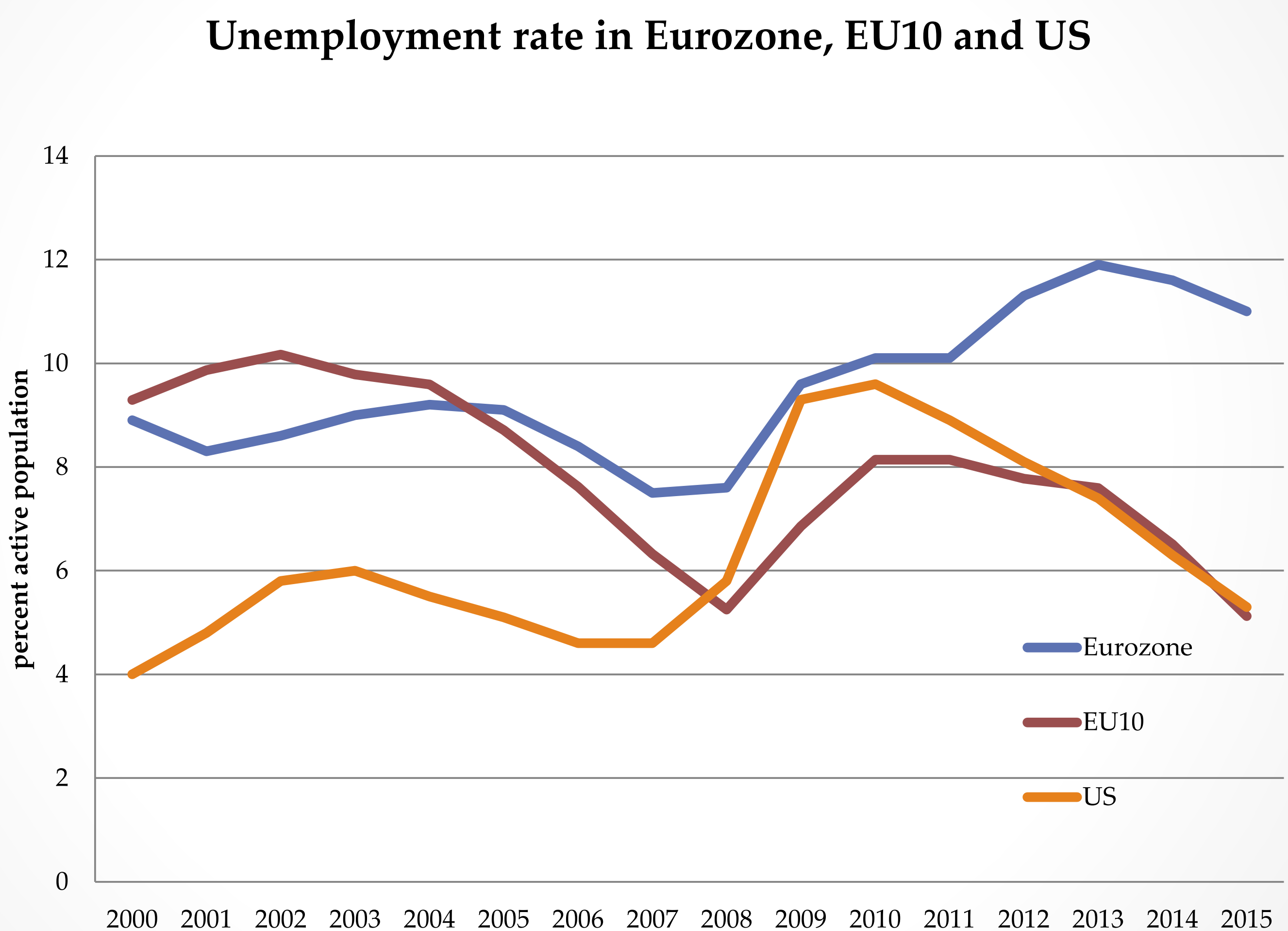
- We find that origin of crisis is a classical boom bust story
- However policies have been influenced by another diagnosis: it is governments' profligacy
- This has led to applying wrong medicine,
  - i.e. excessive austerity in periphery
  - without fiscal stimulus in center
- Result: economic stagnation in Eurozone


IMF Fiscal Impulse (2011-14)
7,0
6,0
5,0
4,0
3,0
2,0
1,0
0,0
-1,0
-2,0
-3,0
Austria
Belgium
Finland
France
Germany
Greece
Ireland
Italy
Netherlands
Portugal
Spain
Euro Area
Sweden
Switzerland
United Kingdom

Stagnation in Eurozone



Increasing unemployment

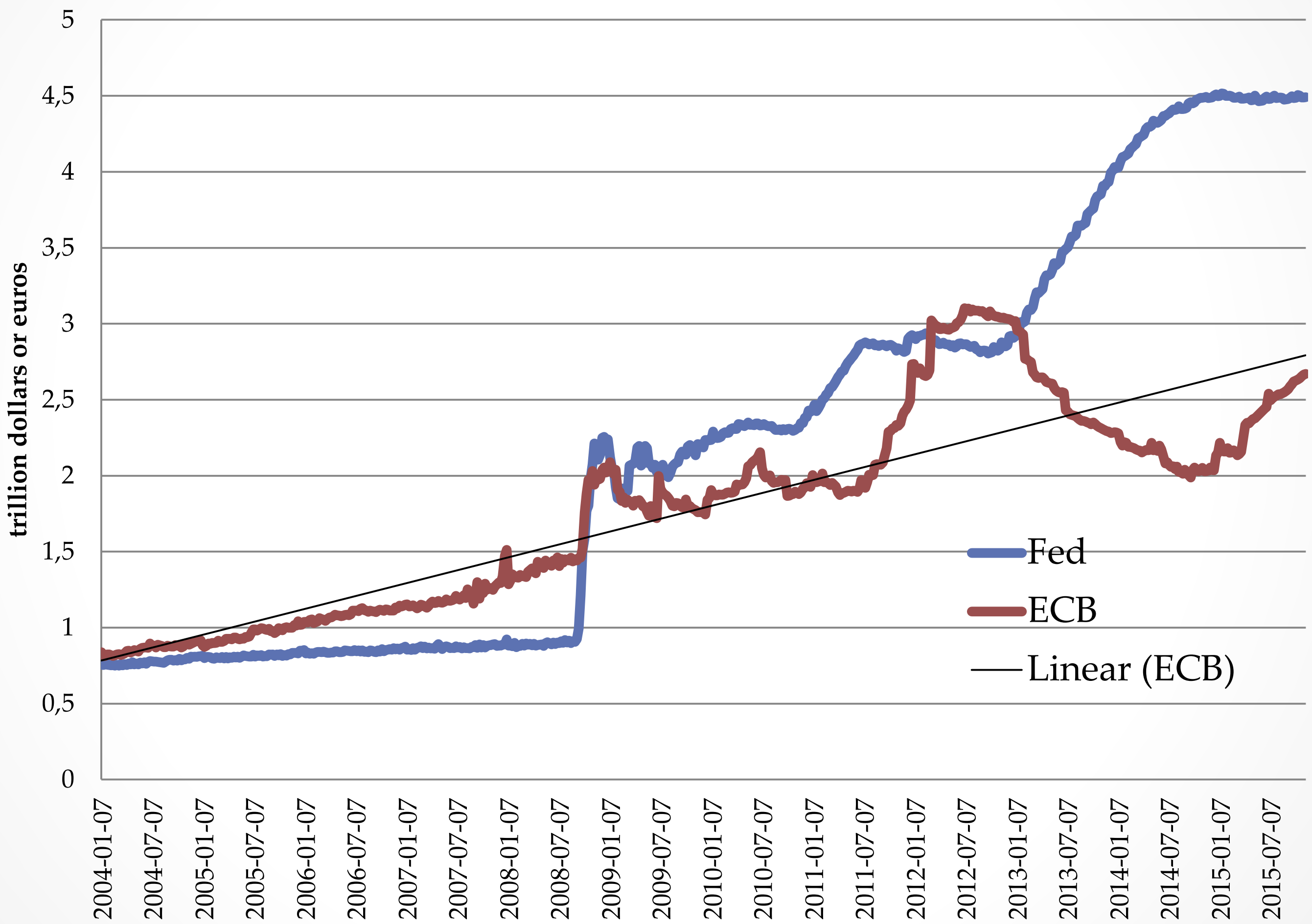


- The short-term problem: how to get out of stagnation?
- The long-term problem: how to redesign the Eurozone so as to make it sustainable

Short-term problem

- How to get out of stagnation in eurozone?
- Policy mix should be:
  - Monetary and fiscal expansion
- ECB has started QE early 2015:
  - ECB waited too long (see next figure)
  - QE necessary but insufficient
  - Has worked mostly through depreciation of euro

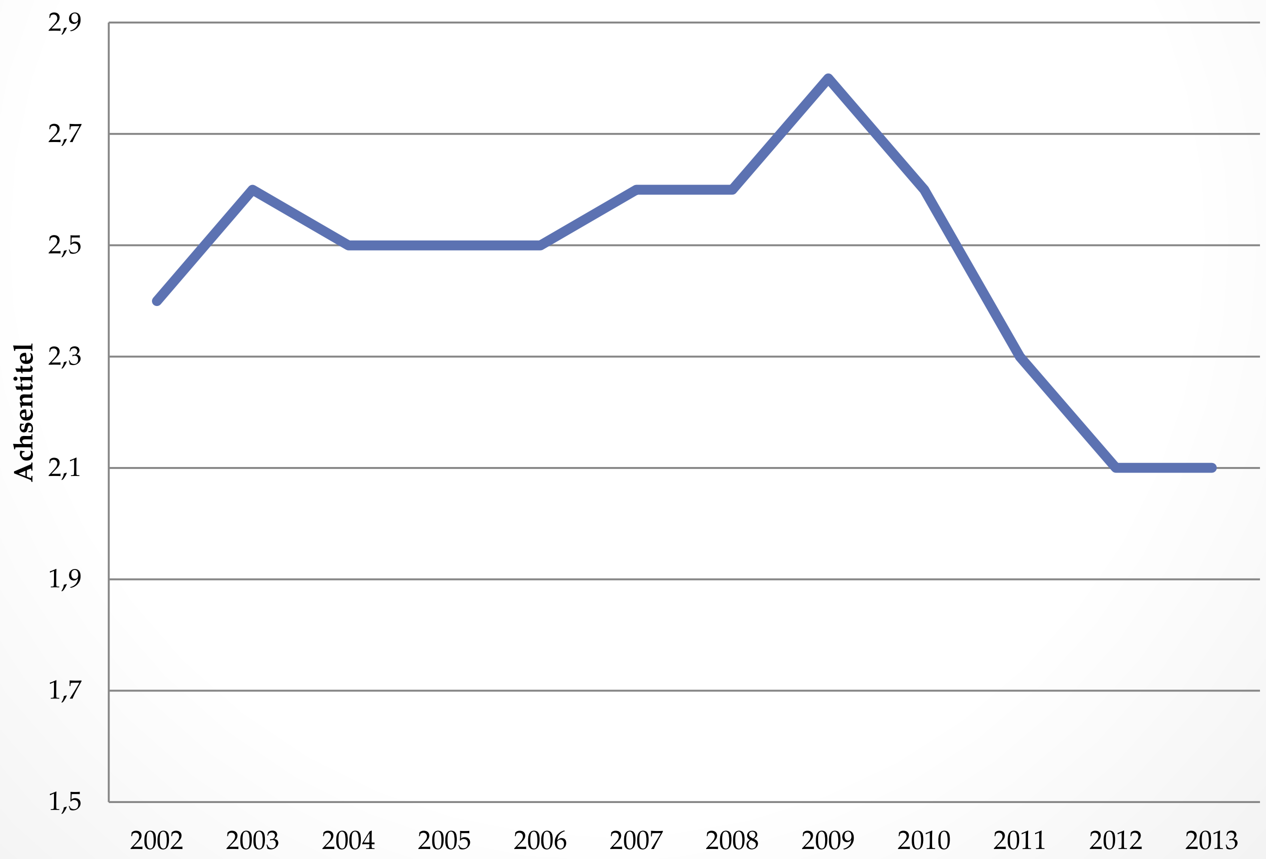
Balance Sheet FED and ECB (2004-15)



- Monetary policy alone cannot do the job of bringing about economic recovery
- When economy is in “liquidity trap”
- Monetary expansion should be complemented with fiscal policy expansion
- Fiscal policy should focus on public investment
- Why?
- It is one of the major victims of ill-advised macroeconomic policies in Eurozone

Austerity programs led to strong decline in public investment

Figure 8: General government gross fixed capital formation (%GDP)



- Leading to less aggregate demand today
- And less supply in the future
- Thus, start public investments
- These can be initiated everywhere, also in Belgium
- but especially in Germany, a country that can borrow almost for free
- Difficult to understand why governments that can borrow for free cannot find investment projects with rate of return exceeding 0% (in Belgium 0.8%)

Throw away dogmas

- We have to free ourselves of dogmas
- One such dogma: balanced budget, i.e. no bond financing of investments
    - o All investments should be financed by current revenue
    - o No well run company follows such a rule
- Result: governments are reducing their responsibility to provide essential public goods (infrastructure, energy investments, environmental investments)
- This reduces long-term growth of the Eurozone

Gross and net debt

- Need to distinguish gross and net debt
- Europe imposes governments to care only about gross debt
- What matters is net debt
- When governments invest in productive assets and issue debt to finance this net debt does not increase
- If productive assets have higher rate of return than cost of borrowing, future debt burden is alleviated
- Thus our grand children will not understand why governments today did not issue more debt to invest in productive assets that earn more than the cost of the debt

Long term problem

- Eurozone has been ill-designed
- It will have to be redesigned to survive in the long run. How?
- Let me first explain the nature of these design failures.

Eurozone's design failures: in a nutshell

1. Dynamics of booms and busts are endemic in capitalism and continued during Eurozone

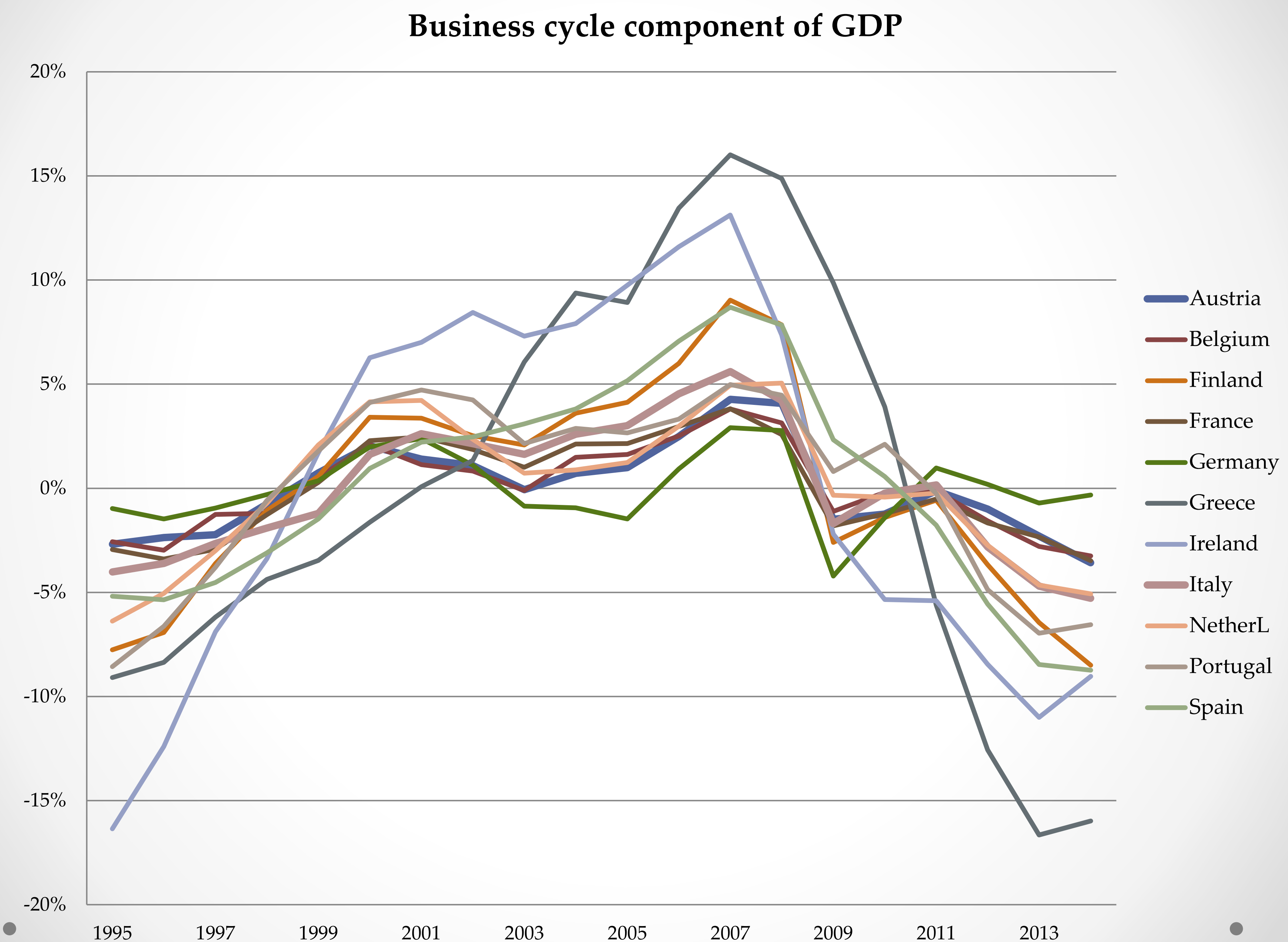
2. Stabilizers that existed at national level were stripped away from the member-states without being transposed at the monetary union level.
   - This left the member states "naked" and fragile, unable to deal with the coming disturbances.

3. This was reinforced by deadly embrace sovereign and banks

Let me expand on these points.

Booms and busts

- These were strongly synchronized in Eurozone
- Asymmetry was in the amplitude of the booms and busts
  - o Some countries (Ireland, Greece, Spain) experiencing wild swings
  - o While others (Germany, France, Netherlands, Belgium) experiencing mild swings
- This led to instability in government bond markets during downswing
- Why?
- We have to analyze a fundamental design failure of Eurozone



Business cycle component of GDP
20%
15%
10%
5%
0%
-5%
-10%
-15%
-20%
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
Austria
Belgium
Finland
France
Germany
Greece
Ireland
Italy
NetherL
Portugal
Spain

Design failure:
no stabilizers left in place

- Absence of lender of last resort in government bond market in Eurozone
- exposed fragility of government bond market in a monetary union
- Self-fulfilling crises pushing countries into bad equilibria

Fragility of government bond market in monetary union

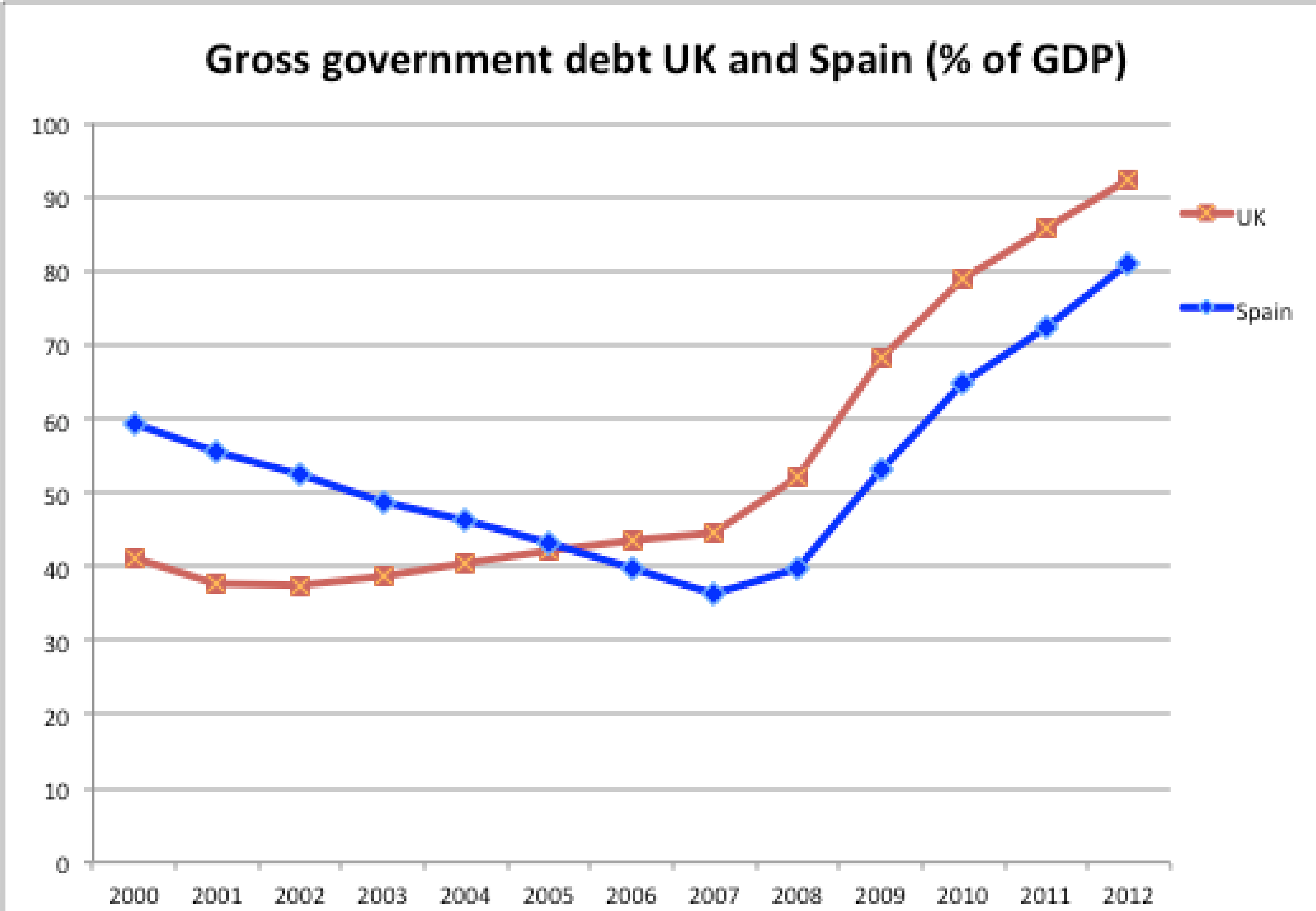
- Governments of member states cannot guarantee to bond holders that cash would always be there to pay them out at maturity
- Contrast with stand-alone countries that give this implicit guarantee
  - because they can and will force central bank to provide liquidity
  - There is no limit to money creating capacity

Self-fulfilling crises

- This lack of guarantee can trigger liquidity crises
  - During recession, budget deficits increase automatically
  - Distrust leads to bond sales
  - Interest rate increases
  - Liquidity is withdrawn from national markets
  - Government unable to rollover debt
  - Is forced to introduce immediate and intense austerity
  - Intensifying recession and Debt/GDP ratio increases

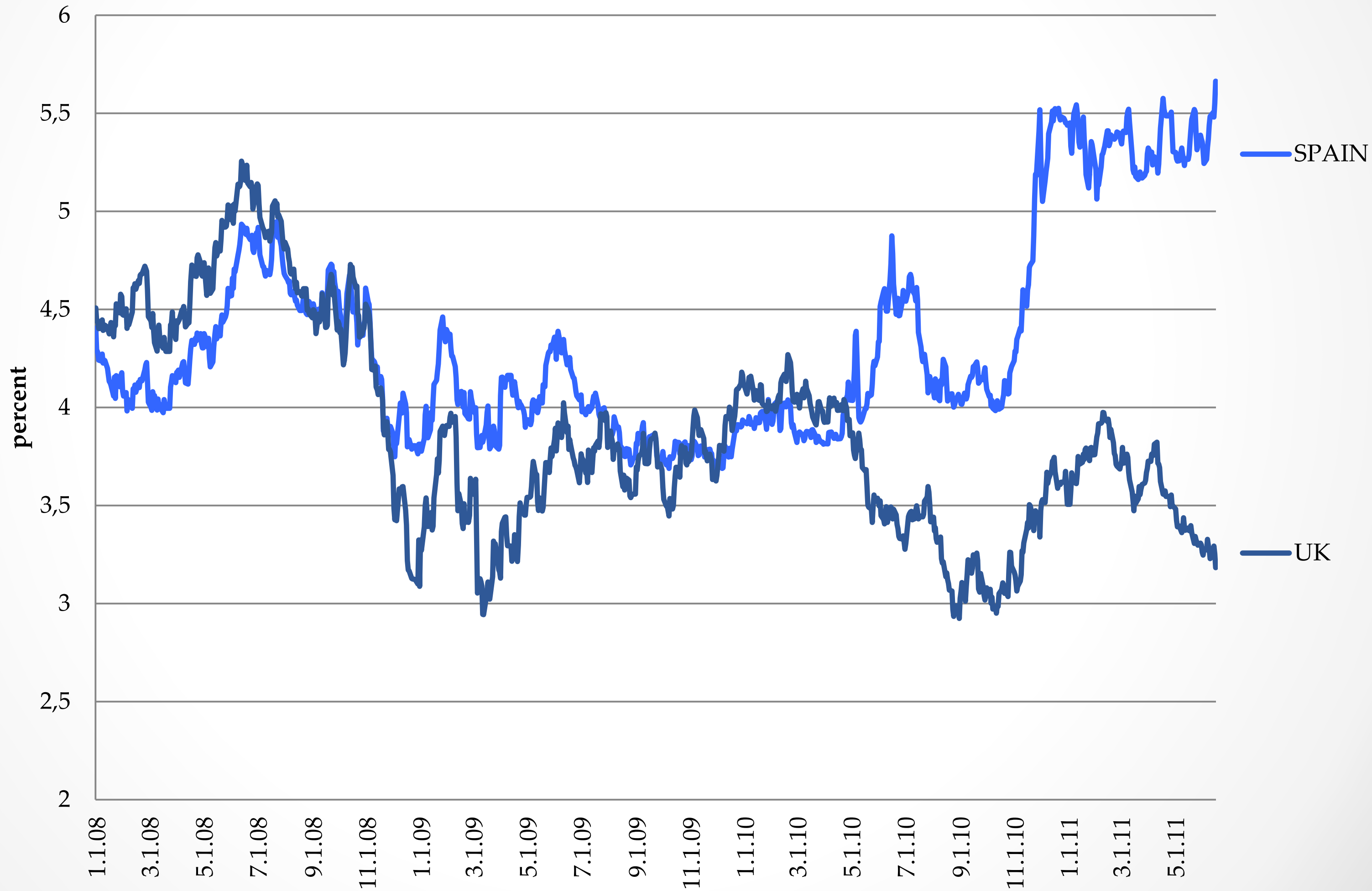
- This leads to default crisis
- Countries are pushed into bad equilibrium
- That can lead them into default

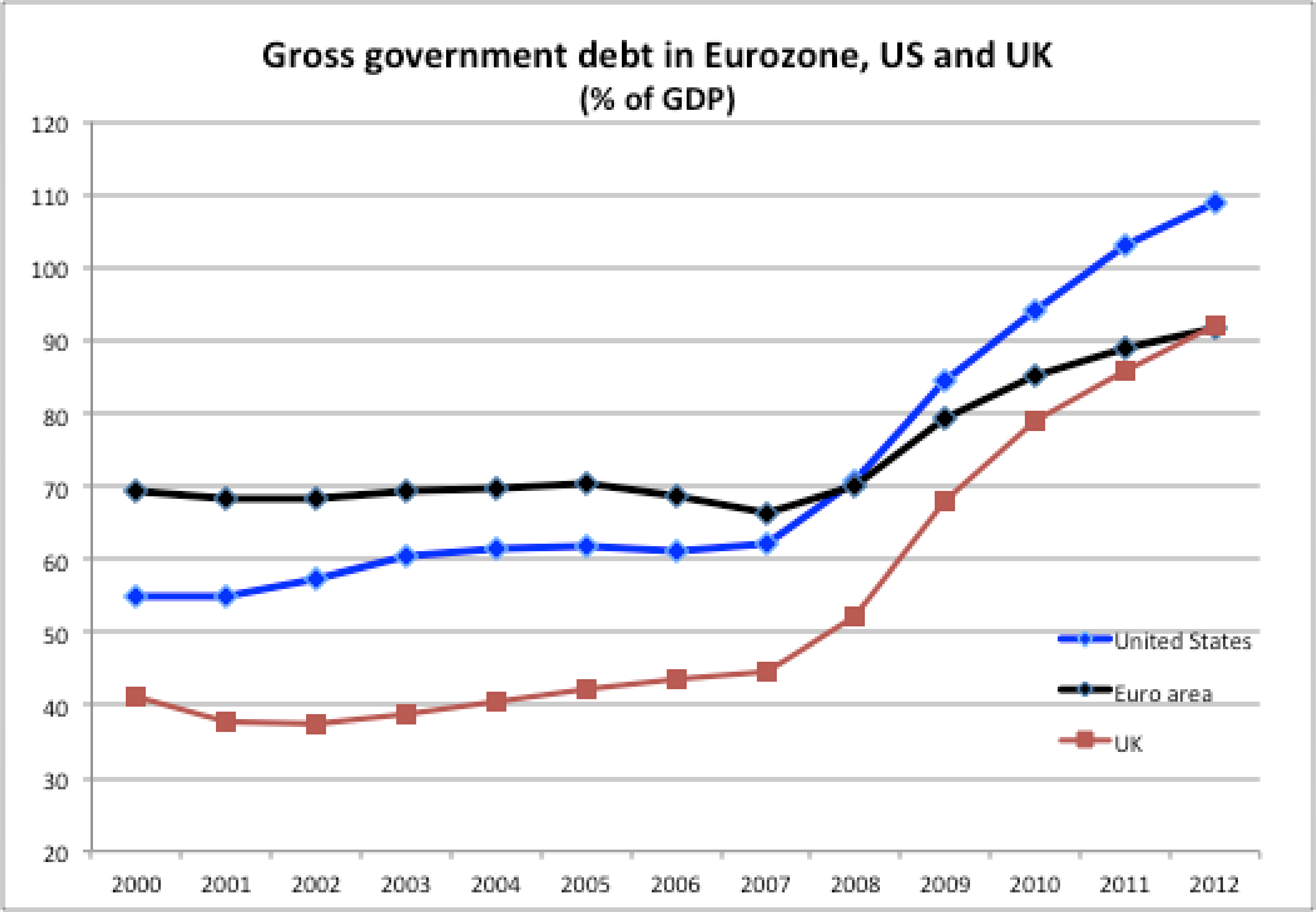
- Thus absence of LoLR tends to eliminate other stabilizer: automatic budget stabilizer
  - Once in bad equilibrium countries are forced to introduce sharp austerity
  - pushing them in recession and aggravating the solvency problem
  - Budget stabilizer is forcefully switched off
- Investors know this and flee from the government bond markets hit most by recession to invest in bond markets less hit by recession
- Destabilizing capital flows in monetary unions
- Case study: pain in Spain



Gross government debt UK and Spain (% of GDP)
100
90
80
70
60
50
40
30
20
10
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
UK
Spain

10-Year-Government Bond Yields UK-Spain




Gross government debt in Eurozone, US and UK
(% of GDP)
120
110
100
90
80
70
60
50
40
30
20
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
United States
Euro area
UK

Pain in Spain

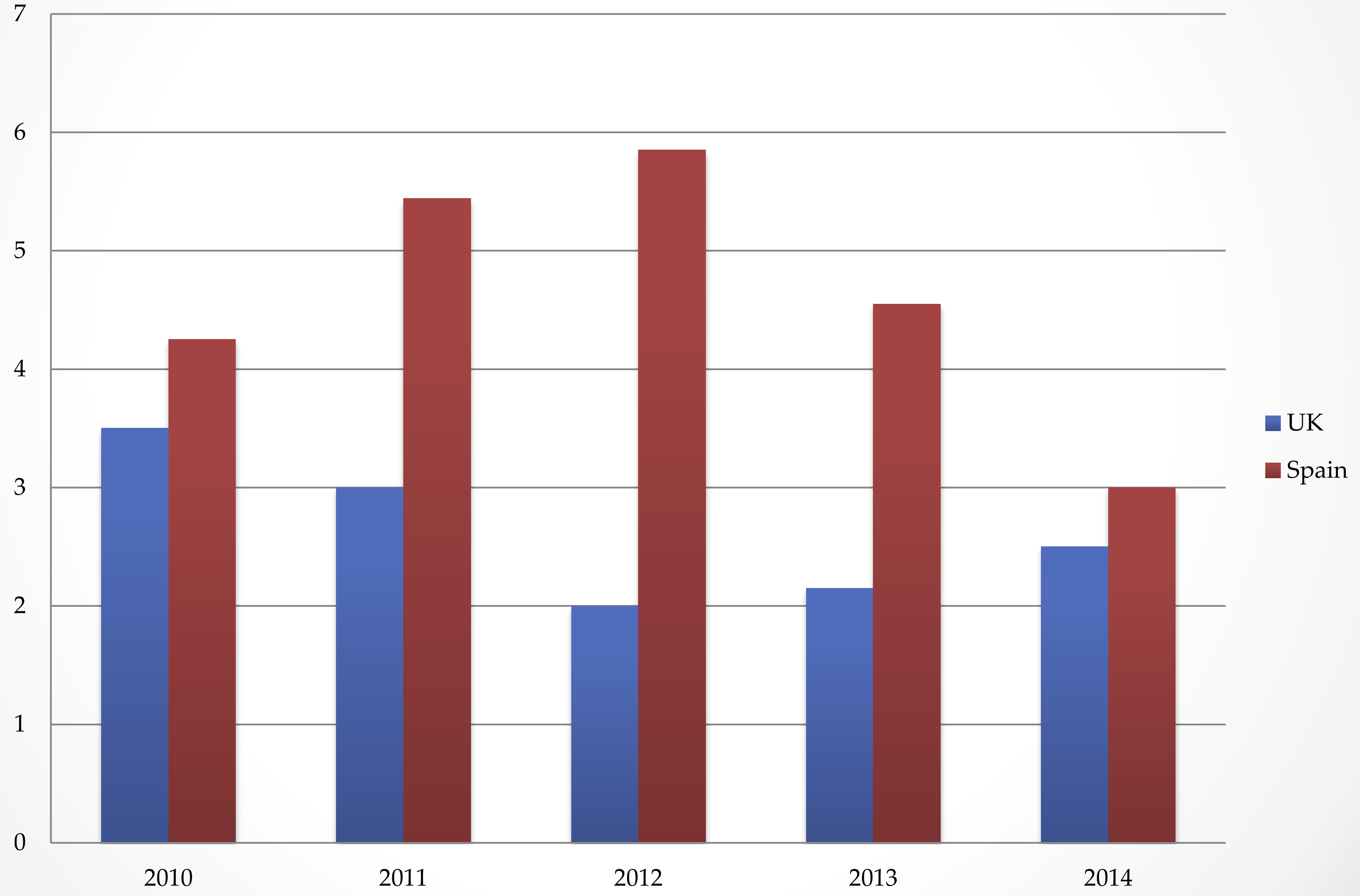
Debt to GDP dynamics:

$$\Delta D = (r - g)D - S$$

S = primary budget surplus,
r = nominal interest rate on the government debt,
g = nominal growth rate of the economy
D = government debt to GDP ratio.

Let us contrast Spain and the UK

Figure 3: 10-year Government bond yields



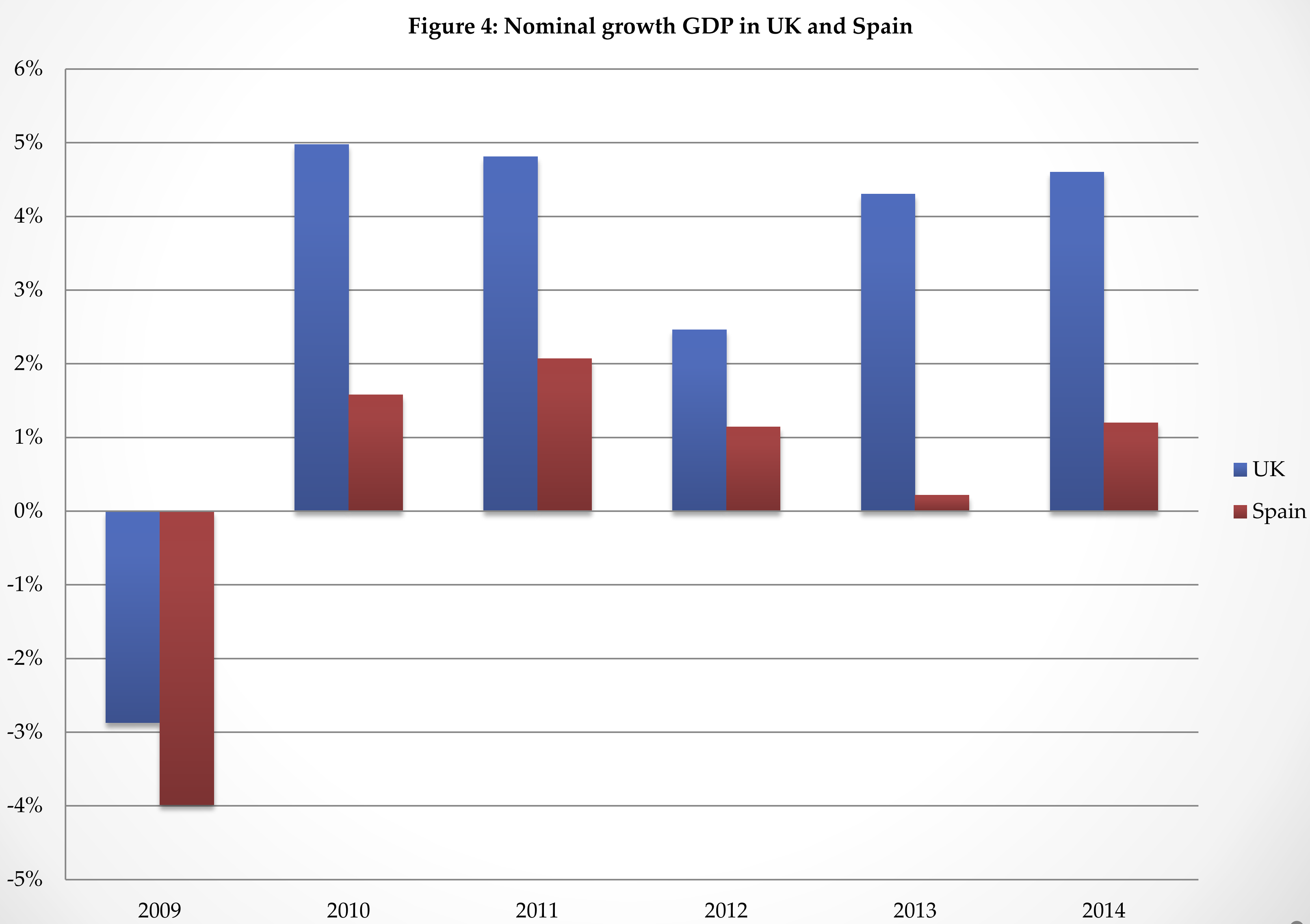


Figure 4: Nominal growth GDP in UK and Spain
6%
5%
4%
3%
2%
1%
0%
-1%
-2%
-3%
-4%
-5%
2009
2010
2011
2012
2013
2014
UK
Spain

Figure 5: Nominal interest rate - nominal growth rate

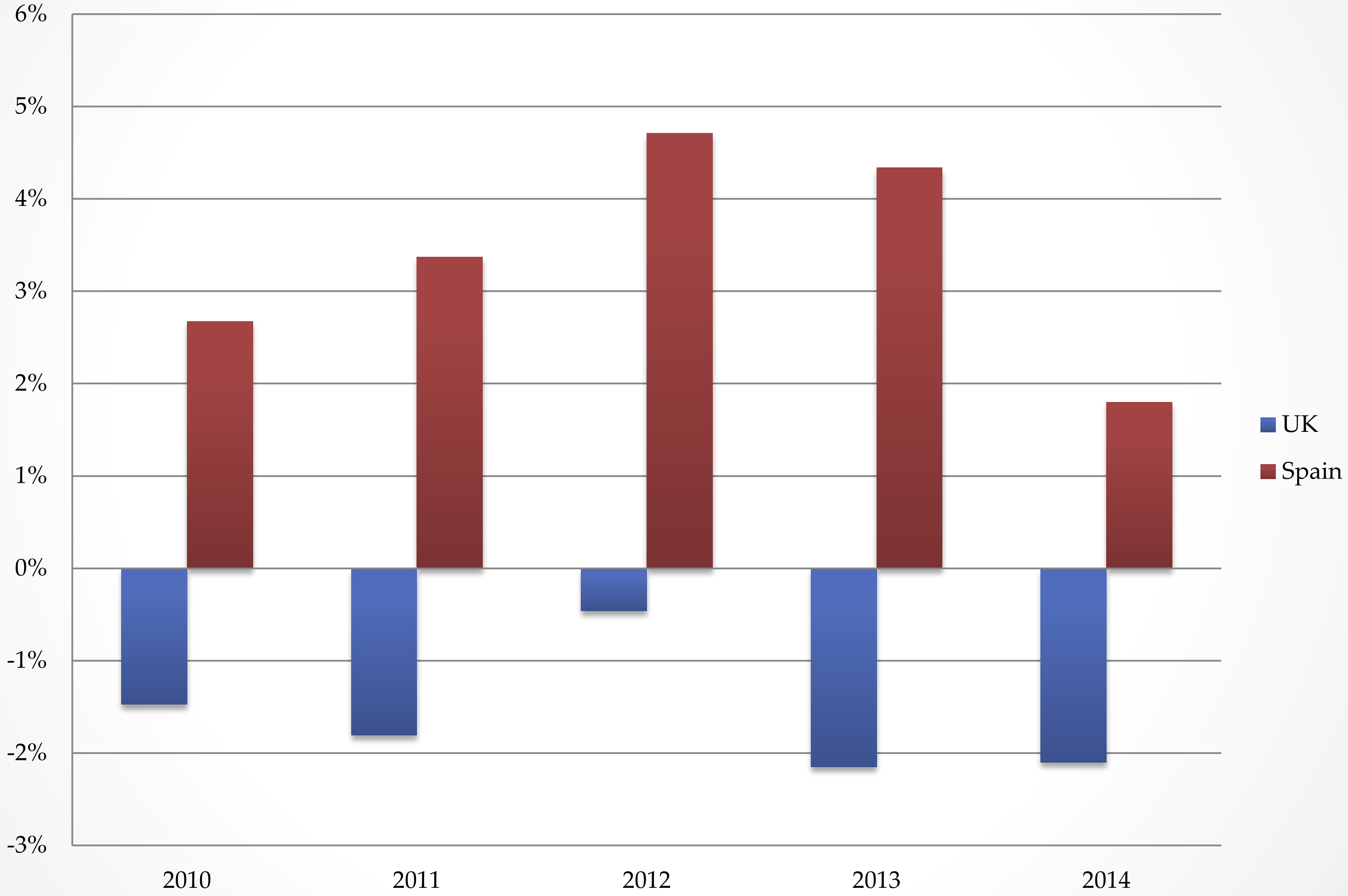
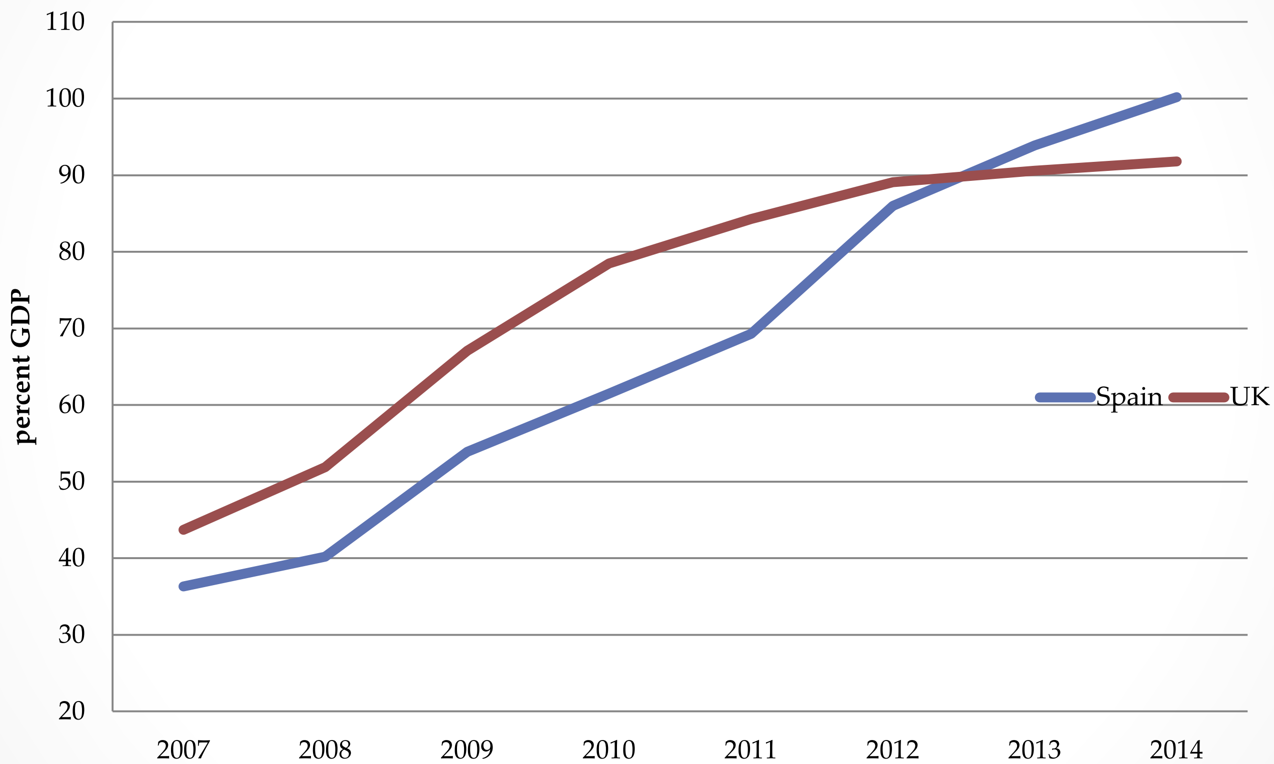


Table 1: Primary surplus needed to stabilize debt (%GDP)			
	2011	2013	2014
UK	-1,22	-1,94	-1,995
Spain	2,30	4,34	1,836

Figure 2: Government Debt to GDP ratio in Spain and UK



Redesigning the Eurozone

How to redesign the Eurozone?

- Role of ECB
- Budgetary and Political Union

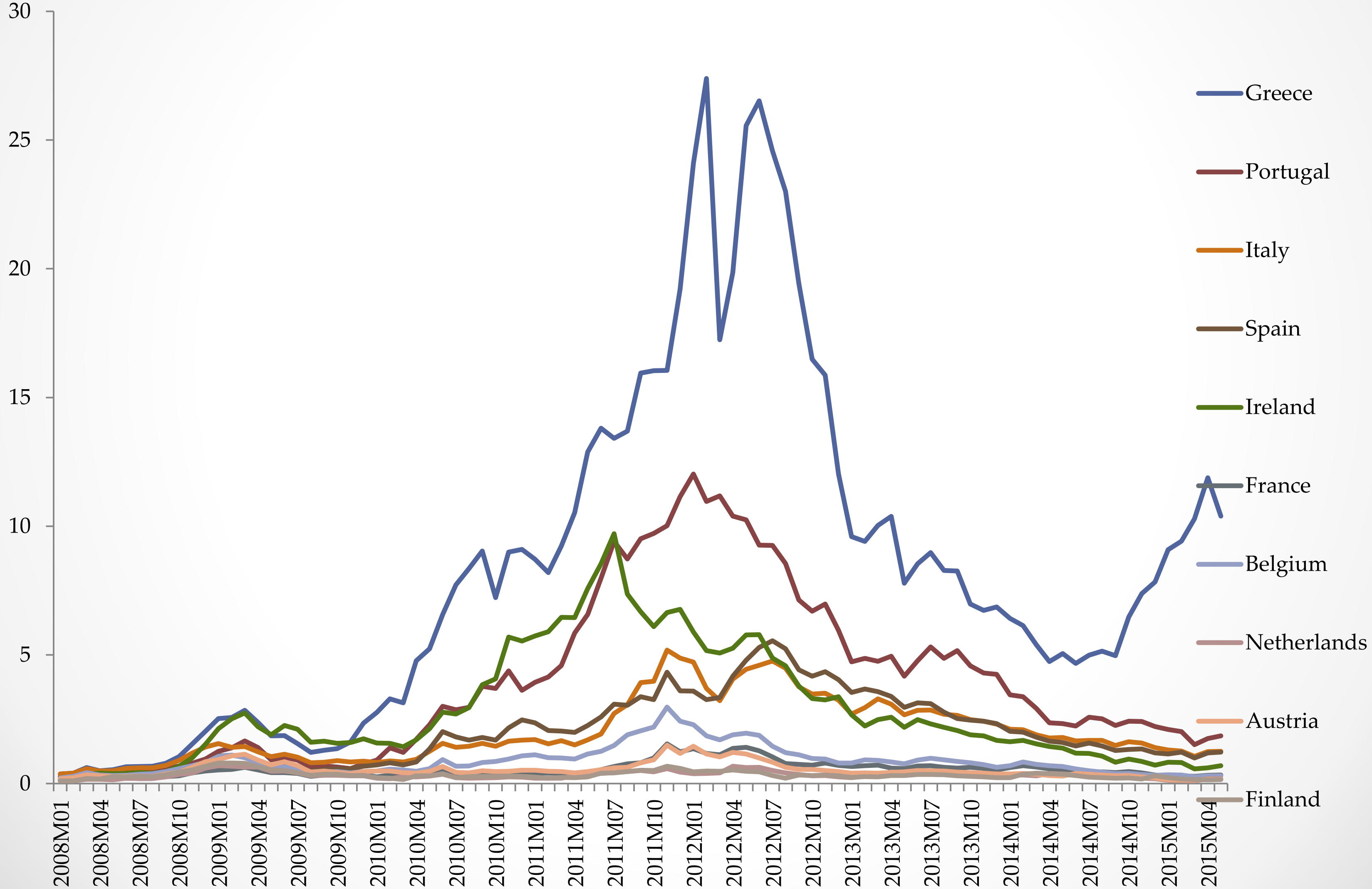
The common central bank as lender of last resort

- Liquidity crises are avoided in stand-alone countries that issue debt in their own currencies mainly because central bank will provide all the necessary liquidity to sovereign.
- This outcome can also be achieved in a monetary union if the common central bank is willing to buy the different sovereigns' debt in times of crisis.

ECB has acted in 2012

- On September 6, ECB announced it will buy unlimited amounts of government bonds.
- Program is called “Outright Monetary Transactions” (OMT)
- Success was spectacular

Success OMT-program



- This was the right step: the ECB saved the Eurozone
    - But then ECB waited too long to stop deflationary dynamics
    - Only in January 2015 when it started QE, did it act to fight deflation
- However, the second Greek crisis of 2014-15 casts doubts about the willingness to activate OMT in future
- And surely there will be new crises when next recession hits
- We need more than lender of last resort

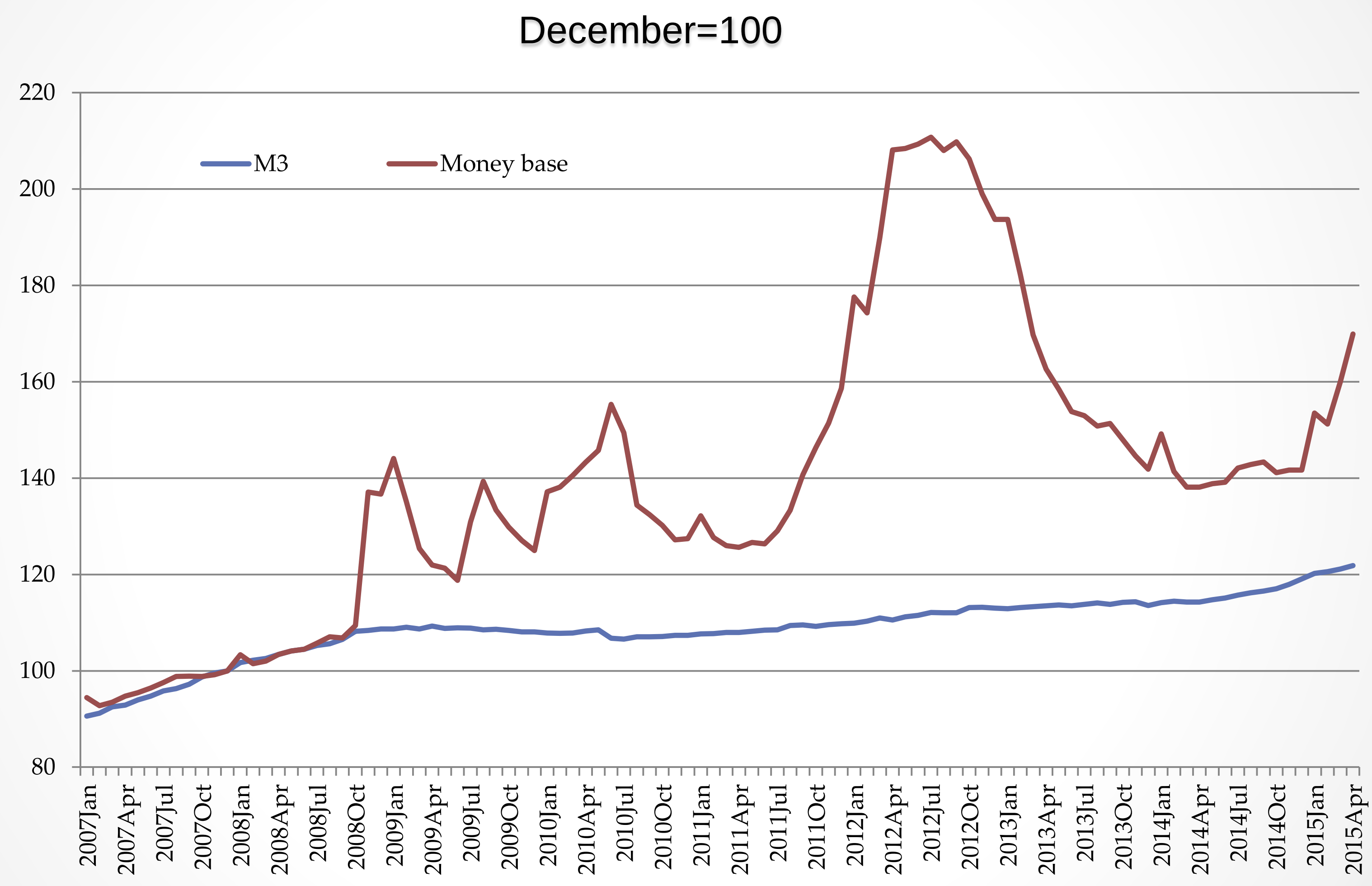
Criticism of OMT

- Points of criticism
  - Inflation risk
  - Moral hazard
  - Market efficiency
  - Fiscal implications
- Is this criticism valid?

Inflation risk

- Distinction should be made between money base and money stock
- When central bank provides liquidity as a lender of last resort money base and money stock move in different direction
- In general when debt crisis erupts, investors want to be liquid

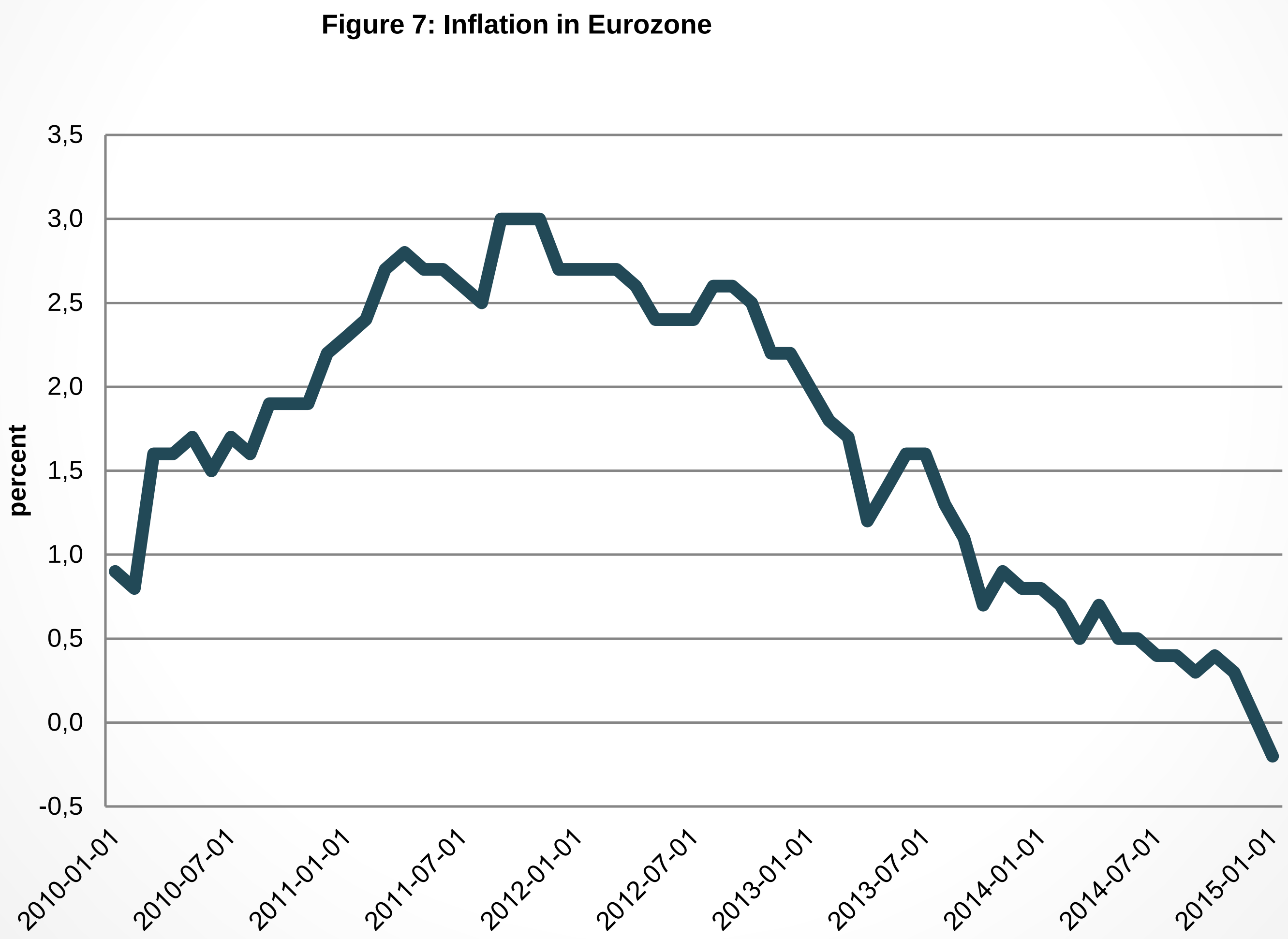
Money base and money stock (M3) in the Eurozone 2007



- Source: European Central Bank

- Thus during debt crisis banks accumulate liquidity provided by central bank
- This liquidity is hoarded, i.e. not used to extend credit
- As a result, money stock does not increase; it can even decline
- No risk of inflation
- Same as in the 1930s (cfr. Friedman)

Deflation threat



Moral hazard

- Like with all insurance mechanisms there is a risk of moral hazard.
- By providing a lender of last resort insurance the ECB gives an incentive to governments to issue too much debt.
- This is indeed a serious risk.
- But this risk of moral hazard is no different from the risk of moral hazard in the banking system.
- It would be a mistake if the central bank were to abandon its role of lender of last resort in the banking sector because there is a risk of moral hazard.
- In the same way it is wrong for the ECB to abandon its role of lender of last resort in the government bond market because there is a risk of moral hazard

Separation of liquidity provision from supervision

- The way to deal with moral hazard is to impose rules that will constrain governments in issuing debt,
- very much like moral hazard in the banking sector is tackled by imposing limits on risk taking by banks.
- In general, it is better to separate liquidity provision from moral hazard concerns.
- Liquidity provision should be performed by a central bank; the governance of moral hazard by another institution, the supervisor.

- This should also be the design of the governance within the Eurozone.
- The ECB assumes the responsibility of lender of last resort in the sovereign bond markets.
- A different and independent authority (European Commission) takes over the responsibility of regulating and supervising the creation of debt by national governments.
- This leads to the need for mutual control on debt positions, i.e. some form of political union

Metaphor of burning house

- To use a metaphor: When a house is burning the fire department is responsible for extinguishing the fire.
- Another department (police and justice) is responsible for investigating wrongdoing and applying punishment if necessary.
- Both functions should be kept separate.
- A fire department that is responsible both for fire extinguishing and punishment is unlikely to be a good fire department.
- The same is true for the ECB. If the latter tries to solve a moral hazard problem, it will fail in its duty to be a lender of last resort.

Market efficiency

- Spreads reflect underlying economic fundamentals. This is argument developed by German Constitutional Court
- Attempts by ECB to reduce spreads are attempts to counter the view of market participants.
- ECB is in fact pursuing economic policy, which is outside its mandate.
- Implicit in this argument is assumption of market efficiency
  - spreads observed from 2010 to the middle of 2012 were the result of deteriorating fundamentals
  - Thus, the market was just a messenger of bad news.
- Implication of efficient market theory is that the only way these spreads can go down is by improving the fundamentals, mainly by austerity programs
- With its OMT program the ECB is in fact reducing the need to improve these fundamentals.

- I have argued that markets are sometimes gripped by panic.
- These movements can drive the spreads away from underlying fundamentals,
  - very much like in the stock markets prices can be gripped by a bubble pushing them far away from underlying fundamentals.
- In absence of central bank this can lead to sudden stop (liquidity crisis)
- Countries can be pushed in bad equilibirum
- Role of central bank is to avoid this outcome

Testing two theories of the spreads

- econometric model of the spreads

$$I_{it} = \alpha + z * CA_{it} + \gamma_1 * Debt_{it} + \mu * REE_{it} + \delta * Growth_{it} + \gamma_2 * (Debt_{it})^2$$
$$+\alpha_i + \beta_t + \varepsilon_{it} \qquad (1$$

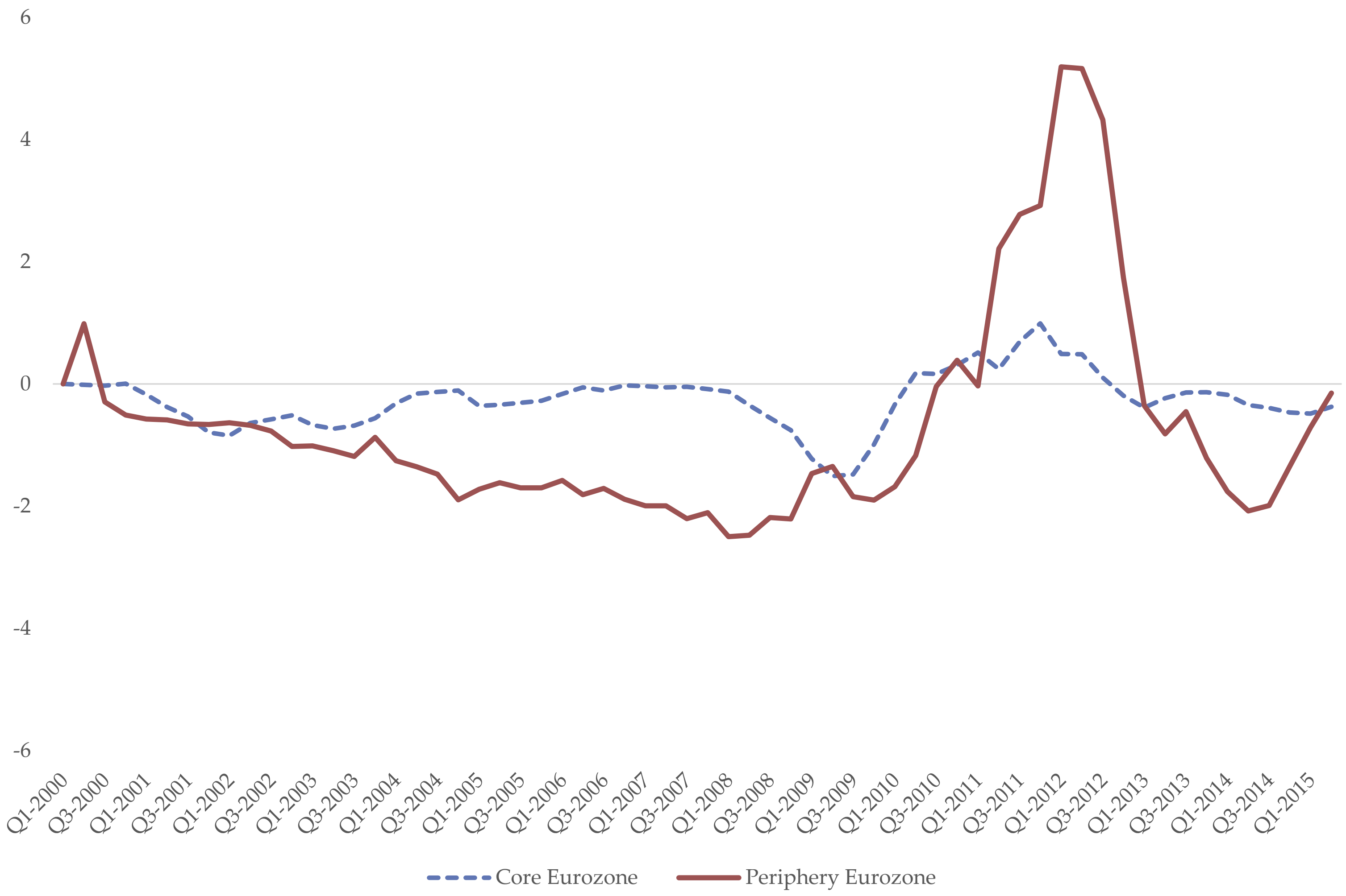
Table 2: Estimation results equation (1)

Debt/GDP ratio (%)	-0.1202 *** (0.0304)
Debt/GDP ratio squared	0.0009 *** (0.0002)
Accumulated current account/GDP ratio (%)	-0.0048 (0.0034)
Real effective exchange rate	0.0554 (0.0332)
Growth rate (%)	-0.1851 ** (0.0659)
Country fixed effects	Controlled
Time fixed effects (quarterly)	Controlled
Number of observations	560
Number of countries	10
R-squared	0.8601

Cluster at country level and robust standard error is shown in brackets. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Sample period: (2000Q1-2013Q4)

Figure 1: Time Component of Spread (%)



- Results suggest that since 2010 markets were first gripped by negative sentiments and tended to exaggerate the default risks of individual countries, i.e. they pushed the spreads way above the fundamental risks.
- Since the announcement of OMT the reverse has happened.
- The spreads went down spectacularly mostly driven by positive market sentiments unrelated to the improvements (if any) in the fundamentals.
- See also Orkun Saka, et al. (2014)

Towards a budgetary and political union

- Most important component of political union is budgetary union.
- What do we mean with budgetary union?

Budgetary union has two dimensions

1. consolidation of national government debts.
   - A common fiscal authority that issues debt in a currency under the control of that authority.
   - This prevents destabilizing capital movements within the Eurozone
   - and protects the member states from being forced into default by financial markets.

2. Insurance mechanism

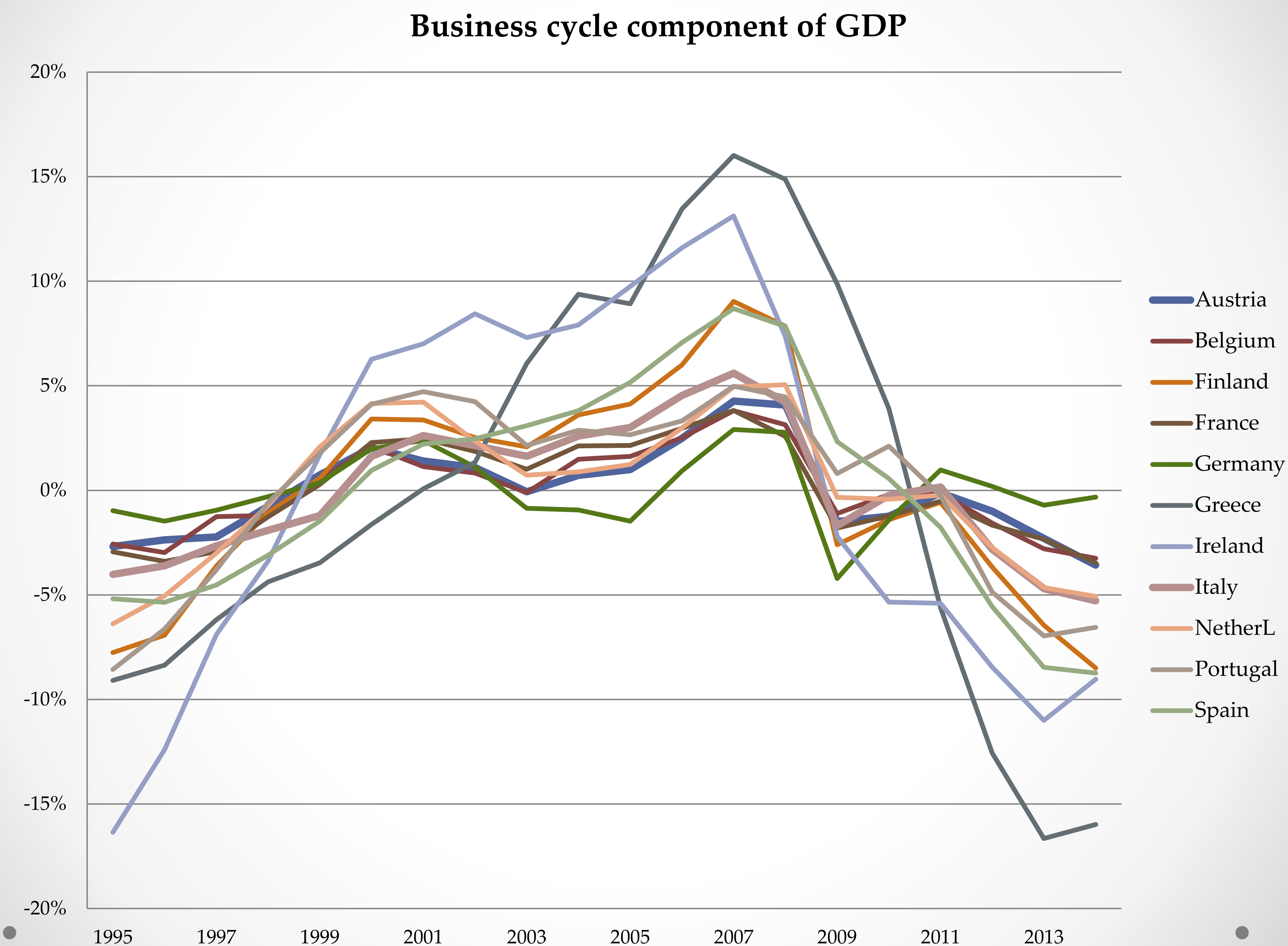
- mechanism transferring resources to the country hit by a negative economic shock.
- Limits to such an insurance: **moral hazard** risk,
- But that is problem of all insurance mechanisms
- Budgetary union also allows to stabilize the business cycle at the Eurozone level

Why is budgetary union needed?

- In order to understand the need for a budgetary union it is important to analyze the nature of the shocks that have hit the Eurozone
- Let's look at the booms and busts that occurred in Eurozone more closely

Empirical evidence about nature of shocks

- I compute trend and cyclical components of GDP of Eurozone countries
  - Using Hodrick-Prescott-filter (HP)
- and then compute correlations
- and relative variance of cyclical and trend component



Business cycle component of GDP
20%
15%
10%
5%
0%
-5%
-10%
-15%
-20%
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
Austria
Belgium
Finland
France
Germany
Greece
Ireland
Italy
NetherL
Portugal
Spain

Correlation coefficients cyclical components GDP

	Austria	Belgium	Finland	France	Germany	Greece	Ireland	Italy	Netherl	Port
Austria										
Belgium	0,97									
Finland	0,97	0,98								
France	0,93	0,95	0,97							
Germany	0,69	0,57	0,55	0,59						
Greece	0,73	0,82	0,84	0,74	0,09					
Ireland	0,85	0,89	0,92	0,95	0,41	0,81				
Italy	0,91	0,96	0,98	0,96	0,50	0,86	0,93			
Netherlands	0,93	0,94	0,93	0,91	0,60	0,75	0,86	0,90		
Portugal	0,98	0,89	0,89	0,87	0,37	0,82	0,87	0,90	0,94	
Spain	0,85	0,91	0,94	0,87	0,27	0,97	0,90	0,95	0,86	0,90

Mean trend growth and mean (absolute) business cycle change in GDP (in percent) during 1999-2014

	Mean cycle	Mean trend	ratio
Austria	1,79%	1,77%	1,01
Belgium	1,72%	1,67%	1,03
Germany	1,55%	1,23%	1,26
France	2,15%	1,49%	1,44
Netherlands	2,66%	1,66%	1,60
Finland	4,35%	2,02%	2,15
Spain	4,58%	2,07%	2,21
Ireland	8,01%	3,35%	2,39
Portugal	3,67%	0,81%	4,53
Italy	2,86%	0,41%	7,05
Greece	9,09%	0,90%	10,11

Table 3. Slope of regression domestic cycle on euro-cycle

	slope
Germany	0,21
Belgium	0,48
Austria	0,49
France	0,55
Italy	0,77
Netherlands	0,80
Portugal	1,02
Finland	1,21
Spain	1,22
Ireland	2,07
Greece	2,18

Source: Own calculations.

Interpretation

- Since start of Eurozone, cyclical (temporary) movements have been the dominant factor of growth variations in GDP.
- Cyclical movements of GDP are highly correlated in the Eurozone.
- Asymmetry between Eurozone countries
  - o not so much to be found in a lack of correlation in growth rates
  - o but in the intensity of the boom bust dynamics of growth rates.

Implications for budgetary union

- Cyclical component of output growth is very important
- Conclusion: efforts at stabilizing the business cycle should be strengthened relative to the efforts that have been made to impose structural reforms.
- Structural reforms and flexibility are important when the monetary union faces permanent shocks
- Not when the shocks are booms and busts (cyclical)
- Then stabilization is important

- The economic paradigm that has dominated policies in Eurozone has been structural reforms
- Pushing countries into attempts to liberalize labour and product markets in the midst of recessions
- Intensifying the recession
- discrediting these policies and the policymakers
- And boosting radical anti-European political
- parties

Need for smoothing over time

- Since most countries experience a boom and a recession at about the same time,
- but with different intensities and amplitudes.
- there is little need for inter-country smoothing of business cycle movements.
- The more pressing need is to smoothen volatilities over time.

Common unemployment benefits scheme

- Many proposals have been made: e.g. Four Presidents report
- As argued earlier business cycle shocks dominate
- We need smoothing over time (stabilization)
- Common unemployment schemes should be allowed to have deficit during recession compensated by surpluses during boom
- This means issuing common bonds
- First step on the road to budgetary union

Objection: That could be done at national level

- In principle, smoothing (over time) could be done at the national level
- However, the large differences in amplitude in business cycle movements makes a national approach impractical:
  - o It leads to large differences in the budget deficits and debt accumulation between countries.
  - o These differences quickly spillover into financial markets: countries that are hit very hard by a recession experience **sudden stops** and liquidity crises (see De Grauwe(2011)).

- This is likely to force them to switch off the automatic stabilizers in their national budgets (De Grauwe and Ji(2013)).
- This can push countries into a bad equilibrium preventing stabilization
- In addition, these liquidity outflows are inflows in some other countries in the monetary union, typically those that are hit least by the recession.
- Their economic conditions improve at the expense of the others.

- Stabilization of common business shocks with different amplitudes at the national level leads to destabilizing capital flows within system
- Financial markets fail to provide for stabilization and insurance during recessions.

Conclusion

- There is need for stabilization of business cycles at the Eurozone level.
- Budgetary union (a common treasury),
  - o including mutualisation of debt,
  - o And common budget capable of exerting stabilization
  - o Should be long-term objective
- Small step: common unemployment insurance system that is allowed to run deficits (issue bonds) during recession

Conclusion

- Long run success of the Eurozone depends on continuing process of political unification.
- Political unification is needed because Eurozone has dramatically weakened
  - the power and legitimacy of nation states
  - without creating a nation at the European level.
- This is particularly true in the field of stabilization

Conclusion: Integration fatigue

- Budgetary union is needed but is far away
- Willingness today to move in the direction of a budgetary and political union in Europe is non-existent.
- This will continue to make the Eurozone a fragile institution
- Its long-term success cannot be guaranteed