

Crises in Periphery of Europe

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Drivers of European Integration

Since the end of WWII, European integration had four drivers:

- Preventing another European war
- Accelerating economic growth
- Enhancing the European international position and
- Serving as counterweight to the USA

Stages of European Economic Integration

1. **European Steel and Coal Community - 1951**: composed of six countries.
2. **Free Trade Area - 1957**: European Economic Community (EEC)
3. **Customs Union - 1968**: European Community (EC), with EMS in 1979.
4. **Common Market - 1986**: To allow free movement of capital, services and people, to be created gradually, as specified in the Single Europe Act.
5. **European Union, EU – 1992**. Agreed in the Maastricht Treaty. Added common foreign/security policies, cooperation on justice/legal matters, and removal of borders, physical and technical barriers;. Set EMU as objective.
6. **Economic and Monetary Union - 1999**: EMU- Eurozone, a subset of the EU
7. **Political and Economic Union**: the USA is an example; not in Europe. 3

Creation of the Euro

- A **common currency** was the ultimate objective of the European Community since **1969**.
- This objective was expected to be achieved in stages, starting in 1972 (after the collapse of the BW system) with the agreement to maintain exchange rates within a band of +/- 2.25% of average rates and ending with the introduction of the Euro in 1999-2002.
- **In 1979** the initial stability agreement was formalized with the formation of the **European Monetary System** (EMS), which had four elements:
 1. The creation of the **European Currency Unit** (ECU) as a currency basket.
 2. The **Exchange Rate Mechanism** (ERM) which required countries to maintain exchange rate changes within a limited range of +/- 2.25% of the ECU, but widened to +/- 6% for Italy in 1992, and for all countries to +/- 15% in 1993, after attacks on the French Frank.
 3. An extension of **European credit facilities**.
 4. The **European Monetary Cooperation Fund** which allocated **ECUs** to members' central banks in exchange for gold and US dollar deposits.

- In 1990, **exchange controls were abolished** and thus capital movements were completely liberalized.
- In 1992, the **Treaty of Maastricht** sets the EMU as a formal objective and sets a number of **economic convergence criteria** concerning public finances, inflation rates, interest rates and exchange rate stability.
- In 1994, the **European Monetary Institute** is established as the forerunner of the European Central Bank (ECB), with the task of strengthening **monetary cooperation** between the member states and their national banks.
- In 1995, details such as the name of the new currency (the **Euro**) as well as the duration of the transition periods are decided.
- In 1997 in Amsterdam, the European Council decides to adopt the **Stability and Growth Pact**, designed to ensure fiscal budgetary and public debt discipline after creation of the Euro
- In 1997, a new exchange rate mechanism (**ERM II**) is set up to provide stability between the Euro and the national currencies of countries that are planning to enter the Eurozone.

- In 1998 in Brussels, the European Council selects the initial countries that will participate in the Euro from 1 January 1999, with the UK opting out, and Sweden and Denmark delaying their participation.
- In June 1998, the **European Central Bank** (ECB) is created, and in December 1998, the conversion rates between the participating national currencies and the Euro are established.
- From the start of 1999, the **Euro is introduced** in electronic form as a real currency, and a single monetary policy is introduced under the authority of the ECB.
- A three-year transition period (1999-2002) begins for the introduction of actual Euro notes and coins in the individual countries, but legally the national currencies already ceased to exist.

The Expected Benefits of the Euro included:

- Eliminate exchange rate fluctuations and uncertainties
- Eliminate exchange rate-related transactions costs: if countries do a lot of business with one another, they may gain from a currency union (such as Germany and Netherlands)
- Accelerate economic growth through expanded trade, easier travel, and greater price competition
- Give a big push to further EU economic & political integration
- Enhance the EU's power & prestige
- The less developed periphery (e.g. Greece, Portugal) will enjoy lower interest rates, promoting growth and convergence.
- The more developed center (e.g. Germany, France) would benefit from the Euro as it would promote their exports to other EMU countries, without competitive devaluations by the EMU trade partners.

The Costs of joining the Euro included:

- Permanently fixed exchange rate vis-à-vis other EMU members meant that the country gave up the **option of devaluations** to adjust relative prices as a response to shocks
- No **independent monetary policy** meant that the country could not use changes in domestic interest rates and money supply to adjust to external or internal economic shocks
- A single currency implied an **“implicit”** shared responsibility for the economic problems of other EMU partners
- Opponents argued that repeated unsuccessful attempts to limit fluctuations among EU currencies showed that the EU countries were not a suitable economic group to have a common currency, i.e., they were not an **“optimum currency area”** (OCA).
- The OCA theory (developed by Nobel winner Professor Robert Mundell of Columbia University) sets out the conditions needed to make monetary union attractive to a group of countries.

Optimum Currency Area

- The Optimal Currency Area theory sets out the following economic conditions needed to make a monetary union feasible:
 - High **flexibility of prices and wages** to accommodate shocks through “internal” devaluations (given no external devaluations)
 - High **mobility of labor** and capital to accommodate shocks
 - A good degree of **fiscal transfers** to countries with shock problems
 - **Symmetry of external shocks** (correlation in shock effects), needed to enable common policies in interest rates for all countries
 - High level of **economic/trade openness**, with high integration
 - **Comparable economic development levels**, with diversification
 - **Similar fiscal/public debt policies** (to control debt & **inflation rates**)
- The larger the number of countries in an EMU, the more difficult it is to fulfill the Optimal Currency Area (OCA) conditions.
- When the EMU was devised in the early 1990s, some of the 15 EU members met some of the OCA criteria reasonably well. But many countries in the periphery of Europe (Greece, Portugal) did not. 9

Despite general awareness of these OCA concerns, the EMU proceeded, because:

- The EMU's main driver was **political not economic**: to avoid future armed conflicts and enhance EU's prestige.
- There was the hope that the EU's regional policies, that provide for automatic transfers to the poorer regions, particularly in agriculture, would promote convergence in economic development levels and bring economic symmetry.
- There was the hope that gradually over time, future measures would be taken to meet OCA conditions, particularly on labor mobility.
- There would be tough entry criteria and rules limiting fiscal budget deficits and public debt rules, which would be enforced after entry (as agreed upon under the Maastricht Convergence Criteria).

The Maastricht Criteria

Germany's willingness to enter the Euro and give up the DM was tied to strict conditions that EU countries must accept to be admitted to the Eurozone: the 1992 Maastricht Convergence Criteria:

1. The governments' annual budget deficits should not be more than 3% of GDP
2. The level of sovereign (public) debt should be not more than 60% of GDP; otherwise government had to reduce it over time.
3. The inflation rate should be maintained within 1.5% of the average of the three lowest inflation rates in the EMU
4. Long-term interest rates should be within 2% of the three best anti-inflationary performers
5. The candidate country should spend two years in Exchange Rate Mechanism-2 (ERM-2), whereby exchange rate fluctuations must remain within +/- 15% from the Euro.

Stability and Growth Pact (SGP)

- The Eurozone members accepted a subset of the Maastricht criteria and adopted the Stability and Growth Pact (SGP) in 1997.
- The SGP contained Maastricht conditions 1 and 2 (limits on the ratio to GDP of fiscal budget deficits (3%) and government debt (60%))
- The SGP included a “no bailout” clause, which meant that a default would occur if the country failed to meet its debt obligations.
- It was hoped that prudent fiscal and debt policies will be enough to preserve the EMU, even though other OCA conditions were not met.
- Any breach of SGP would lead to warning, then sanctions.
- Breach procedures started against Portugal (2002), France and Germany (2003-2004) and Greece (2005) because of fiscal deficits higher than 3% of GDP; warnings were sent, but fines never levied.
- About 60 breaches took place during the past decade; no fines or other penalties were ever imposed.

Consequences for EMU's Members

- EMU members give up their currency and foreign exchange rate policies. **Devaluations** were no longer tools available to deal with economic shocks.
- EMU members also gave up their independent **monetary policies** (possibility of adjusting money supply and interest rates) which were transferred to the European Central Bank (ECB).
- The ECB unified interest rates for identical classes of borrowers and lenders. The ECB would act as the “lender of last resort” for EMU commercial banks, **but not for governments. It will not become an instrument to bail out government debt.**
- Trade that used to be foreign trade becomes domestic trade; currency conversion costs and exchange rate risks disappear.
- But the only tools available for countercyclical macroeconomic policy were **fiscal policies**, which led to SGP violations.

The Introduction of the Euro

- The Euro was introduced in 1999 and in paper form in 2000-2002.
- Of EU's 15 members signing the Maastricht Treaty, the UK opted out and Denmark and Sweden delayed entry by missing the SGP.
- The remaining 12 introduced the Euro during 1999-2002.
 - **North-financially-prudent:** Germany, Austria, The Netherlands, Belgium, Luxembourg, Finland, Ireland
 - **South-financially-loose:** Portugal, Italy, Greece, Spain (PIGS-Periphery)
 - **In the middle:** France
- Subsequent EU members are obliged to join the EMU, after having met the Maastricht criteria.
- New Eurozone entrants included: Slovenia (2007); Cyprus (2008), Malta (2008), Slovakia (2009), and Estonia (2011)
- Thus, the Eurozone currently has **17 members**, out of 27 in the EU.
- Other countries required to join the Eurozone eventually include: Poland, Czech, Hungary, Romania, Bulgaria, Latvia, Lithuania.

The Current Euro Crises

- The ongoing crisis in the periphery of Europe **began in Greece** in 2009, with the discovery of its falsified fiscal accounts; a fiscal deficit of 6% of GDP turned out to be 13%. The crisis then spread to Ireland and Portugal in 2010, and to Spain and Italy in 2011.
- During the years of economic expansion in 2000-2008, these five countries incurred **un-sustainable levels of debt**, either by their public sector (Greece, Italy) or their private sector (Ireland, Spain).
- This debt was poorly invested either in government current expenses (Greece, Portugal) or in speculative real estate (Ireland, Spain).
- When the 2008 **crisis reduced fiscal budget revenues**, all these countries incurred very high fiscal deficits to maintain and pay for the high level of European social benefits – they had to be financed with additional debt, thereby increasing public debt even more.
- The increases in debt were encouraged by low interest rates generated by the use of a common currency, the Euro, which created the illusion among investors that the default risks were similar across the Euro countries, charging almost identical interest rates across Europe.

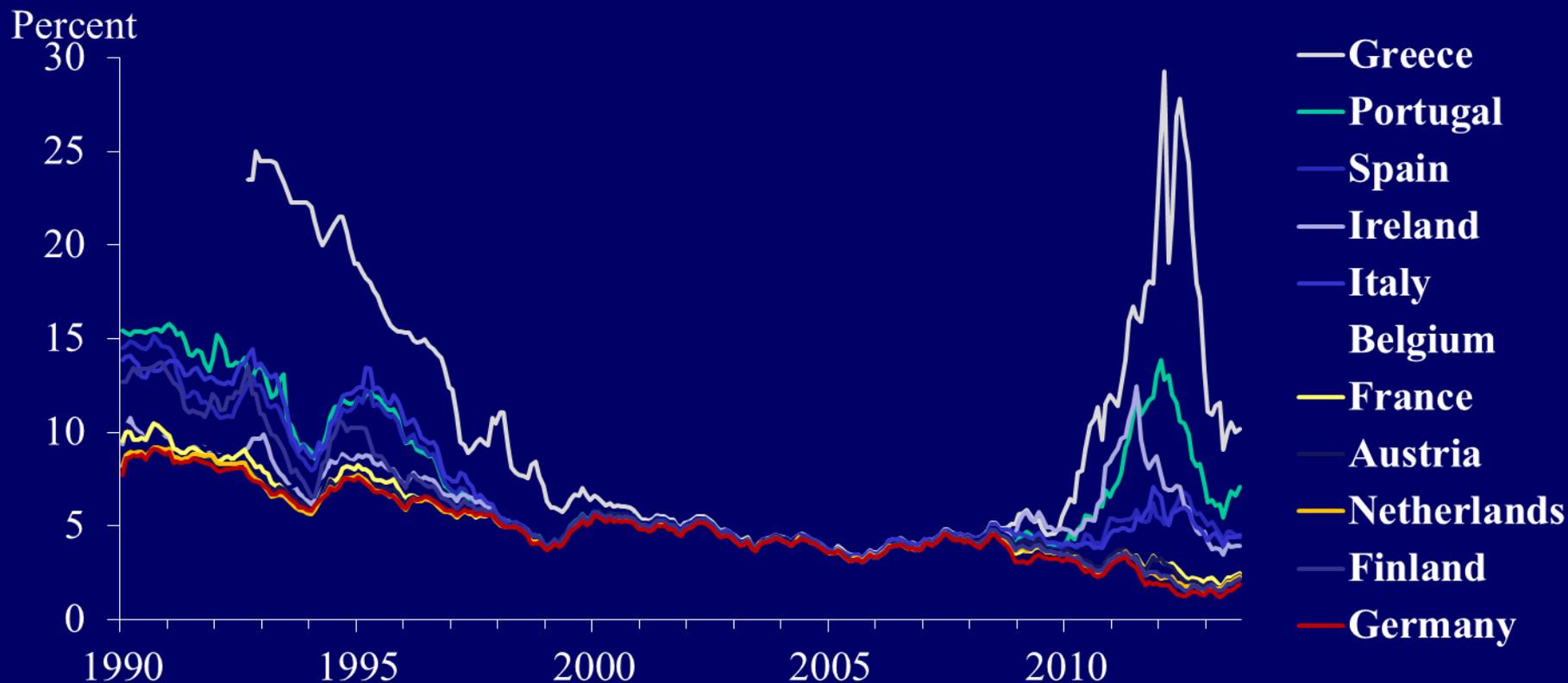
- The current crisis involves the risk that some of the highly-indebted EMU countries – particularly Greece - may default on their public debt, precipitating banking crises around the world and even leading to the collapse of the Euro.
- This would greatly damage the prestige of the Euro and the Eurozone, reversing the integration process in Europe.

Brief History of the Development of the Euro Crisis.

- Paul Krugman has provided a good description of the Euro history, which is described below:
- The new Euro introduced in 1999 generated a new sense of confidence in Europe, especially for those European countries that had been considered investment risks.
- Greece, with its long history of debt defaults and high inflation, was one of the main initial beneficiaries of this increased confidence.

- Until the late 1990s, Greece's poor fiscal policies were reflected in its bond yields: investors would buy bonds issued by the Greek government **only if they paid much higher interest** than bonds issued by governments perceived as safe, like those by Germany.
- Its high rates limited Greece's capacity to contract excessive debt.

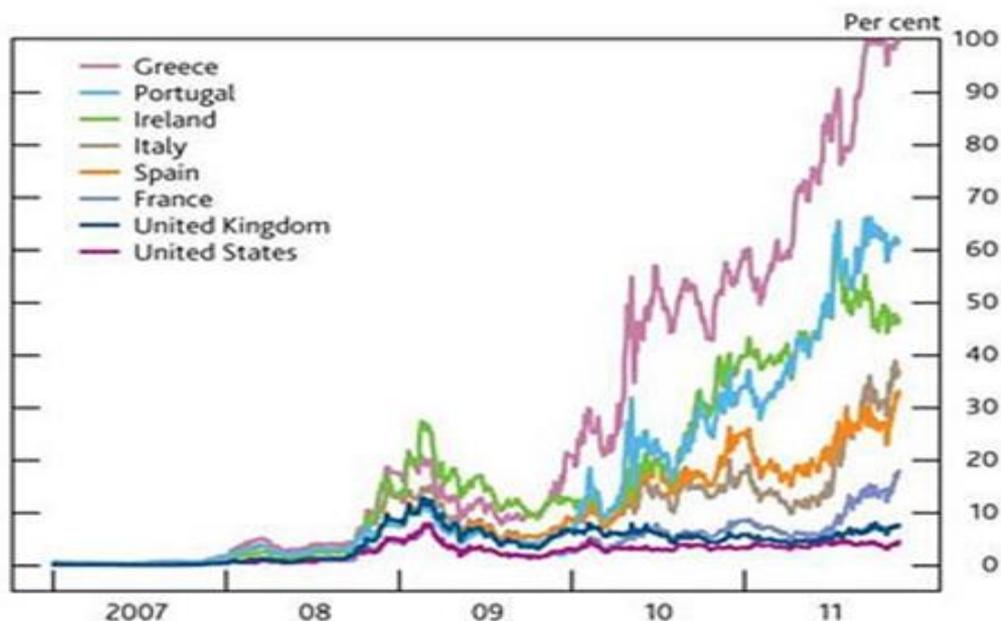
EU 10-year Government Interest Rates



- As the Euro's entry approached, however, **the risk premium on Greek bonds was reduced significantly.**
- This happened because investors felt that Greek debt would be immune from default: the ECB would intervene to avoid it.
- Indeed, by the middle of the 2000s just about all investors' concerns of country-specific fiscal risks had vanished.
- Greek bonds, Irish bonds, Spanish bonds, Portuguese bonds — they all traded at similar rates, as if they were as safe as German bonds.
- As interest rates converged in Europe, the formerly high-interest-rate countries **found debt cheap, and borrowed excessively from banks.**
- **This was a key driver for the crises:** excessive borrowings by Greece, Ireland, Portugal, Italy, and Spain -- encouraged by the convergence of interest rates in the Eurozone and by lenders in core countries.
- Mistakes were made by borrowers and **also by lenders:** as a result, the debt problems of Europe's periphery are also the problems of European lending banks, principally in Germany, France, Belgium.

- Despite differences in public debt levels, before 2008 the market saw no differences in default probabilities.
- But in 2009-2010, these differences in default became apparent.

Chart 1.1 Market-implied default probabilities over the next five years for selected sovereign debt^(a)



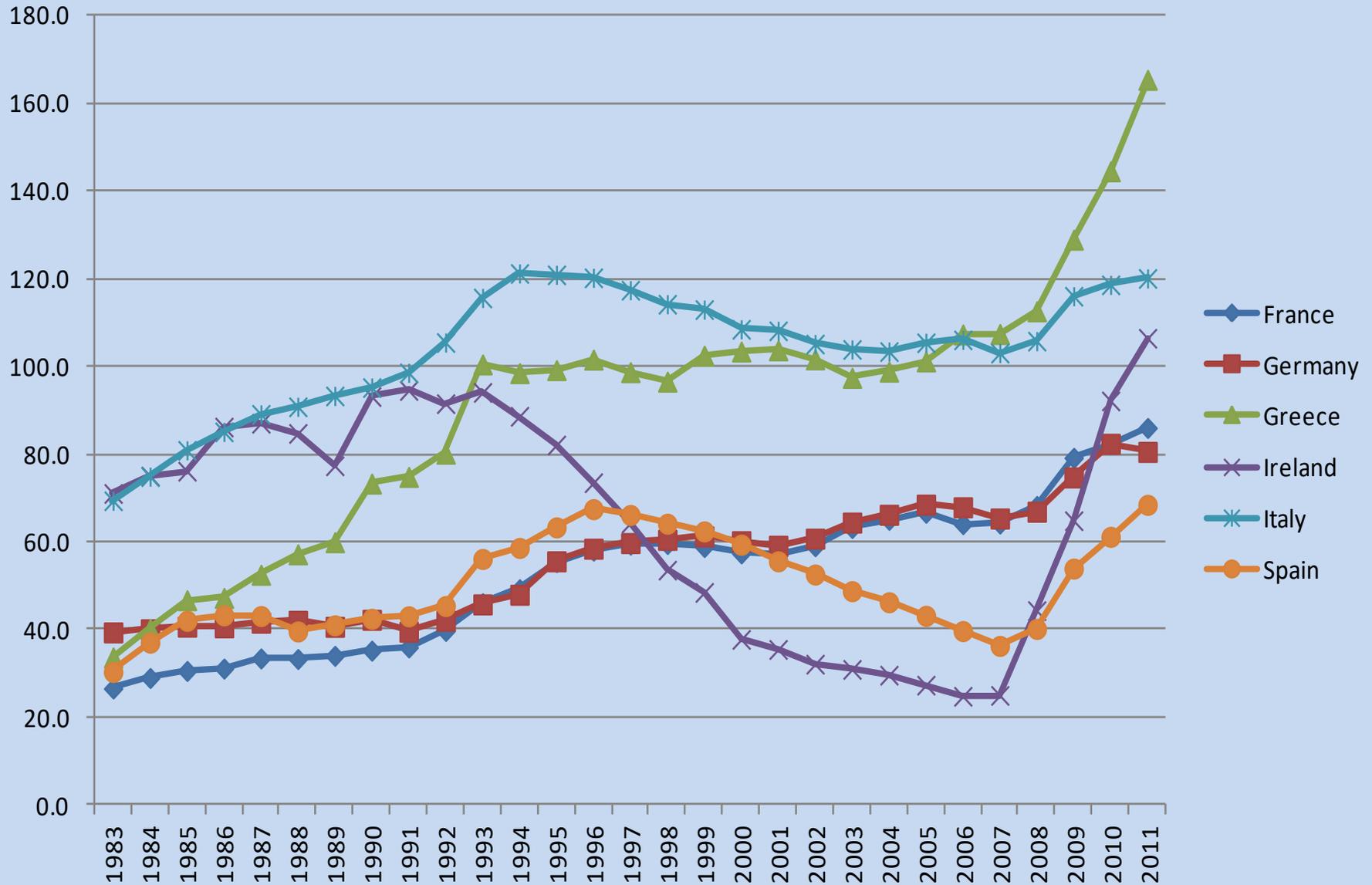
Sources: Markit Group Limited and Bank calculations.

(a) Probability of default, derived from CDS premia, from the perspective of a so-called 'risk-neutral' investor that is indifferent between a pay-off with certainty and an uncertain pay-off with the same expected value. If market participants are risk-averse, these measures may overstate actual probabilities of default. A loss given default of 60% is assumed.

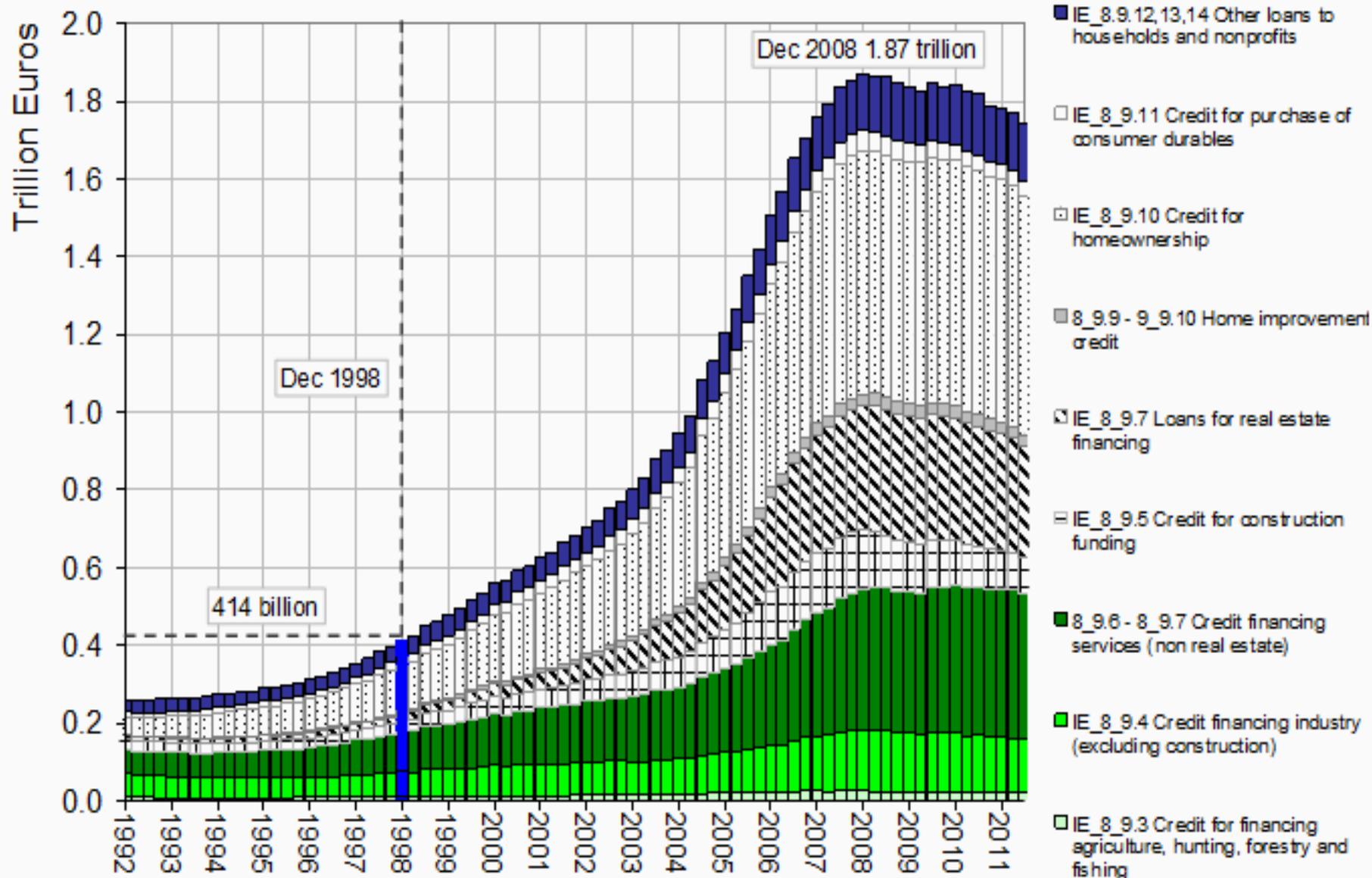
Debt Utilization

- The Greek debt was **public** and used for Defense (due to fears about Turkey) and was financed principally by German and French banks.
- Portugal also incurred significant **fiscal deficits & public debt** due to large fiscal expenditures, mismanagement and a large bureaucracy.
- Elsewhere, the big borrowers were **private – not public - entities**.
- **Ireland and Spain had huge real estate booms**: home prices rose 180 percent from 1998, just before the Euro was introduced, to 2007.
 - Spanish **private debt** increased from **180%** of GDP in 2000 to **285%** of GDP in 2010. Five million houses were built in Spain between 1997 and 2007, twice the increase in new households. Whole ghost towns were built, which today are toxic/trouble property bank loans.
 - In 2007, construction accounted for 13 % of total employment in both Spain and Ireland, more than twice as much as in the United States.
 - So when the building booms came to a halt, employment crashed.
 - Overall employment fell 10 % in Spain and 14 % in Ireland.

Public Debt as Share of GDP in some EMU countries



Spain: Total Bank Credit to Domestic Borrowers



Loss of Competitiveness

- This initial Euro success and large financing also encouraged countries in the periphery to increase wages at a faster pace than elsewhere.

Chart 1: Unit labor costs indexed to 1999 (EMU launch) equals 100
For example, Germany at 106 indicates that unit labor costs have increased by 6% cumulatively since 1999.



Source: OECD

- Europe regarded periphery wage increases as positive signals of convergence. But these countries lost competitiveness and exports. 23

- **Germany also benefitted by expanding its exports to the periphery.**
- In the 1990s, German economy was depressed due to low demand from local consumers and low exports.
- But it recovered in the decade that followed, thanks to export booms to the periphery.

Current Account Balances (*percent of GDP*)

	<i>1993–1997</i>	<i>1998–2002</i>	<i>2003–2007</i>	<i>2008–2011</i>
Greece	–2.0	–5.9	–9.1	–11.1
Ireland	3.4	–0.2	–2.6	–1.6
Italy	2.1	0.2	–1.8	–2.9
Portugal	–2.4	–9.0	–9.2	–10.5
Spain	–0.6	–3.1	–7.0	–5.8
France	1.1	2.0	–0.2	–1.9
Germany	–0.9	–0.3	5.1	5.7

Source: International Monetary Fund

- Everybody benefitted & things were going well: the € was a success.

- **But then the bubble burst.**
- The crisis in the US was in part due to its **house subprime borrowers** who took on mortgages too big for their incomes to be repaid.
- Similarly, in Europe, **its periphery economies borrowed much more than they could really afford to pay back and also lost competitiveness.**
- This excessive borrowing was largely financed by banks in France, Germany, Belgium and other low-interest-rate countries, which experienced stress after 2008 due to the US subprime crisis.
- In the Euro periphery, real estate bubbles temporarily concealed the underlying un-sustainability of the borrowing: as long as housing prices kept rising, borrowers could always pay back previous loans with more money borrowed against their properties.
- In Europe, **the initial damage came from the collapse of the real estate bubbles** (caused in part by the US financial crisis), which stopped the Ponzi scheme and devastated employment.

- Furthermore, in late 2009, **the European crisis entered a new phase.**
- First Greece, then Ireland, Portugal, Spain and Italy suffered **losses in investor confidence** and a **significant rise in borrowing costs.**
- In Greece the cause is clear: the **government concealed** its large deficits and public debt through the use of financial derivatives.
- When the Greek government changed in 2009, the accounting fictions came to light; suddenly it was revealed that **Greece had both a much bigger deficit and substantially more debt than anyone had realized.**
- Investors, understandably, **demanded higher rates to lend more.**
- **But before the crisis Spain and Ireland had good fiscal situations, with balanced budgets and low public debt. What went wrong here?**
- First, there was a large direct fiscal effect from the recession: Revenue plunged in both Spain and Ireland, in part because tax receipts depended heavily on real estate transactions.
- And as unemployment soared, so did the cost of unemployment benefits, as Europe has **extensive social programs** to protect citizens.

- As a result, both Spain and Ireland went from **budget surpluses** just before the crisis to **huge budget deficits** by 2009.
- Then, there were the costs of **bank clean-up**, which were especially high in Ireland, where banks had lent excessively in the boom years.
- When the real estate bubble burst, Irish banks became insolvent.
- In an attempt to avert a massive run on the financial system, **Ireland's government guaranteed all bank debts** — loading the government itself with those debts, bringing its own solvency into question.
- Big **Spanish banks** were well regulated by comparison, but the smaller local private savings banks (Cajas) became insolvent.
- The Spanish government forced the merger of a large number of savings banks into a larger bank called Bankia. But when Bankia was unable to cover its debts, the Spanish Government had to nationalize it and assume its debts.
- Spain was in trouble because it needed about \$60 billion to recapitalize banks and could not print its own money. It is finally able to negotiate **direct** financing to the banks from the EU.

What is different about the Euro countries that make them more vulnerable to a financial crisis?

- In fact, there are other nations — in particular, the United States and Britain — that have been running fiscal deficits that, as a percentage of GDP, are comparable to the deficits in the Euro's periphery.
- Yet they haven't suffered a comparable loss of lender confidence.
- It is the **Euro itself** that makes the Euro periphery so vulnerable.
- In fact, membership in the Euro means that these countries cannot issue their own currency (print their money) to service their debt.
- The Euro has delegated them to the category of most developing countries that must issue debt in foreign currencies as they can not issue debt in their own currency to deal with economic shocks.
- Also, without devaluations and without more debt, these countries have to deflate their prices and wages to regain competitiveness.
- The trouble with deflation is not just the coordination problems and population resistances to get wages and prices down.
- Even when countries successfully drive down wages, they run into another problem: incomes are falling, but debt is not.

- Irving Fisher noted 80 years ago, that the collision between deflating incomes and unchanged debt can greatly worsen economic downturns.
- Suppose the **economy declines for whatever reason**: spending falls and so do prices and wages. **But debts do not**, so debtors have to meet the **same obligations with smaller income**; to do this, they have to cut spending even more, further depressing the economy.
- The way to **avoid this vicious circle**, Fisher said, **was monetary expansion** that provides cheap financing and reverses deflation.
- **And in America and Britain, the Federal Reserve and the Bank of England, respectively, are trying to do just that.**
- But Greece, Portugal, Ireland, Spain and Italy **do not have that option** — they don't have their own monies, and in any case they need deflation to get their costs in line to regain competitiveness.
- Over the past 3 years, these countries became caught up in a vicious financial circle: as potential lenders lost confidence, the interest rates that they had to pay on the debt rose, undermining future prospects, leading to a further loss of confidence and even higher interest rates.

The Dollar –versus- the Euro as OCAs

- A single currency has advantages; but forming a currency union means sacrificing economic flexibility.
- How serious is this loss of flexibility depends on whether the countries meet OCA conditions, mainly on the degrees of fiscal budget integration and labor mobility.
- Paul Krugman has made the following comparison between two small economies in trouble that have many things in common: the nation of Ireland and the state of Nevada.
- Both are small economies of a few million people highly dependent on selling goods and services to their neighbors (other states or nations).
- Both were boom economies for most of the past decade. Both had huge housing bubbles, which burst painfully. Both are now suffering roughly 14 percent unemployment. And both are members of currency unions: Ireland, of the euro zone, Nevada, of the dollar.
- But Nevada's situation is much less desperate than Ireland's.
- First of all, the fiscal side of the crisis is less serious in Nevada, even though budgets in both Ireland and Nevada have been hit hard.

- This is because much of the spending Nevada residents depend on funds from federal, not state, programs. In particular, retirees who moved to Nevada don't have to worry that the state's reduced tax take will endanger their Social Security checks or their health coverage.
- In Ireland, by contrast, both pensions and health spending are at risk.
- Also, Nevada, unlike Ireland, doesn't have to worry about the cost of bank bailouts, not because the state has avoided large loan losses but because those losses, for the most part, aren't Nevada's problem.
- Thus Nevada accounts for a disproportionate share of the losses incurred by Fannie Mae and Freddie Mac, the US government-sponsored mortgage companies — losses that, like Social Security and Medicare payments, will be covered by Washington, not Carson City.
- Furthermore, under federal economic stimulus programs, the federal government has transferred billion of dollars to the states that have helped to service their public debts and provide state employment.
- And there's one more advantage to being a US state: it's likely that Nevada's unemployment problem will be greatly alleviated over the next few years by large emigration to other states.

- Because of emigration, even if the lost jobs don't come back to Nevada, there will be fewer workers chasing the jobs that remain.
- Americans are extremely mobile. Emigration will bring Nevada's unemployment rate back in line with the U.S. average in a few years.
- But Europeans are less willing to migrate to other places.
- Over all, then, even as both Ireland and Nevada have been especially hard hit, Nevada's medium-term prospects look much better.
- What does this have to do with the case for or against the Euro?
- When the single European currency was first proposed, a question was whether it would work as well as the dollar does here in America.
- And the answer, clearly, was no — for exactly the reasons the Ireland-Nevada comparison illustrates.
- **Europe isn't fiscally integrated:** German taxpayers don't automatically pick up part of the tab for Greek pensions or Irish bank bailouts.
- Europe is also **less geographically mobile:** While Europeans have the legal right to move freely in search of jobs, in practice, due to imperfect cultural integration and lack of a common language, in 2012 only about 3% of the EU workforce is employed in another member state.

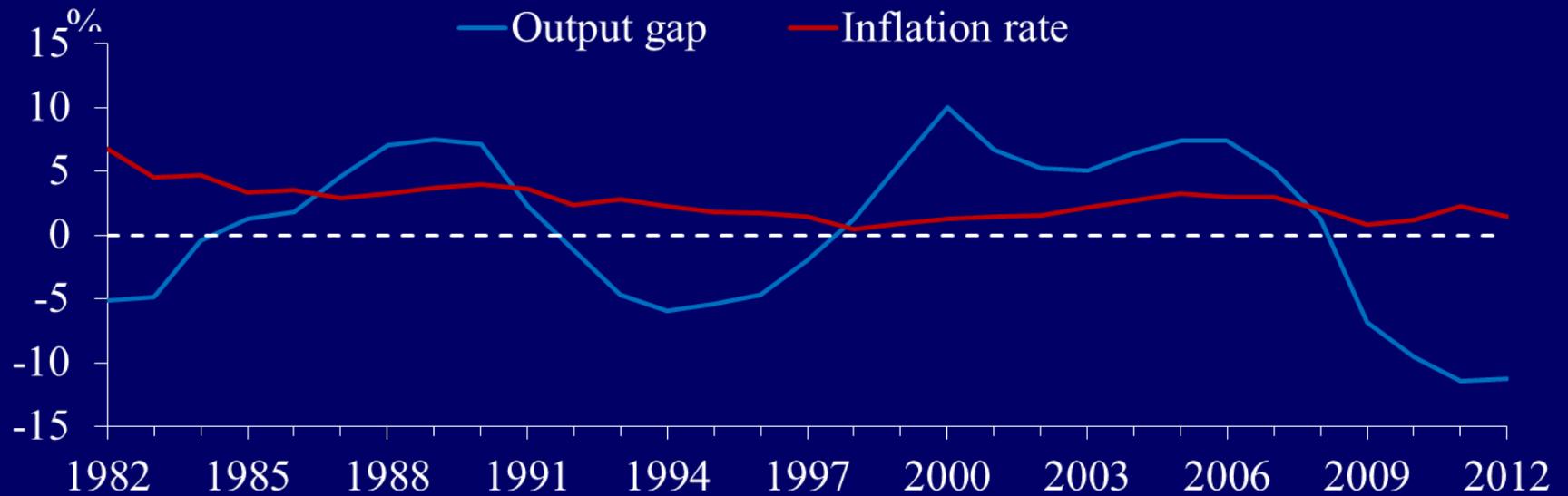
More on the US Dollar vs the Euro as OCA

- Mark A. Wynne, of the Federal Reserve Bank of Dallas made recently an analysis of this issue:
 - Euro area does not satisfy the criteria of an “OCA” and therefore living with a “one-size-fits-all” monetary policy will create strains
 - He illustrate this with comparison to US monetary union
 - How would individual US states conduct monetary policy if they were free to do so?
 - Use the Taylor Rule as guide: To minimize output and inflation gaps, the policy interest rate should be:

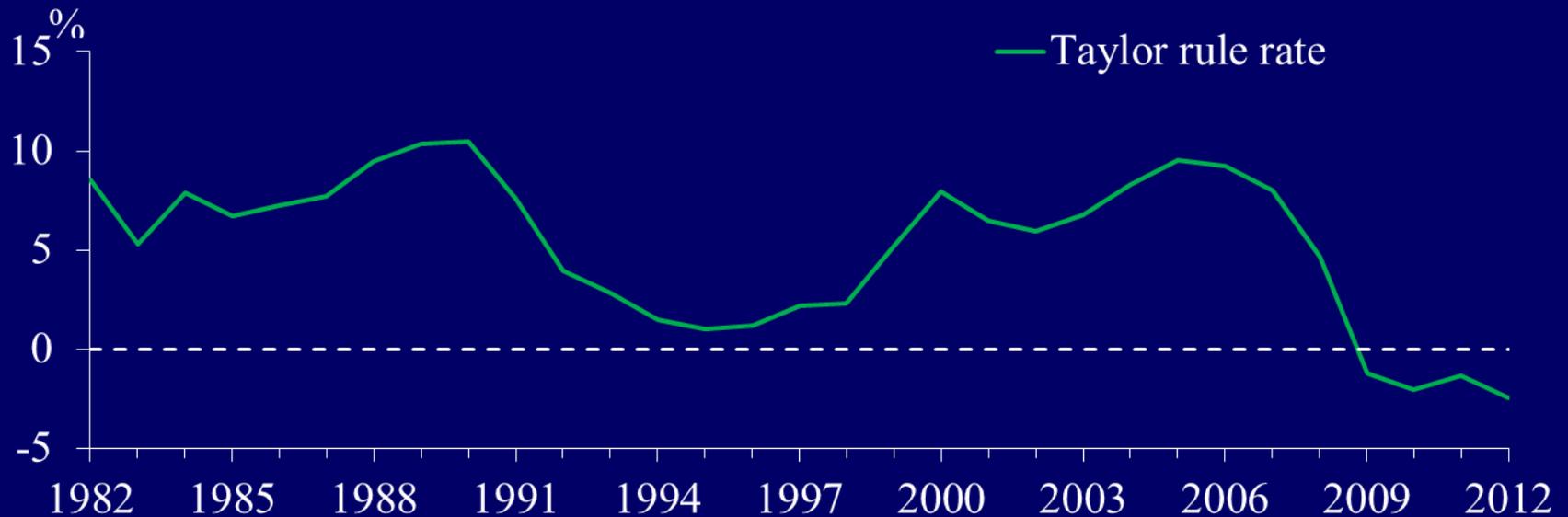
$$(4) \quad i_t = \gamma (\pi_t - \pi^*) + \rho (y_t - y_t^*)$$

- This equation says that the Central Bank ought to raise its policy interest rate when inflation is above the Central Bank’s target.
- But the CB should lower its policy interest rate if current income is below its potential, in order to stimulate the economy.

California: output gap & inflation



California: Implied Taylor rule rate

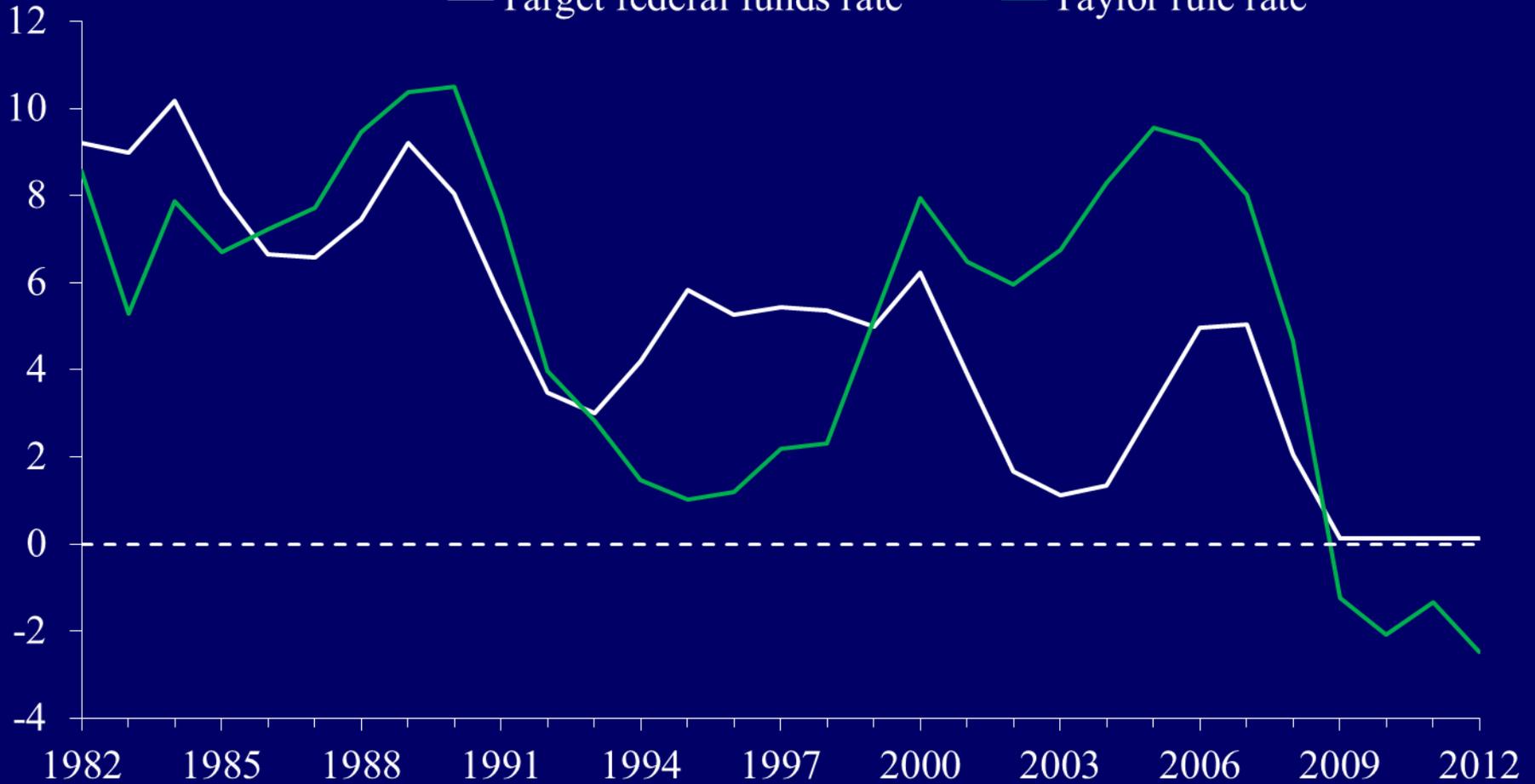


California: Fed funds rate & Taylor rates

Percent

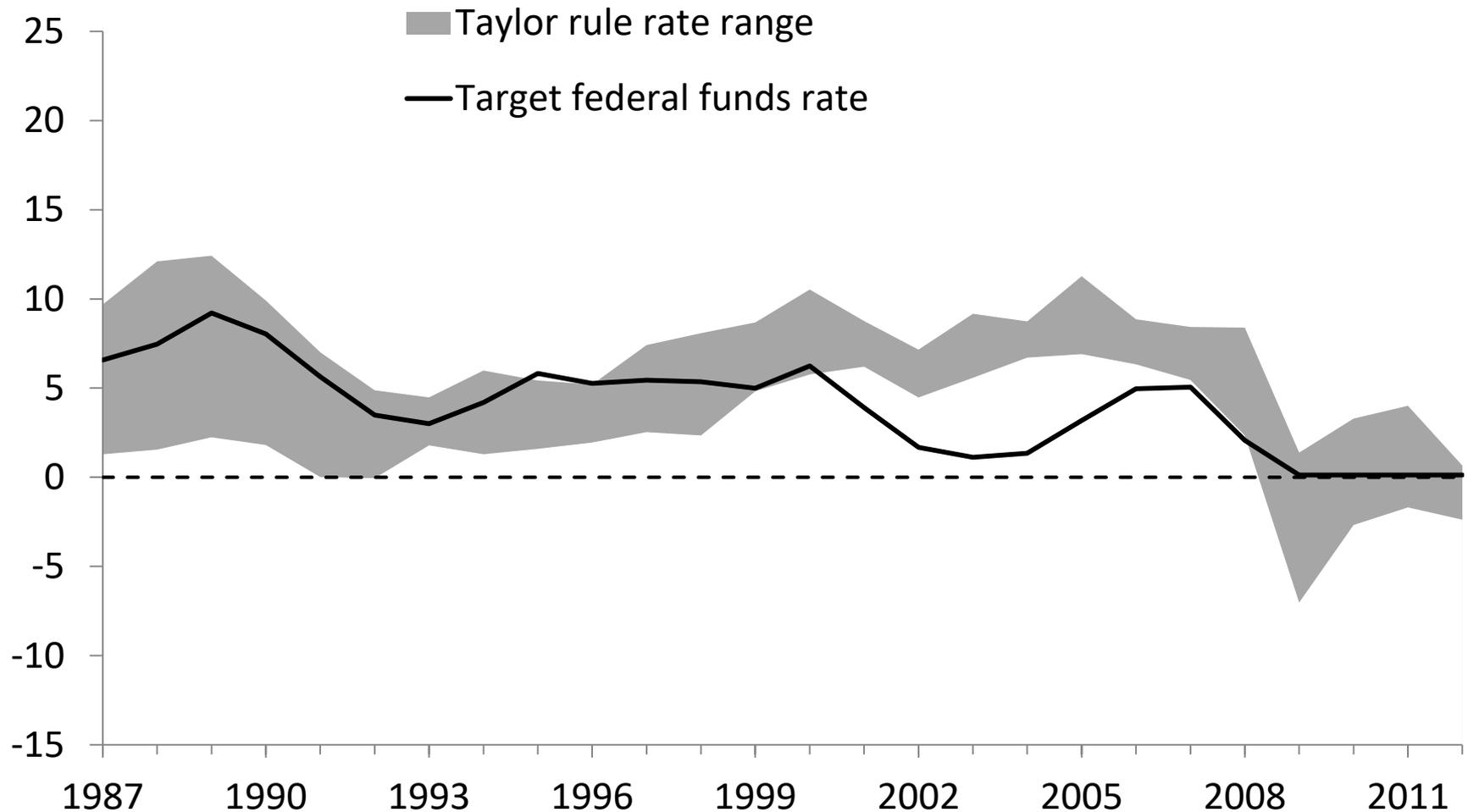
— Target federal funds rate

— Taylor rule rate



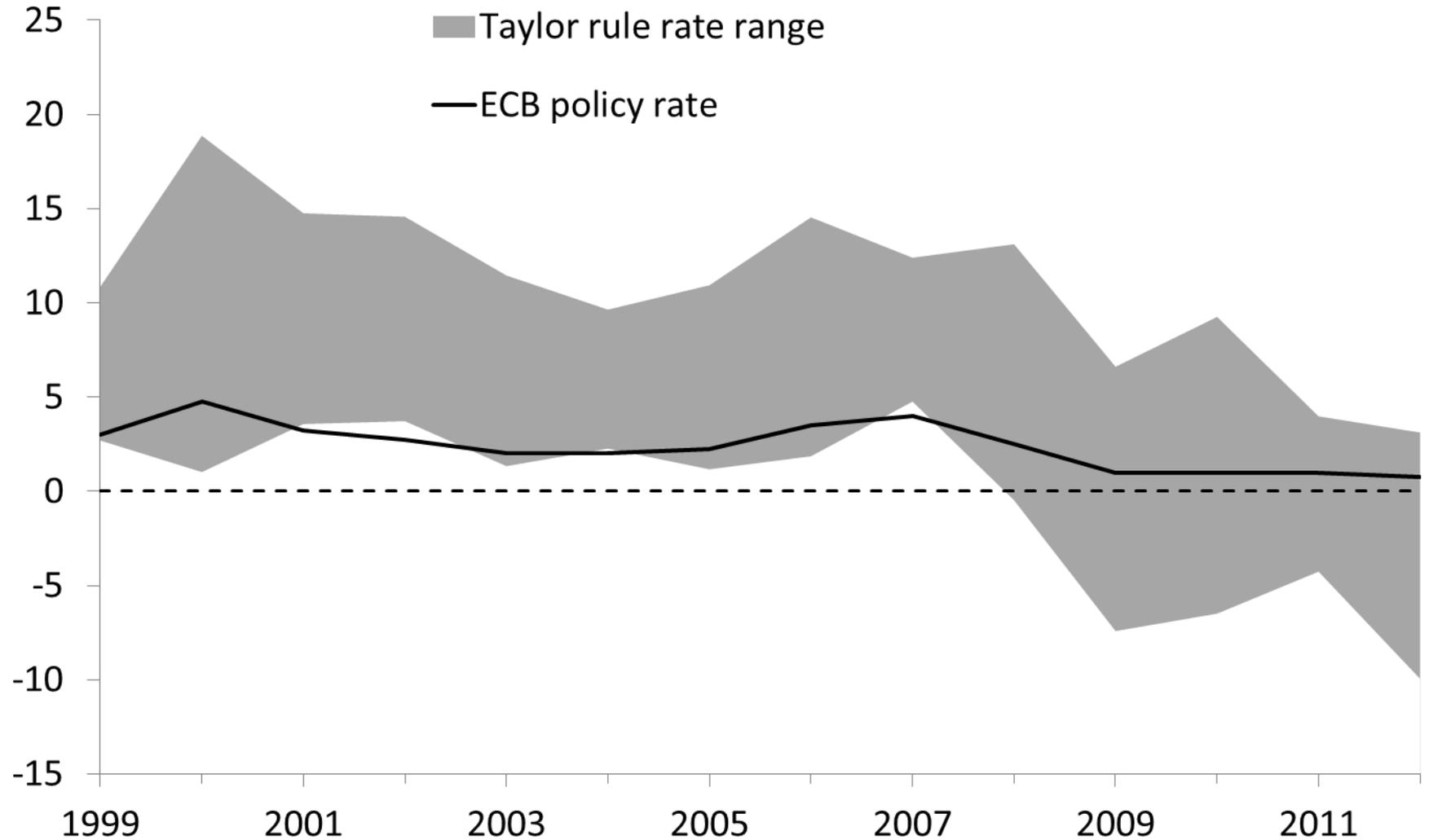
U.S. BEA regions Taylor rule rate range

Percentage points



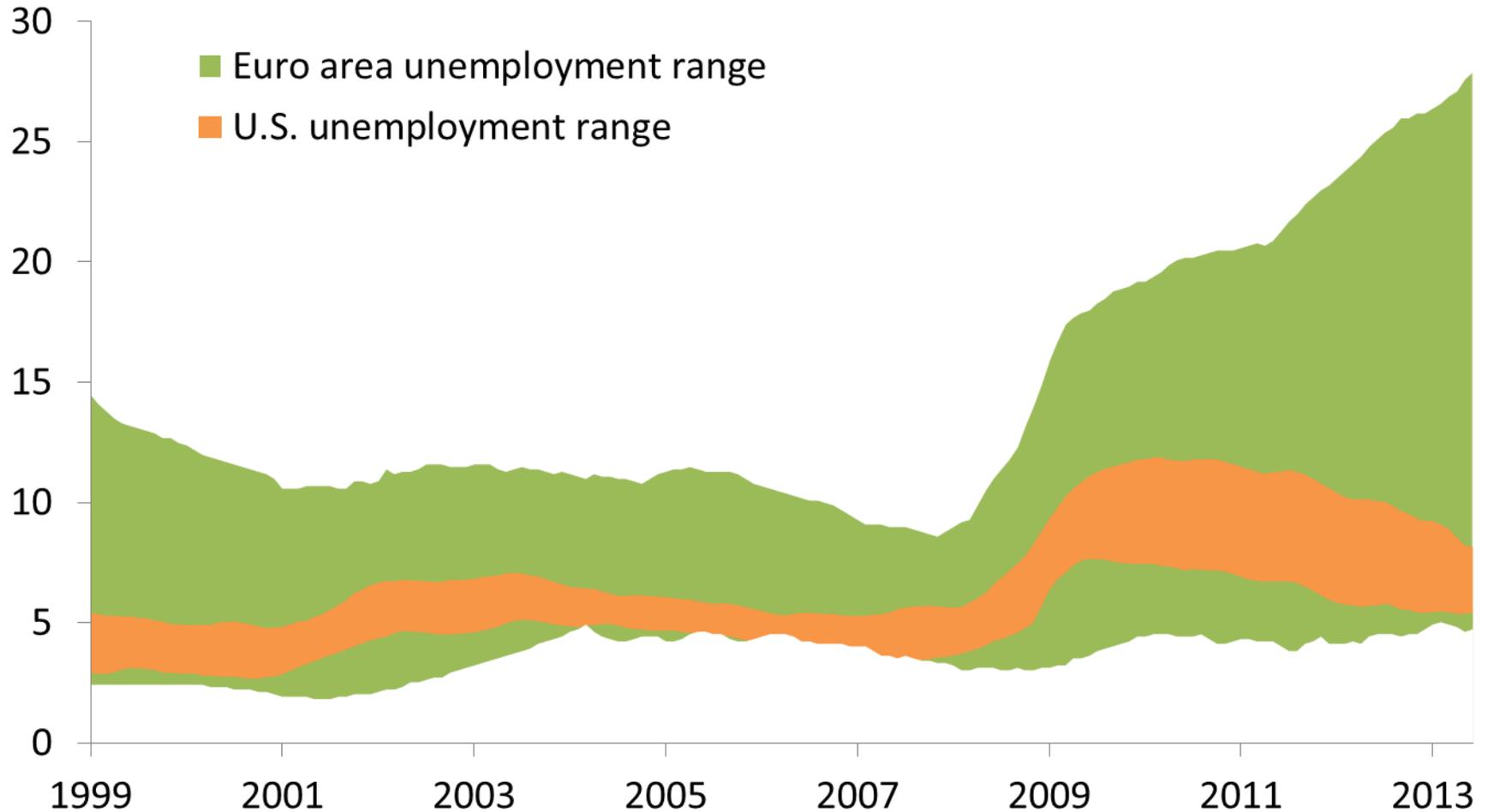
Euro area Taylor rule rate range

Percentage points



Variation in unemployment rates

Percentage points

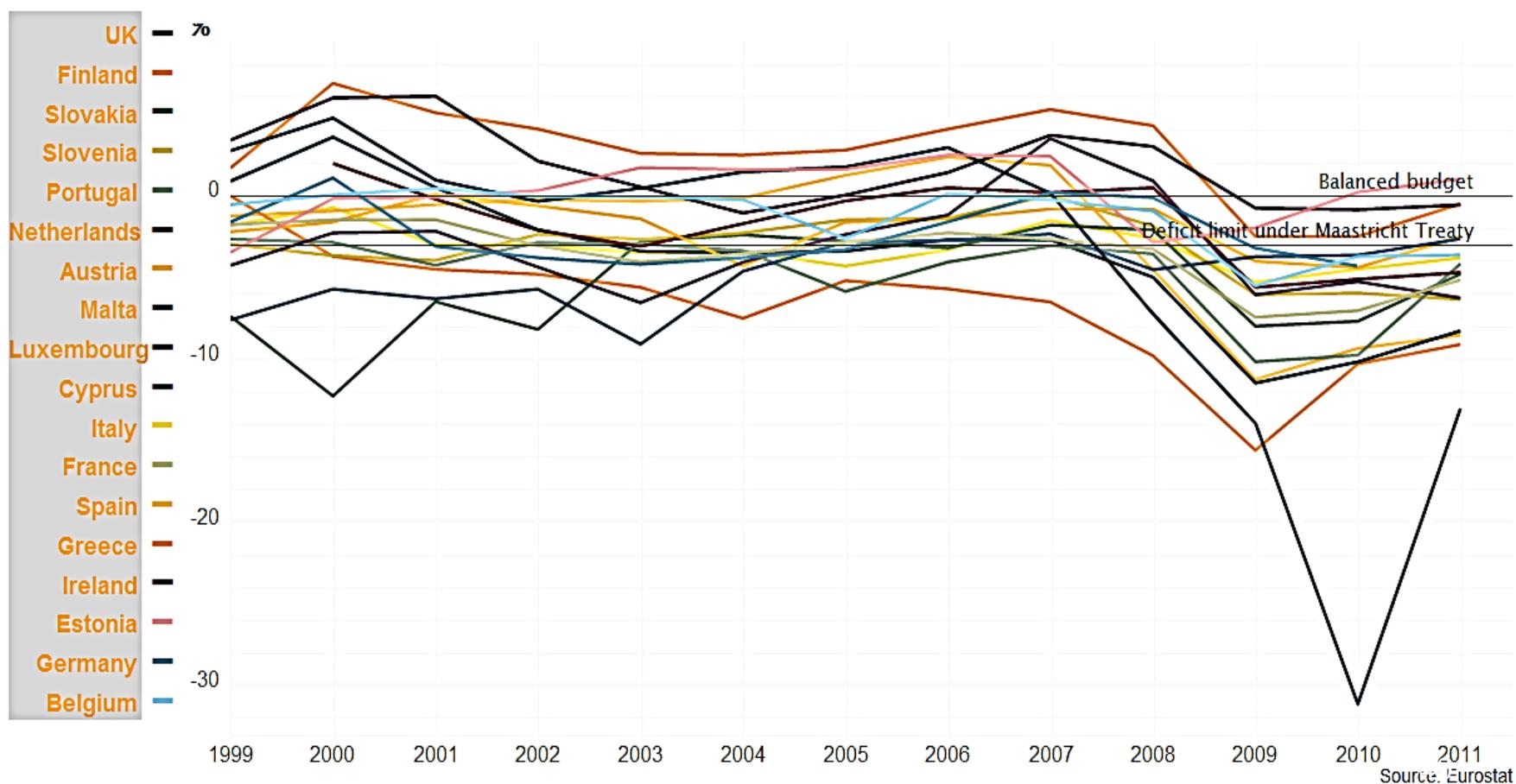


Fundamental Causes of the Euro Crisis

1. Serious **shortcomings in meeting OCA conditions** needed to make a common currency workable: in particular, Europe lacks strong labor mobility across countries, wage/price flexibility, economic symmetry, and common financial/fiscal budget policies.
2. Widespread **non-compliance with Maastricht criteria and SGP: in 2011, only Luxembourg and Finland meet the debt and deficit criteria.**
3. **Low interest rates in the EMU's periphery enabled large borrowings** and permitted them: (1) to increase wages and pensions at fast pace, losing competitiveness; (2) to maintain large **inefficiencies** (widespread tax avoidance and large public administrations); (3) to **finance bubbles** (real estate in Spain/Ireland) and other expenditures (Greece); and (iv) to incur large imports and current account deficits.
4. **Excessive lending** at unjustified low interest rates by core EU banks.
5. A “one-size-fits-all” **monetary policy was unsuitable** for many.
6. The **global liquidity crisis** contributed to the accumulation of debts₃₉

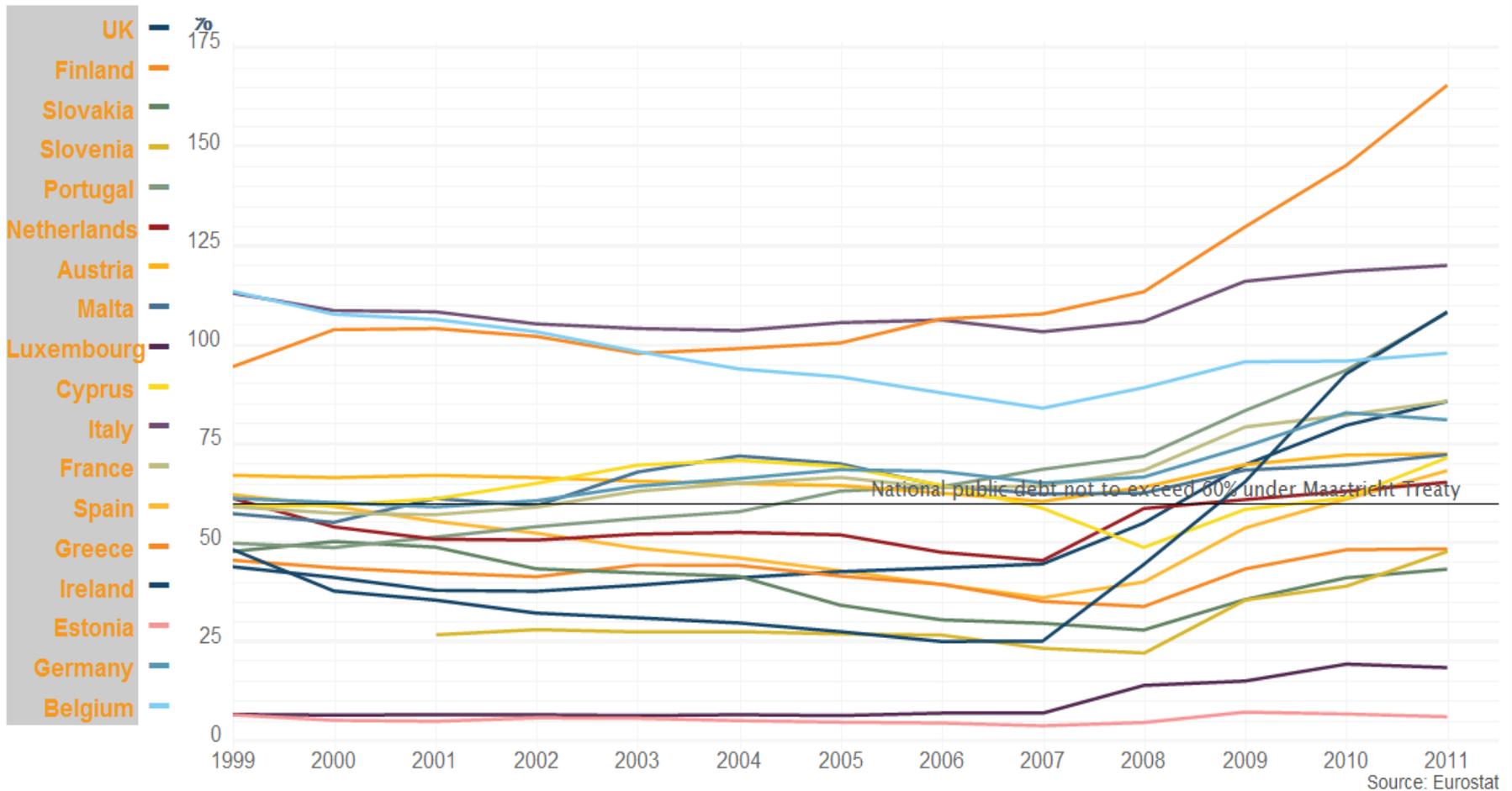
Only Estonia, Luxembourg & Finland met the 3% of GDP fiscal deficit criteria.

The highest fiscal deficits were in Ireland (13.1%), Greece (9.1%), Spain (8.5%), and the UK (8.3%)

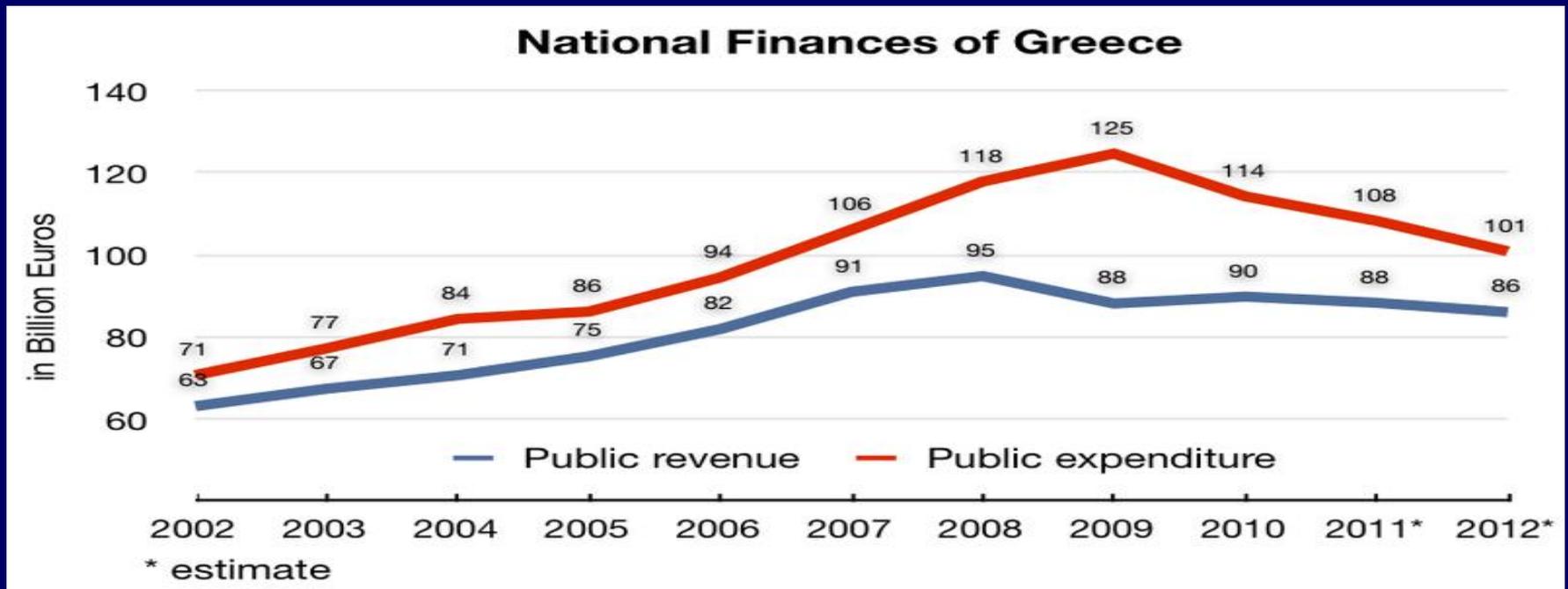


Source: Eurostat

- Only Luxembourg, Slovakia, Slovenia and Finland met the EU criteria of maximum debt/GDP of 60%.
- The highest debt ratios were in Greece (165%), Italy (120%), Ireland (108%), Belgium (98%) and France (86%).



The Case of Greece



- Greece has been living beyond its means, with large fiscal deficits.
- These deficits led to the accumulation, by 2012, of **\$460 bn of public debt** (175% of GDP of \$260 bn), of which \$360 bn are due to foreign banks and private lenders (\$200bn), governments (\$60bn), and institutions such as the IMF, ECB, EU (\$100bn).
- Of the amounts due locally (\$100 bn), about 50% are owed to local banks, with the rest owed to government agencies.

- Over the last 2 years, **Greece has received significant financial aid:**
- In May 2010, the EU and IMF provided 110bn euros of bailout loans to Greece to help the government pay its creditors.
- In 2011, a 2nd, 130bn-euro bailout, was agreed, to be given in stages.
- By Nov 2012, Greece had received 150bn euros from these loans.
- In addition to these two loans, the majority of Greece's private creditors agreed to write off more than half of the debts owed to them by the Greek government. They also agreed to replace existing loans with new loans at a lower rate of interest.
- However, **in return for all these loans, the EU and IMF insisted that Greece embark on a major austerity program** involving drastic spending cuts, tax rises, and labor market and pension reforms.
- These have had a devastating effect on Greece's already weak economic recovery. Greece has already been in recession for four years. The EC expects the Greek economy to shrink by 4.2% in 2013.
- Without economic growth, Greece cannot pay its loans: it may default (exiting the Euro) or may require further debt write-offs.

Greece: Key Macroeconomic Indicators.

	2011	2012	2013	2014	2015	2016
Real GDP (growth rate)	-7.1	-6.0	-4.2	0.6	2.9	3.7
Final domestic demand contribution*	-10.1	-9.0	-6.7	-0.8	1.8	3.0
Net trade contribution	2.4	3.3	2.5	1.5	1.1	0.8
Employment (growth rate)	-5.6	-7.9	-2.1	1.4	2.0	3.0
Unemployment rate (percent of labour force)	16.5	22.4	22.8	21.0	19.4	16.7
Compensation of employees, private sector per head	0.4	-4.0	-9.7	-10.6	1.9	2.2
Unit labour cost (growth rate)	-2.4	-8.7	-5.0	-0.4	-1.0	1.0
HICP inflation	3.1	1.1	-0.8	-0.4	0.6	1.1
HICP inflation at constant taxes	1.2	0.2	-1.3	-0.6	0.5	1.1
Current account balance (percent of GDP)	-11.7	-8.3	-6.3	-5.2	-3.4	-2.1
Net borrowing vis-à-vis RoW (percent of GDP)	-9.8	-6.1	-3.9	-2.7	-1.0	0.3
Net external liabilities (percent of GDP)	-120.9	-94.4	-102.5	-105.6	-105.1	-102.5
General Government deficit (percent of GDP)	-9.4	-6.9	-5.4	-4.5	-3.4	-2.0
General Government primary surplus (percent of GDP)	-2.3	-1.5	0.0	1.5	3.0	4.5
General Government debt (percent of GDP)	170.6	176.7	188.3	188.9	184.2	174.7

Source: European Commission

Consequences of the Euro Crises.....

1. Inability to Serve External Public Debt.

- Raising interest rates in periphery countries led to the inability of these EMU governments to fully service their external obligations.
- Since the market had assumed that all EZ governments' Euro obligations are jointly and severally guaranteed by the EZ and the ECB, a default by one Eurozone Government would call into question the debt-servicing abilities of other heavily indebted countries.
- As the cost of (re)financing their debts rose to high levels, their default could follow. And so would then the collapse of the EMU.

2. Impact on EU Banks

- Since EU banks hold huge volumes of Eurozone sovereign (and private) debt, a chain of defaults would threaten several nations' banking systems, particularly in France and Germany.

.....Consequences of the Euro Crises (cont'd)

3. Competitiveness Loss in the Periphery.

- Since the introduction of the Euro, excessive borrowings led to loss of competitiveness of periphery countries as their wages and prices rose faster, and productivity slower, than those of their EMU partners.
- As noted earlier, from 1999 to 2010, wages increased by 40%-55% in Greece, Italy and Spain; whereas wages increased by 6% in Germany.
- In Spain and Ireland private borrowings led to high wages driven up by housing booms. But then, with extensive overbuilding, the booms went bust. Housing construction could no longer be a source of employment.
- With devaluation not an option, high wages make it almost impossible for some countries, such as Greece – to export competitively and grow and bring large Current Account deficits (and the resulting external debt) under control.

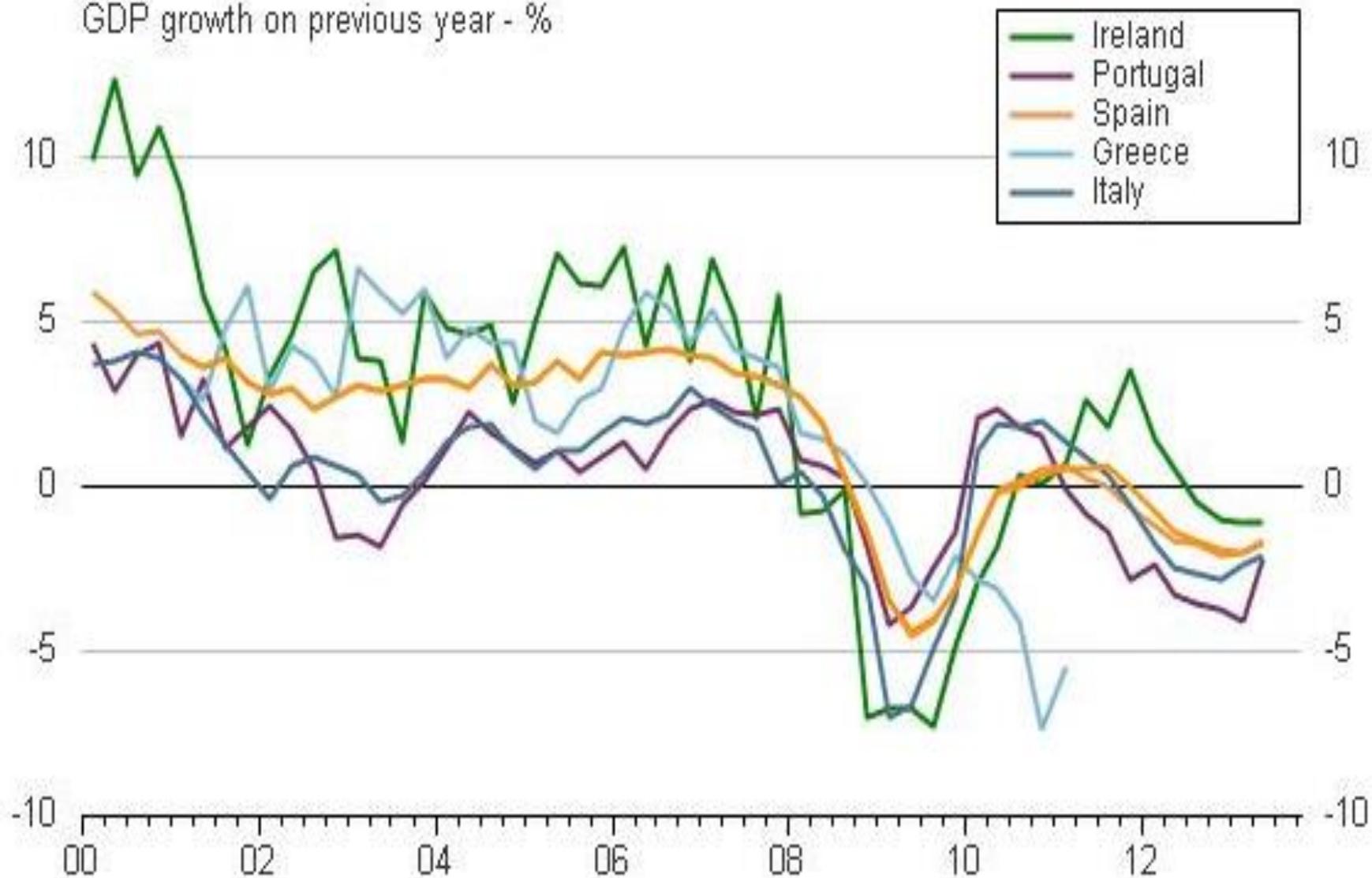
....Consequences of the Euro Crises (cont'd)

4. Inability of Periphery Countries to Resume Growth.

- To address the crises, these countries require major reduction in domestic wages and costs (internal devaluation) to revive economic activities, reduce unemployment and improve competitiveness.
- But getting wages and prices to fall is difficult: labor unions resist pay cuts, especially without assurance that prices will fall.
- Also cutting wages is also hard when people have large debts.
- Without devaluation options, and with resistance to “internal devaluation”, periphery countries will face difficulties in resuming sustained economic growth.
- If these countries had had their own currency, they wouldn't have to go through the protracted pains of cutting wages: They could just devalue their currency and they would effect a de facto wage cut.
- So while there are benefits of a common currency, there are also important potential advantages to keeping your own currency.

Euro zone GDP growth

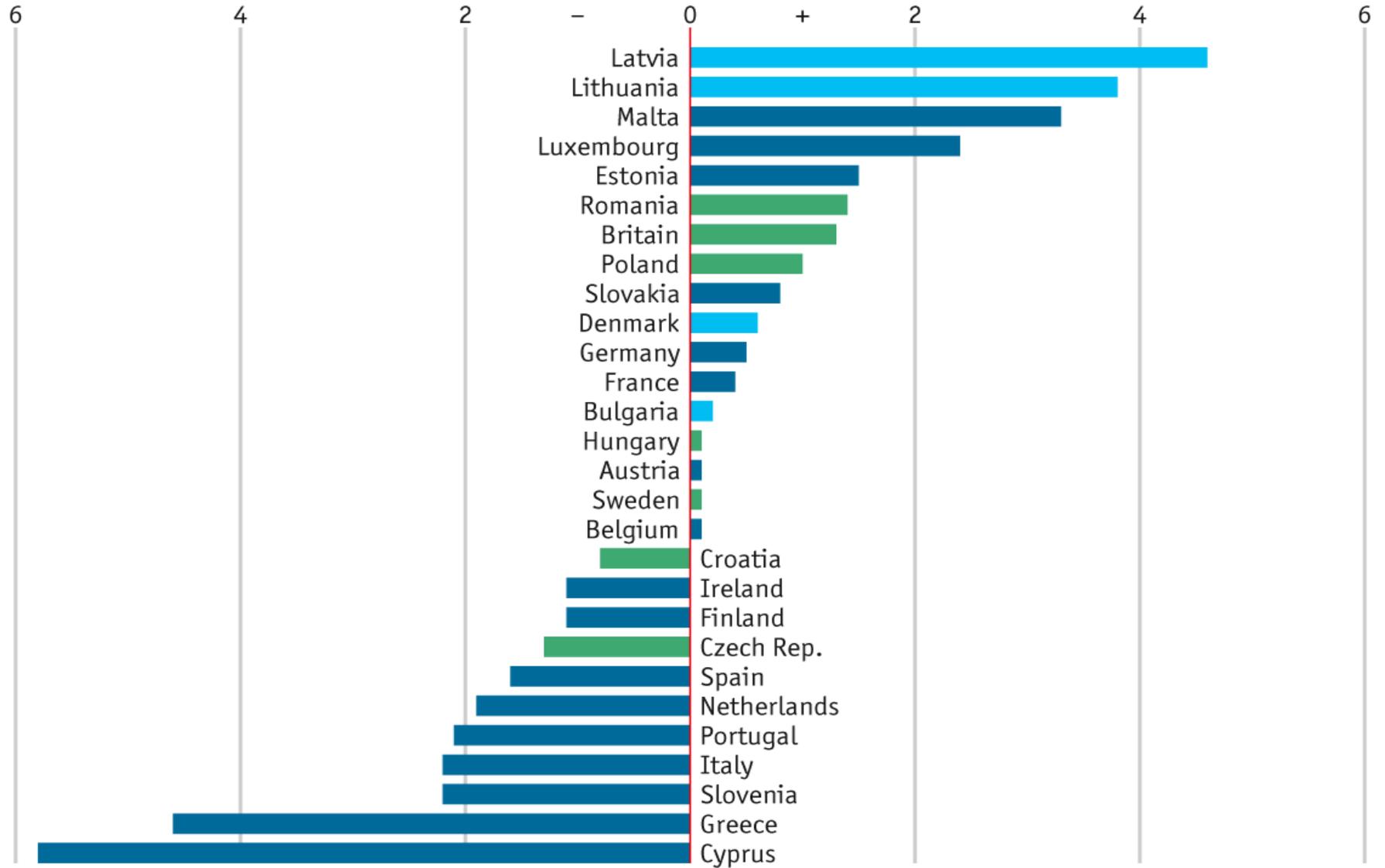
GDP growth on previous year - %



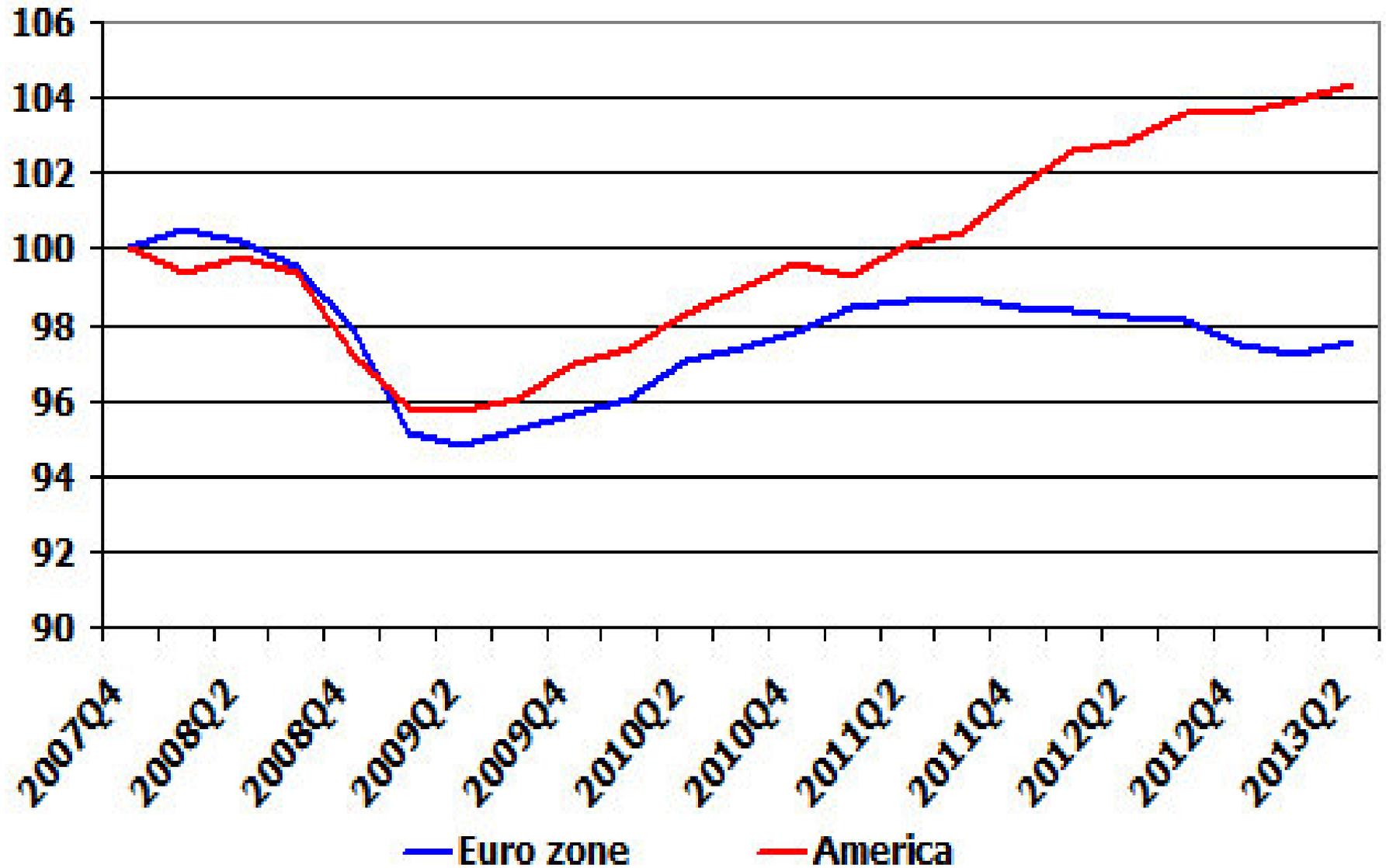
Latest GDP

% change on previous year*

■ Euro area ■ Currency pegged to euro ■ Floating currency



Real GDP (2007Q4=100)



Management of the Eurozone Crisis

- The shortcomings of the Eurozone have led to a major crisis.
- Until recently, only stop-gap measures had been implemented.
- Crisis management had concentrated on providing **liquidity to** avoid public default by Greece and other heavily indebted countries.
 - But Greece faced public debt **solvency problem** as it was unable to **serve its large public debt** with a debt/GDP ratio approaching 190%.
 - Until mid-2011, the problem was treated by the Eurozone leadership and the IMF as if Greece had a liquidity, not a solvency problem.
 - They gave Greece large loan packages, with strict conditionality.
 - In 2011, the first “solvency” measure was agreed (the private **debt relief**); **but it** was insufficient to reduce substantially debt to GDP.
 - Most studies have shown that a public debt in excess of 60-80% of GDP is not sustainable as debt service would explode exponentially.
 - The ECB bought Greek and other public debt on the secondary market and gave large loans to Greek and other periphery banks against their government bonds as collateral.

Management of the Eurozone Crisis (cont'd)

- To finance liquidity assistance, in mid 2010 a temporary **European Financial Stability Facility** (EFSF) was created to issue bonds up to €440 billion, guaranteed by EMU states.
- The IMF added €250 bn to EFSF and the EC, €60 bn (total €750 bn)
- These funds were used for:
 - on-lending to those countries in difficulty;
 - buying sovereign debt on the secondary market to reduce interest rates for debt of these countries, and
 - recapitalizing banks
- Each transaction was subject to conditions negotiated with the EC, the ECB, the IMF and approved by the Eurozone's finance ministers.
- This amount was sufficient to give temporary help to Greece, Portugal and Ireland and to a few exposed banks, but was inadequate to help other sovereign debtors that could again be again “under attack”.

Management of the Eurozone Crisis (cont'd)

- In 2011 it was agreed to replace the EFSM by a permanent **European Stability Mechanism** (ESM), with a total capital of €700bn & a lending capacity of €500bn to provide support to countries in difficulty as well as to their financial sectors for bank recapitalizations.
- The ESM started operations in May-2013 and Spain and Cyprus have received support of €44bn and €10bn, respectively.
- The ESM has a sovereign debt default resolution mechanism: countries judged to be insolvent will have to undergo debt restructuring as a precondition of ESM access.
- Nevertheless, to do the job, ESM lending capacity should be raised substantially to over €2 trillion, an unlikely possibility.
- The EZ has also agreed to establish a **central banking supervision authority** to ensure the consistency and solvency of EZ banks. But it is reluctant to take further measures to set a centralized deposit insurance and bank resolution mechanism.

Plausible Scenarios for Resolving the Euro Crisis

- 1. Muddling through:** continued reactive steps, while delaying a credible, lasting resolution of the crises, and with the ECB providing low-cost liquidity support to banks, while requiring austerity measures that will just constraint economic growth.
- 2. Disorderly default by Greece followed by Exit from the Eurozone** (and others periphery countries). This may still be forced by domestic political considerations. Other countries may be forced into default by events, before Europe-wide institutions are in place to limit contagion. This will create a worldwide crisis.
- 3. Germany leaves the Eurozone**, with several other EMU countries that are reluctant to continue providing support to the periphery.
- 4. A true fiscal union** of some kind is agreed upon, particularly regarding a truly integrated banking system. But Germany is objecting to provisions that may require its financial support

Euro's Long Term Solutions

If the Euro survives the current crisis, there are some further measures that the countries must take to ensure the Euro's long term viability.

Address the Problem of Remaining Current Account Imbalances

- Fiscal austerity with reduced fiscal deficits should help reduce deficits in the current account.
- But the private sector could still spend more than it saves, leading to current account imbalances.
- In fact, as long as capital flows remain unregulated within the Eurozone, asset bubbles and current account imbalances are likely to continue.
- A country that runs a large current account deficit (i.e., it imports more than it exports) must ultimately be a net importer of capital; this is a mathematical identity implied by the balance-of-payments.
- In other words, a country with a current account deficit must either borrow to pay for excess imports or decrease its international reserves.

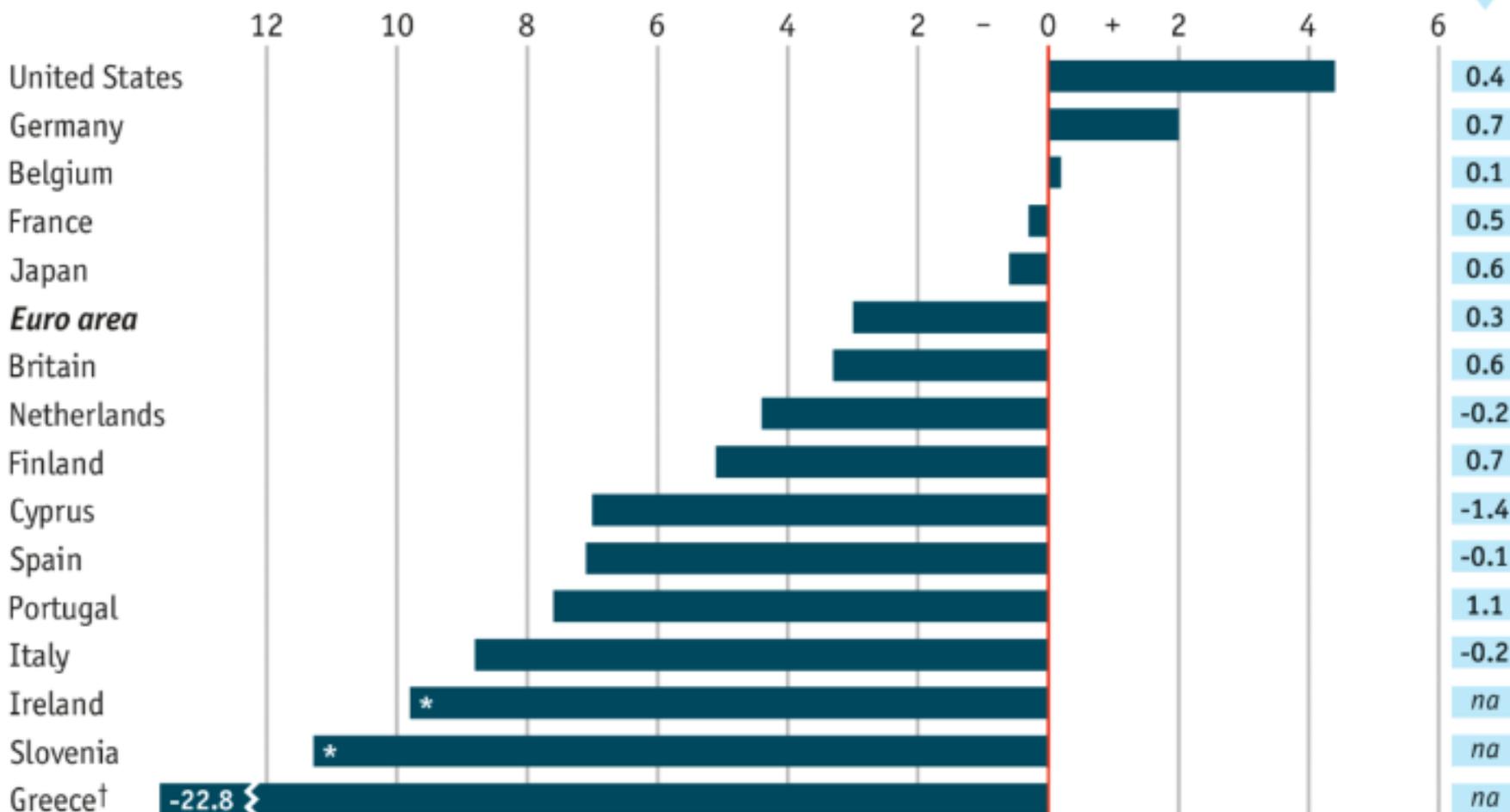
- Conversely, Germany's large trade surplus means that it must either increase its international reserves or be a net exporter of capital, lending money to other countries to allow them to buy German goods.
- The 2009 trade deficits for Italy, Spain, Greece, and Portugal were estimated to be \$43 billion, \$75 bn, \$36 bn, and \$25 bn, respectively, while Germany's trade surplus was \$188.6 bn.
- Outside the Euro, and with independent currencies, **a country with a large trade surplus** would see the value of its currency appreciate relative to other currencies, which would reduce the imbalance as the relative price of its exports increases.
- This appreciation occurs as the importing country sells its currency to buy the exporting country's currency used to purchase the goods.
- On the other hand, with independent currencies, **a country with large trade deficits** could act to encourage domestic saving, for example by restricting the flow of capital across borders, or by raising interest rates (although this benefit is likely offset by slowing down the economy and increasing government interest payments.)

- But the countries involved in the Eurozone crisis are on the Euro, so **individual interest rates and capital controls are not available**.
- The only solution left for a Eurozone country **is to raise the country's level of saving (public and private)**.
- For the public sector, this involves reducing fiscal budget deficits.
- For the private sector, this involves changing consumption and savings habits. For example, if a country's citizens saved more instead of consuming imports, this would reduce its trade deficit.
- Furthermore, Europe may have to re-consider whether its generous welfare programs are sustainable and what needs to do to compete.

GDP

Q2 2013, % change from country's pre-crisis peak (2007-08)

Q2 2013, % change on previous quarter



Source: Eurostat

*Q1 data †Data not seasonally adjusted: change from Q2 2007

Common Fiscal Policy (European Treasury)

- This may require the issuance of Eurozone bonds guaranteed by EMU countries, but this is strongly objected by Germany.
- Over the long term, EMU countries need a common fiscal budget policy, which may involve the creation of a new authority responsible for tax policy and spending oversight of EMU countries (an European Treasury.)
- But this development is unlikely, since in addition to having already lost control over monetary and foreign exchange policies, countries would also lose control over domestic fiscal policy.

Integrated Banking Sector

- In the absence of a common fiscal policy, the Eurozone has been developing a second best option: a Banking Union, which should involve three elements: (i) Centralized Banking Supervision; (ii) Centralized bank deposit insurance; and (iii) Common bank resolution mechanism.
- Only the first step is likely to move forward, since steps 2 and 3 require the backing of the full faith and credit the EU, which is objected by Germany.

Address Slow Economic Growth

- Even if the “financial” crisis is “resolved” now, the possibility of a slow recovery with a long economic recession will not fade.
- Slow GDP growth rates would also generate slow growth in tax revenues and higher safety net spending, increasing deficits and debt levels.
- The fact is that Europe's core problem is the lack of growth due to low competitiveness. For example, Italy's economy has not grown for an entire decade. No debt restructuring will work if it stays stagnant for another decade.
- European economies - with high wages, middle-class subsidies and complex regulations and taxes - have become uncompetitive and sluggish.
- In addition, they face pressures from two fronts: demography (an aging population), and globalization (which has allowed manufacturing and services to re-locate across the world).
- Over the long term, economic stability will only be achieved along with economic growth, which requires lower wages, greater labor mobility, and better business environment to bring in more capital investments.