The Euro Zone Crisis
Why it Happened, Lessons for the Future

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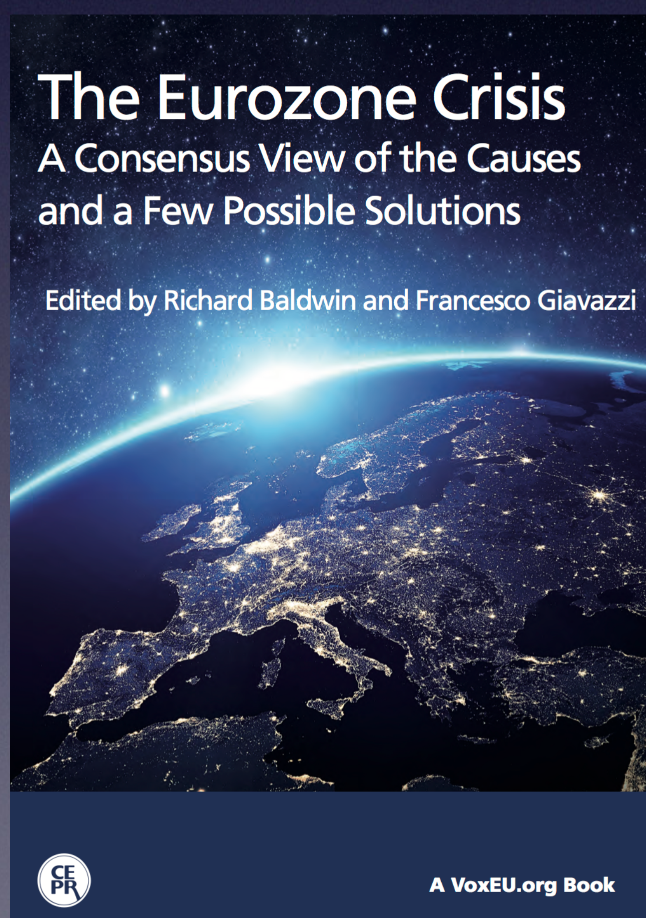
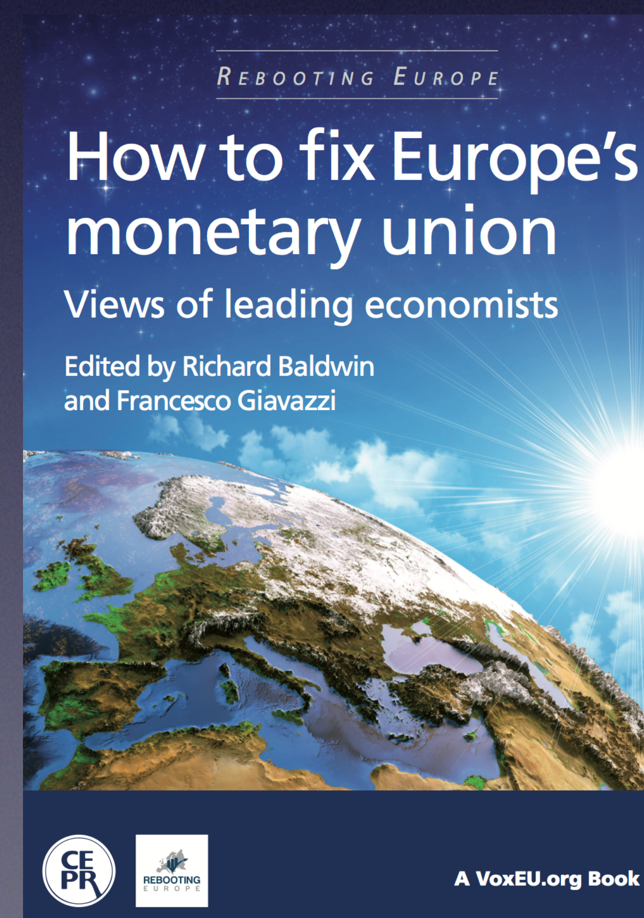
Two Important Recent Reports on the Macroeconomics of the Euro Zone

- Baldwin R. and Giavazzi F. (eds) (2015), *The Eurozone Crisis: A Consensus View of the Causes and a Few Possible Remedies*, CEPR, VoxEU.org, London.

- Baldwin R. and Giavazzi F. (eds) (2016), *How to Fix Europe's monetary union: Views of leading economists* , CEPR, VoxEU.org, London.





The Nature of the Euro Zone Crisis

- “The euro crisis started as a classic ‘sudden stop’ to cross-border capital inflows. As boom turned into bust, governments lost their tax base and had to assume private debt, thus creating a public debt crisis. The highly leveraged banking system of the Eurozone, tightly linked to national governments, provided a multiplier, which made the crisis systemic.”. D. Gross (2015)

- “The European monetary union lacked a mechanism that could stop divergent economic developments between countries. Some countries experienced a boom, others a recession. Some countries improved their competitiveness, others experienced a worsening. These divergent developments led to large imbalances, which were crystallised in the fact that some countries built up external deficits and other external surpluses.”. P. de Grauwe (2015).

- “If a sudden stop occurs, the sovereign most likely will lack the fiscal resources to cope with it. The size of the financial sector has grown just too large.” G. Tabellini (2015).

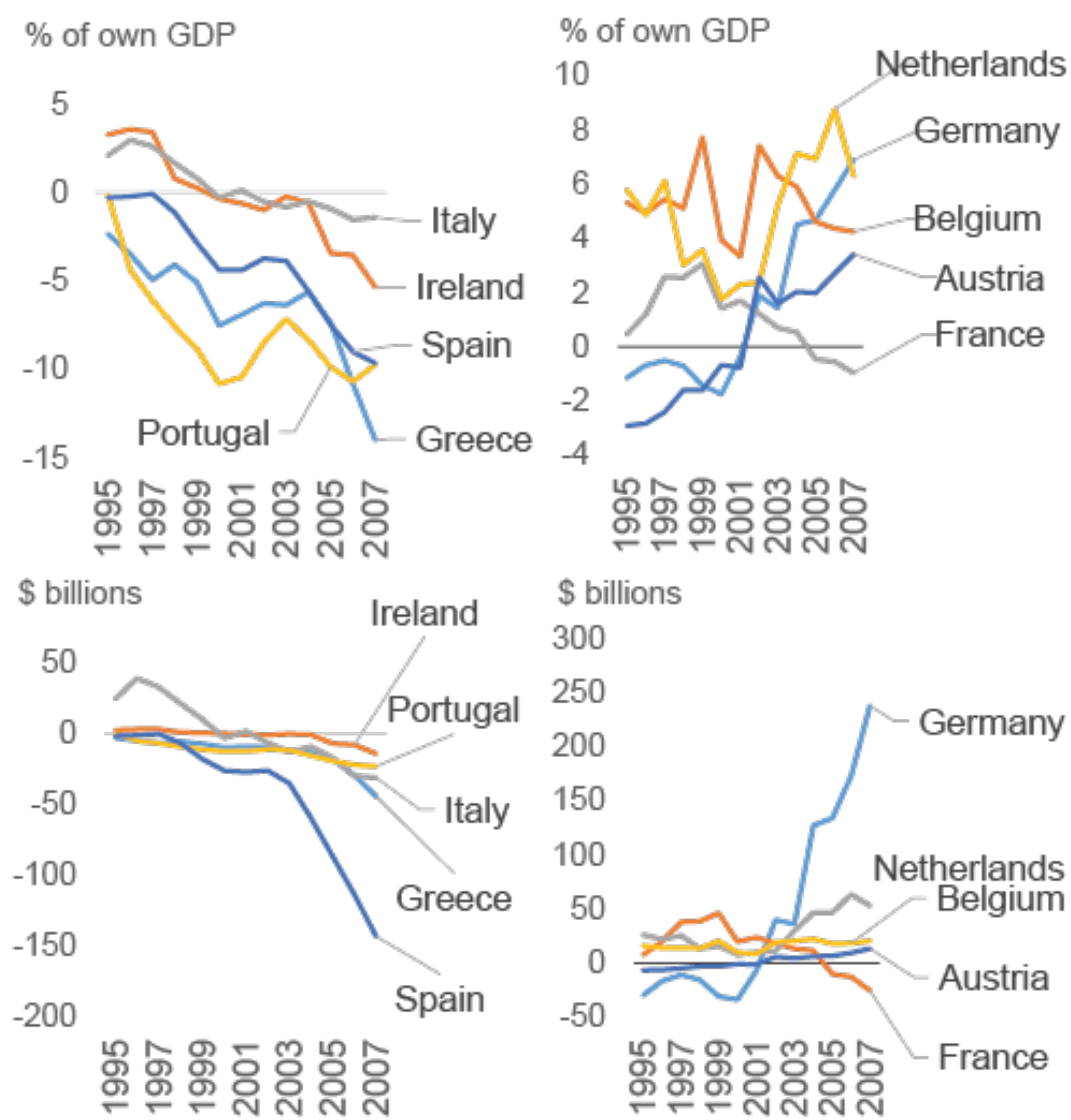
The Central Macroeconomic Imbalance that Led to the Crisis

- The fast and excessive international indebtedness of the private and public sector of some countries in the periphery of the Eurozone, which was not channeled in investment projects that could contribute to the servicing of their external debt.

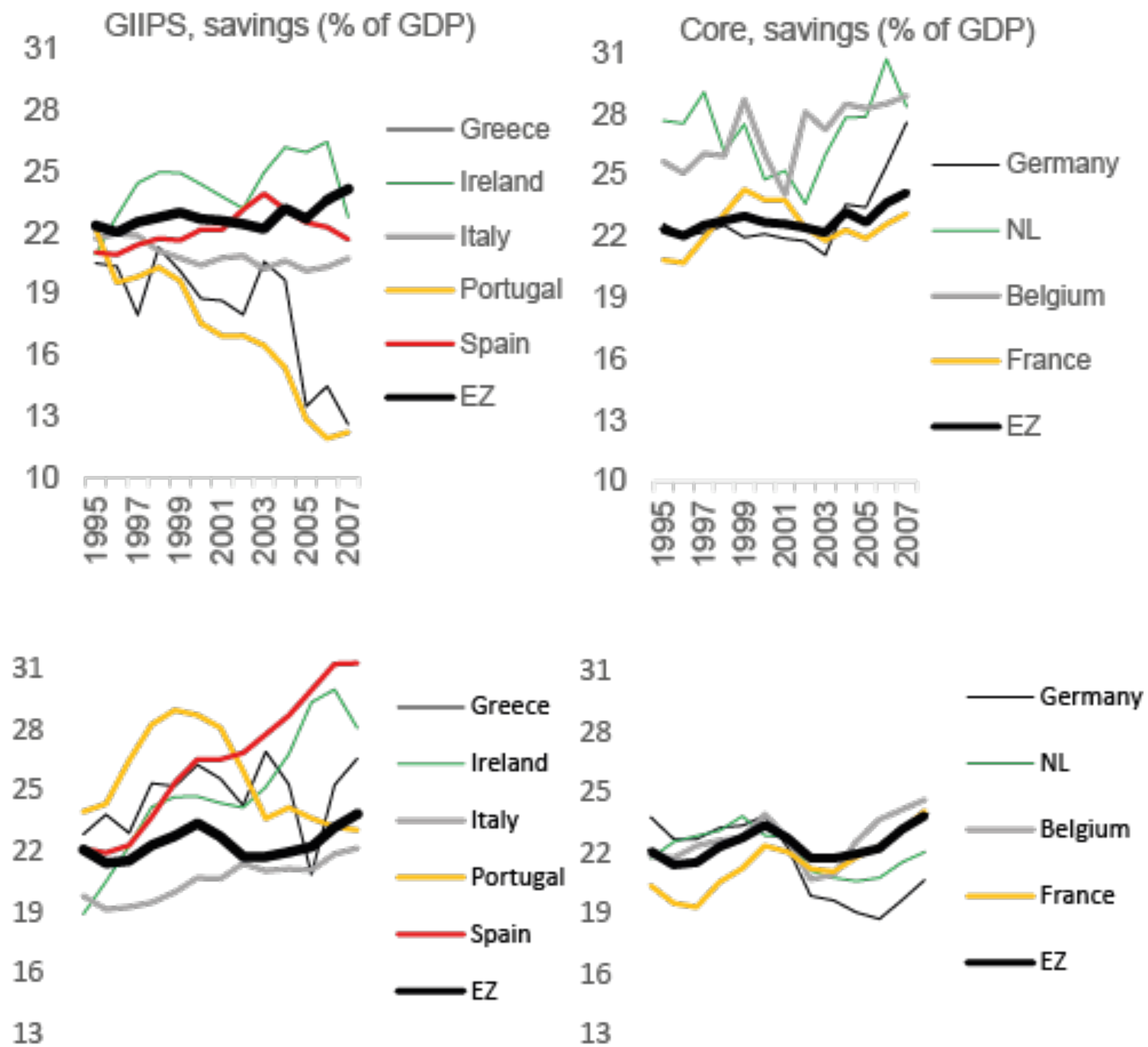
- High external debt is the root cause of all international financial crises, from the Latin America crisis of the 1980s, the Asian crisis of the 1990s to the Eurozone crisis of the 2010s.

- The Eurozone crisis should not be seen as a public debt crisis, but as a classic external debt crisis.

The Balance of Payments of Core and Peripheral Economies in the Eurozone



Savings and Investment of Core and Peripheral Economies



Additional Factors that Contributed to the Crisis

- Lack of Lender of Last Resort for both sovereigns and banks, as the ECB was not allowed to fund sovereigns and banks.
- Excessive reliance on bank lending and the large size of the banking sector relative to the GDP of many countries, especially in the periphery of the Eurozone.
- The *doom loop* between a confidence crisis in the banking system and public debt sustainability in the periphery of the Eurozone.
- Sclerotic labor and product markets which led to competitiveness losses in countries which could no longer resort to devaluations.

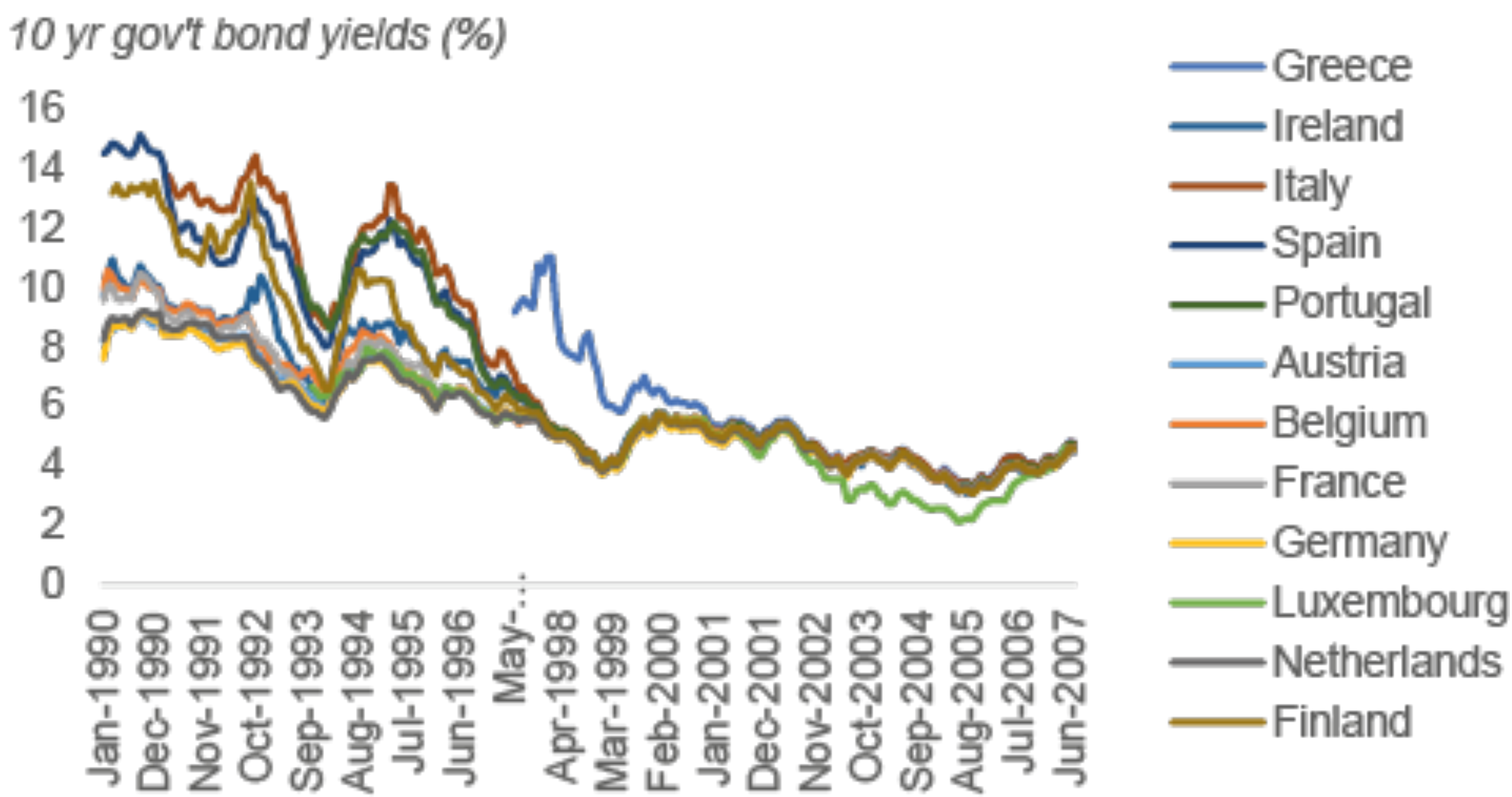
The Causes of International Indebtedness in the Periphery

- The fall in nominal and real interest rates after 1995 and the convergence of interest rates of countries in the periphery with those of the core countries.

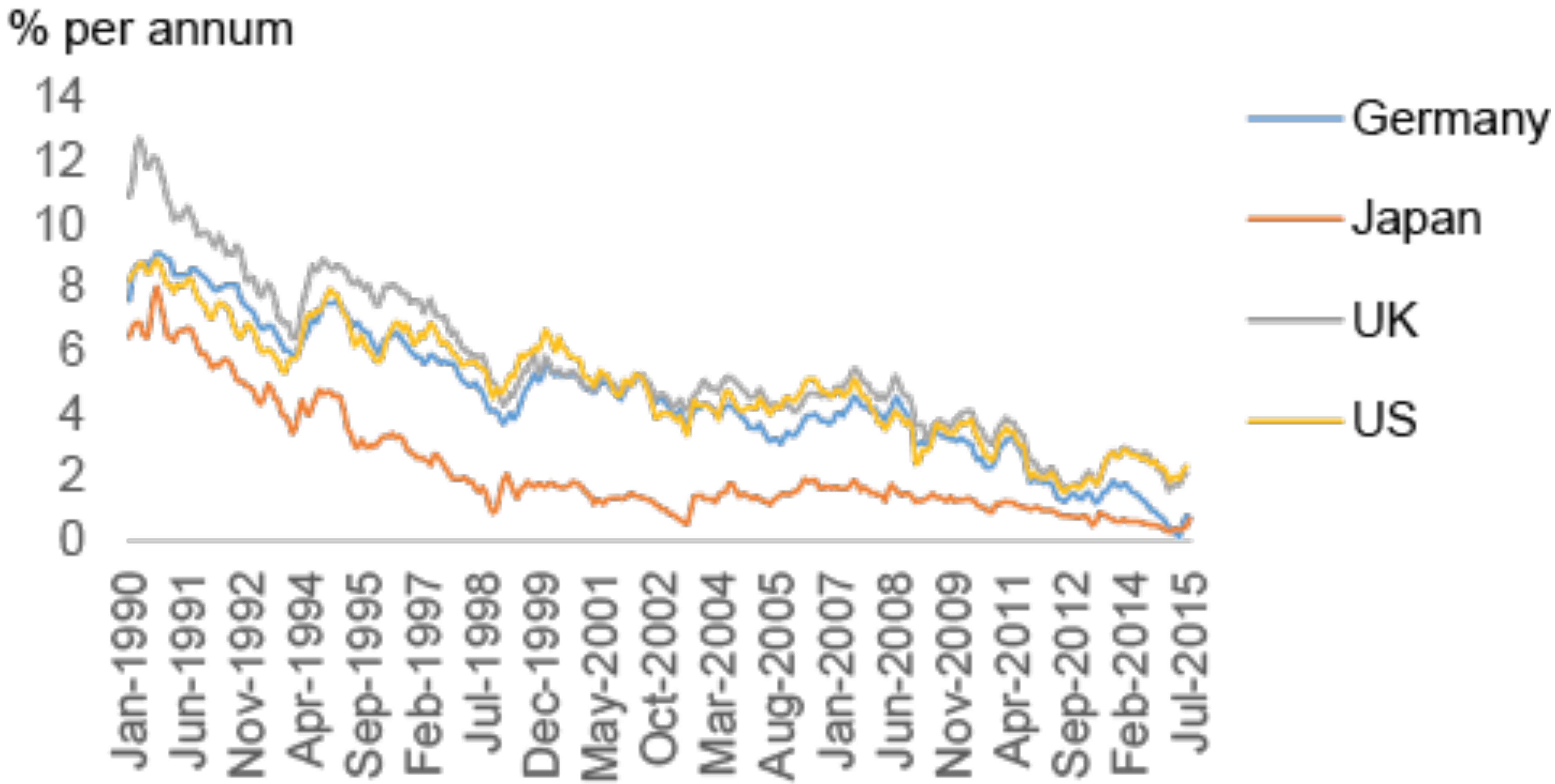
- In countries where there was a sharp drop in interest rates, this led to an increase in public and private international borrowing, as savings fell and investment rose.

- For a long time the risks of low interest rates and the consequent widening external imbalances were underestimated. Many even considered the fall in interest rates as highly beneficial and an indication of successful financial integration.

The Convergence of Interest Rates



The Decline of German Interest Rates



Reactions to External Imbalances before the 2010 Crisis

- Before the crisis, the widening external imbalances were not seen as a source of Eurozone problems, but rather as an indication of its success.

- There was a widespread belief that private capital flows to countries in the periphery was a natural consequence of the real convergence process within a monetary union.

- The poorest countries of the region, who had plenty of investment opportunities, attracted investors from richer countries, where the return on investment was low. (See Blanchard and Giavazzi, *Brookings Papers on Economic Activity*, 2002).

- A big problem was that much of the investment was directed to non-tradable sectors such as public investment and housing.

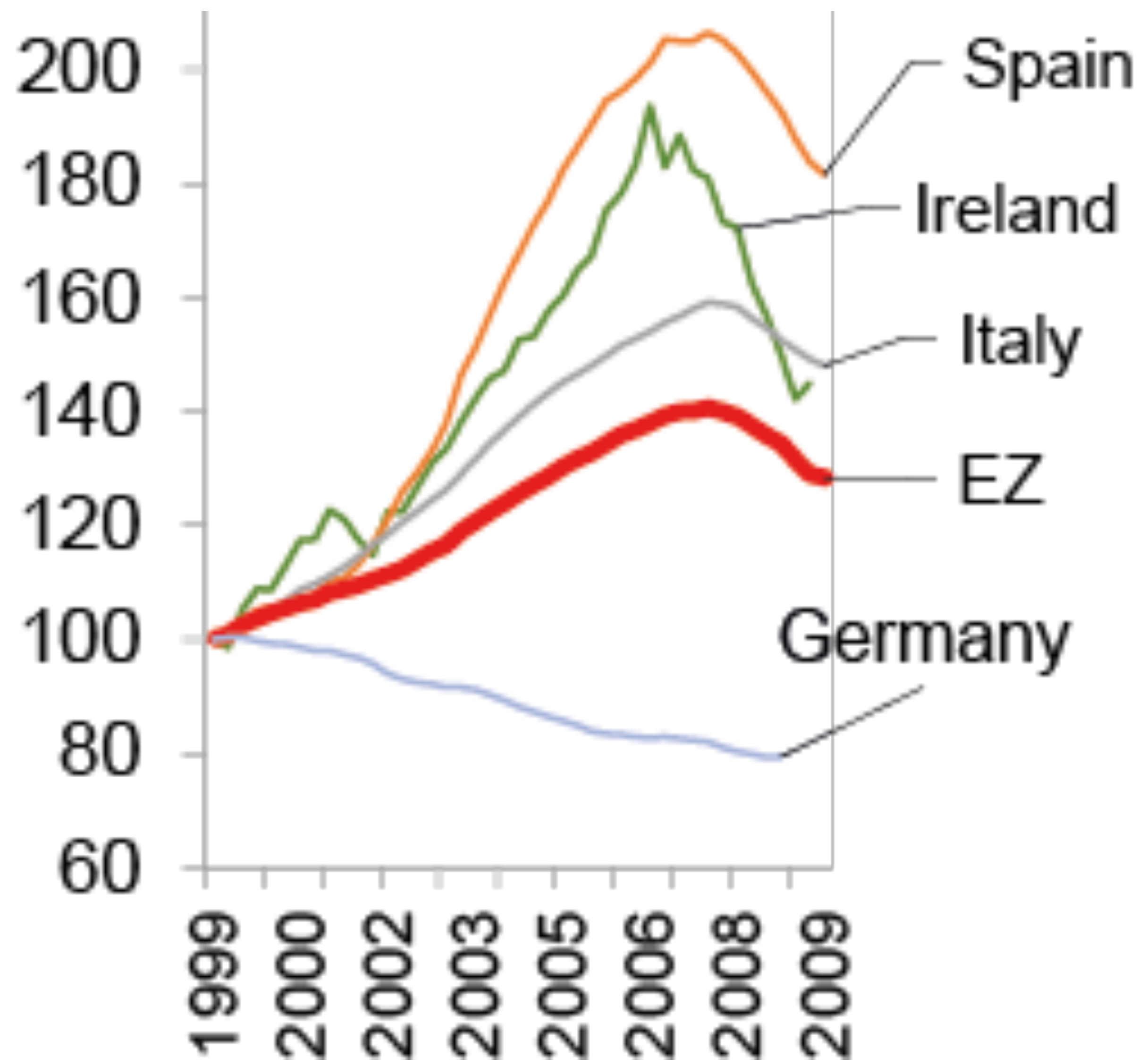
Capital Flows and the Competitiveness Problem

- Capital inflows were invested in the non-tradable sectors of the countries in the eurozone periphery. In host countries, the increase in external debt was not sustainable as it did not lead to an increase of their export capabilities. Worse, capital flows contributed to house price bubbles that eventually would inevitably burst.

- The inflows also contributed to the increase of wages and costs, which resulted in losses of competitiveness that further contributed to the deficits in the current account. All four states which eventually signed "Rescue Memoranda" - Greece, Ireland, Portugal and Spain - had inflation above the eurozone average.

- Instead, all of the core states, except the Netherlands and Luxembourg, had inflation below the average of the Eurozone, and particularly Germany.

Real Price of Housing



Total Bank Lending from the Core Economies to Peripheral Economies (bn euros)

	1999 4th quarter	2009 4th quarter	% change 99-2009
Portugal	26	110	320
Ireland	60	348	481
Italy	259	822	217
Greece	24	141	491
Spain	94	613	554
GIPS	204	1,212	495
Total	463	2,033	340

A Summary of Eurozone Imbalances

	Cumulative current account balance	Cumulative budget deficit	2000 to 2008 increase (p.p.)	Bank assets, 2008	Debt-GDP ratio, 2008	Excess inflation (1999-2007)
Portugal	-96	-36	44%	262%	72	7.5
Greece	-84	-47	36%	173%	109	9.9
Spain	-60	2	121%	296%	39	9.2
Ireland	-21	14	464%	783%	43	11.6
Italy	-8	-26	85%	235%	102	1.8
EZ	-2	-17	94%	335%	69	0.0
France	6	-23	180%	395%	68	-2.9
Austria	16	-19	305%	379%	69	-3.2
Germany	27	-19	18%	316%	65	-4.8
Belgium	47	-5	83%	392%	92	-1.1
Netherlands	48	-5	-9%	375%	55	2.8
Finland	61	33	101%	197%	33	-4.9
Luxembourg	98	23	-577%	2367%	14	5.5

1. Accumulation of External Imbalances

- The Achilles heel of the eurozone was the accumulation of large current account imbalances. There is nothing inherently wrong with such flows. If a member state borrows from the rest of the world to invest in tradeable goods sectors that helps servicing their foreign debt, everyone can be better off. To a large extent, this was not the case of the eurozone. In all economies of the periphery, capital was invested mainly in non traceable sectors such as housing.

- The first column of the table shows the cumulative imbalance from the establishment of the euro until the collapse of Lehman Brothers. The figures for Greece, Cyprus, Portugal and Spain are extremely negative. This meant that these nations invested much more than their savings, and that the difference was financed through external borrowing. Of course, all this was the result of the free movement of capital.

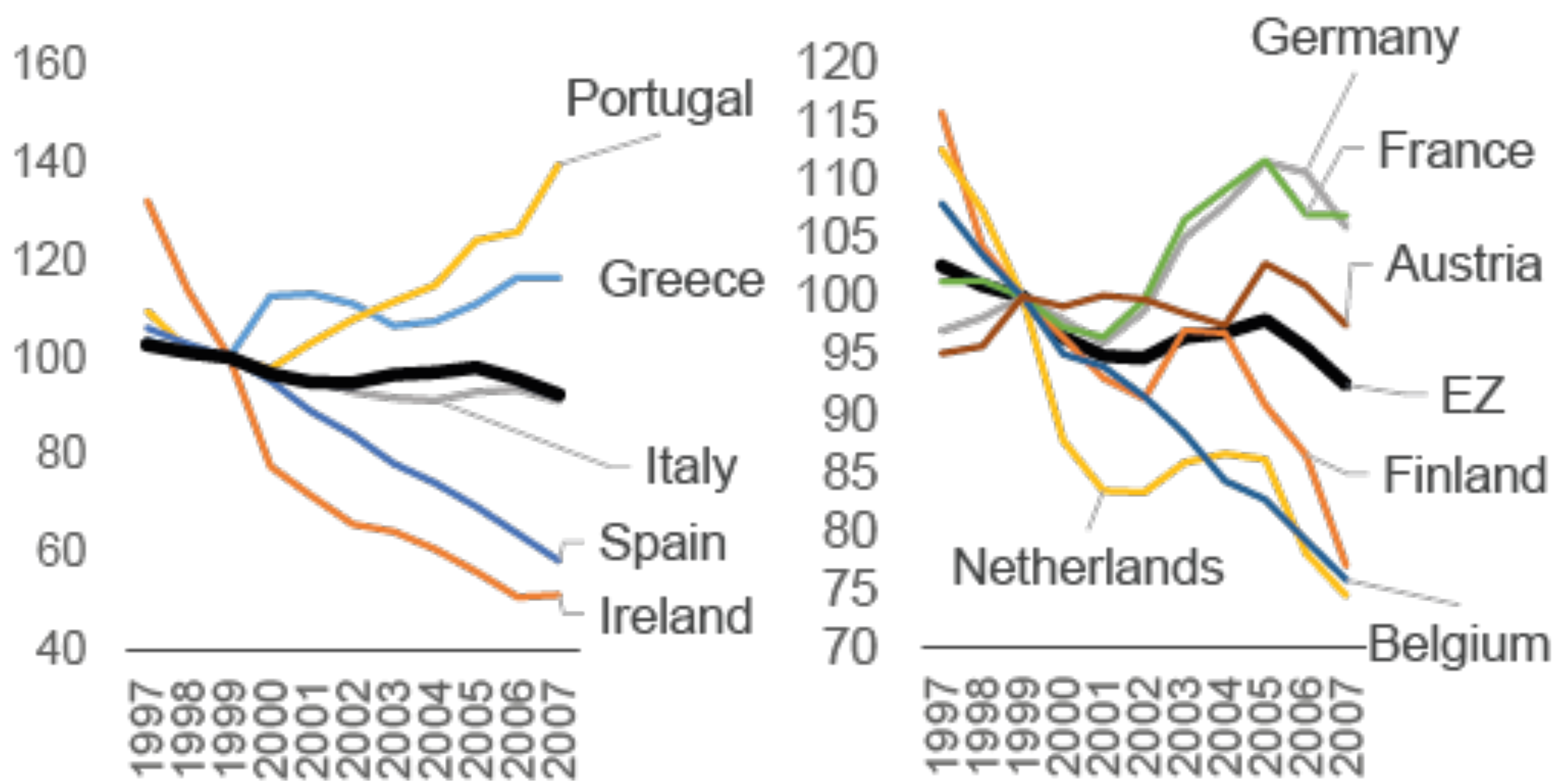
- On the part of creditors, the numbers are high, especially for the countries of the eurozone core - Germany, France and Holland. Interestingly, Italy, showed a large accumulation of external debt during this period.

2. Accumulation of Fiscal Imbalances

- The second column shows that for some of these countries, the influx of foreign capital contributed to the financing of budget deficits, especially in Greece and Portugal. The large accumulated deficits in the current account in Spain are not accompanied by corresponding public deficits.

- Even Germany and France were characterized by public debt accumulation of around 20 percentage points of GDP over this period. Italy's public debt accumulation was on a similar scale, although a little higher. None of these countries, however, had major imbalances in the current account. On the other hand, Finland and Luxembourg have unusually large fiscal surpluses.

The Evolution of Government Debt
1999=100



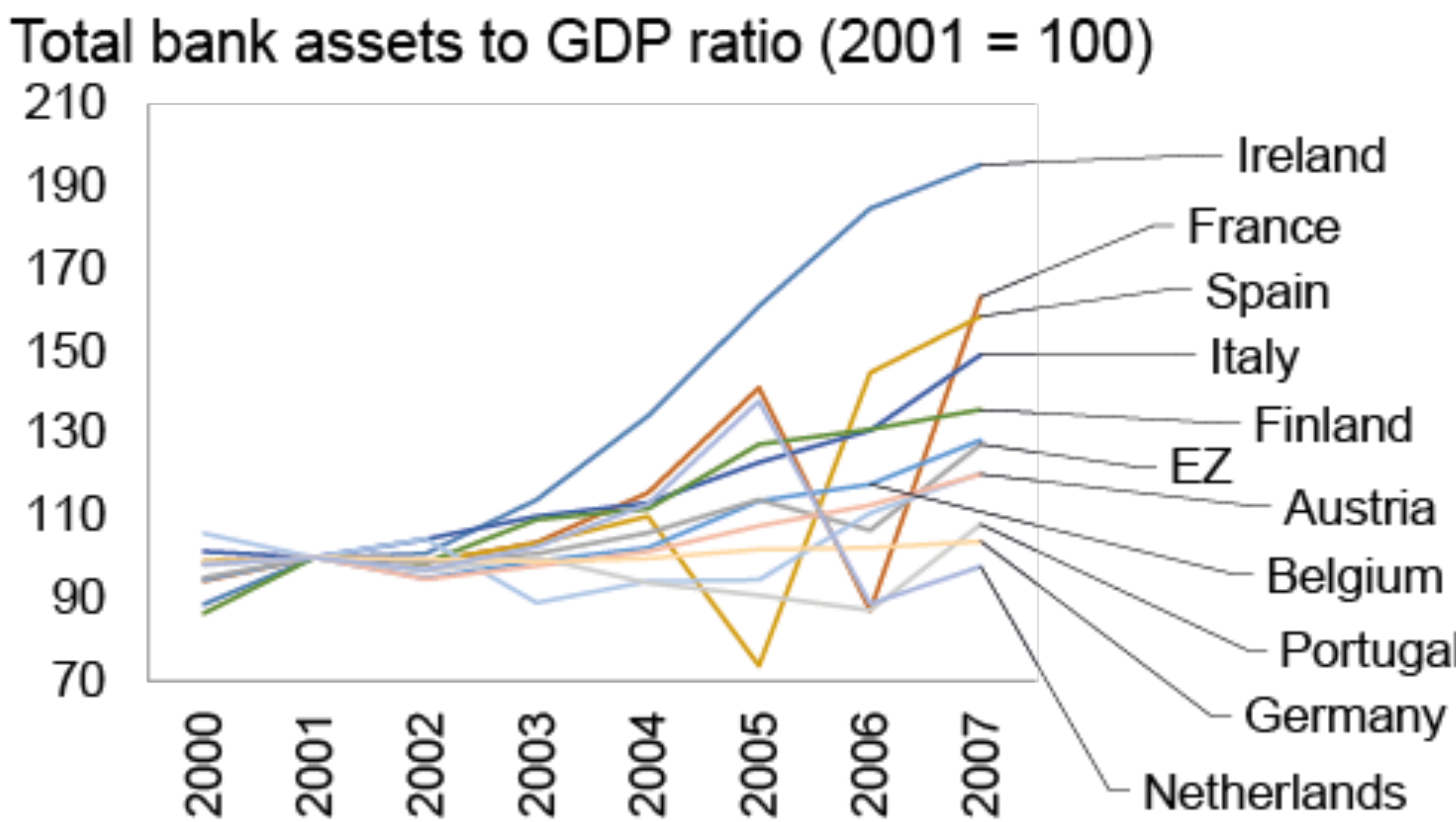
3. Accumulation of Financial Imbalances

- The third and fourth column of the table shows the accumulation of financial imbalances.

- The cumulative additional lending of Irish banks amounted to almost four times the country's GDP. For banks in Austria it amounted to 2.5 times GDP. For banks in Spain, Belgium and France cumulative new bank lending was over 100% of GDP.

- By 2007, many banks were not only "too big to fail", they were also "too big to save". Banks in Ireland had assets (and therefore loans) seven times Irish GDP. Banks in the economies of the eurozone core were not in a much better position, with banks having lent more than twice the GDP of the average country. The data show that bank lending was more than three times GDP in Germany, France and the Netherlands. For Luxembourg, the multiple was astronomical.

The Evolution of the Banking Sector



The First Indications of the Crisis

- In retrospect, it is surprising that these imbalances had gone virtually unnoticed. In a sense, this was the equivalent to the non-realization by the US authorities of the toxicity of the soaring subprime mortgage lending.

- By 2007, the course of the eurozone was assessed very positively. However, the euphoria gradually gave its way to anxiety during 2008, and deep anxiety following the collapse of Lehman Brothers in September 2008.

- Slowing growth and a growing realization of the risks in store reinforced each other for everyone, but especially for countries that had accumulated large stocks of public and private debt and large deficits in the current account.

- In late 2008, interest rate spreads (risk premia), which were measured in a few basis points for years, began to climb, and reach up to two or three percentage points for Greece, Ireland, Italy and Portugal.

- However, when it became clear in the summer of 2009, that the Lehman shock would not create a second Great Depression, spreads in the eurozone fell significantly. However this was not to last.

The Start of the Crisis

- Every crisis requires a trigger. For the eurozone crisis this was the announcement of the development of the fiscal deficit of Greece in 2009.

- This announcement set in motion a spiral of increases in interest rates, unsuccessful budget balancing efforts by Greece, the deterioration of Greece's credit rating, further interest rate increases, culminating in the "Greek bailout" of May 2010.

- Europe's leaders decided it was unthinkable for a member country of the eurozone to go bankrupt, and opted for bailing out Greece. In this case, the "lender of last resort" was the troika - the governments of the eurozone, the European Central Bank and the International Monetary Fund.

- The bailout did not work well and proved insufficient. Markets reacted negatively as analysts concluded that Greece was not a clear path to debt sustainability. The constrained and politically charged design and implementation of the program did nothing to boost confidence in the eurozone's ability to handle the crisis. The risk premium on Greek bonds continued to rise.

The Transmission of the Crisis

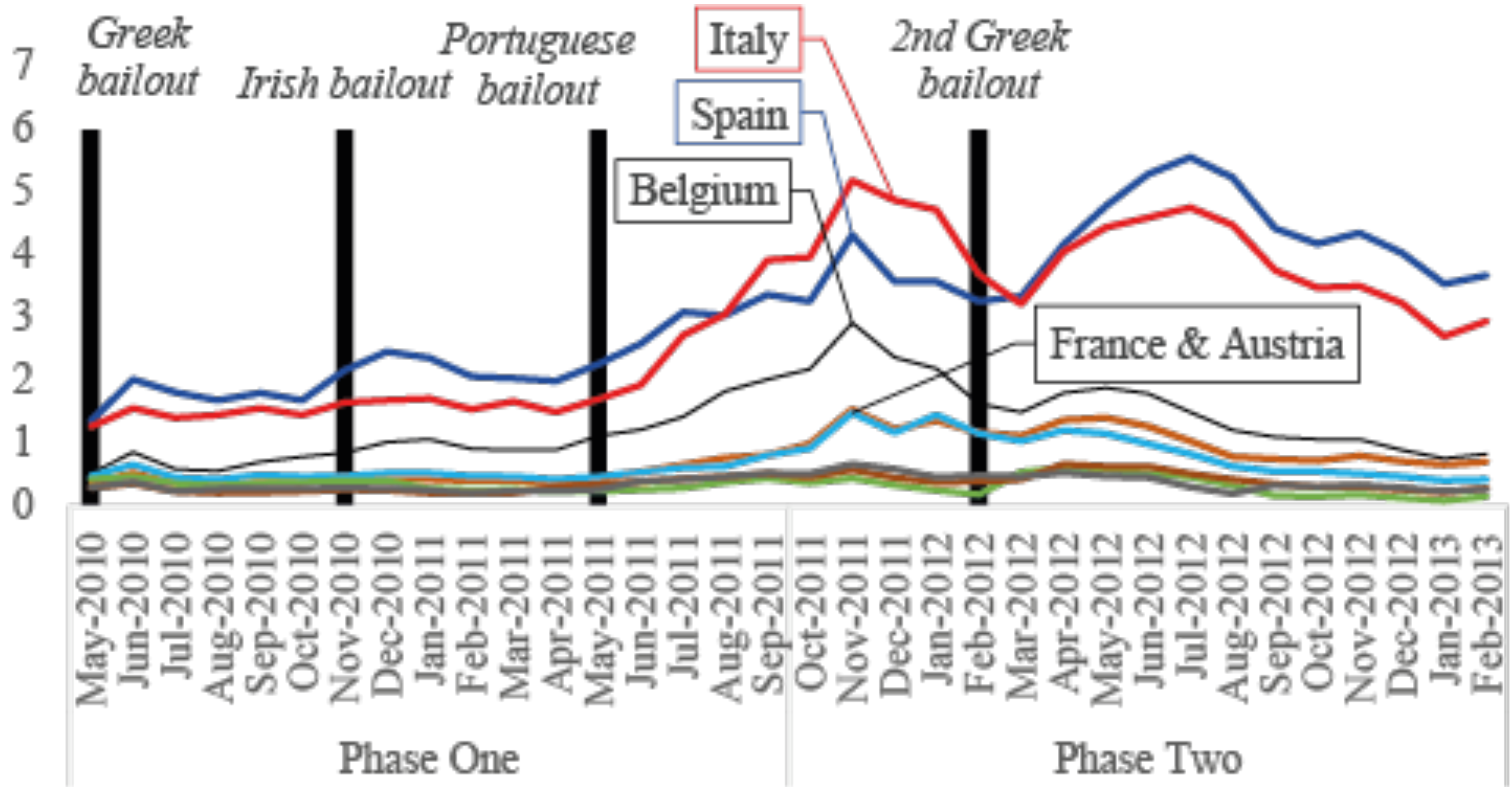
- Since early 2010, financial markets began to wonder if the failure of Greece to tackle the crisis could apply to other countries. These doubts - combined with the relentless logic of the debt vortex - was enough to raise the risk premier for other eurozone members apart from Greece.

- What proved decisive was whether a state's fiscal problems were combined with balance of payments problems. Only countries that borrowed primarily from international markets experienced problems. The borrowing costs of Portugal and Ireland rose sharply when the Greek bailout was announced.

- This was the beginning of a "sudden stop" of lending from international financial markets, which affected all countries with significant deficits in the current account. Ireland, Portugal, Spain and Italy. As it turned out, eurozone investors were much more wary about lending to other eurozone governments than about lending to their own government.

- The increase in risk premier led to the adoption of rescue plans both for Ireland and Portugal, although with very different characteristics than Greece. In the case of Ireland, the imbalance that proved decisive was the situation of Irish banks.

The Transmission of the Crisis
Evolution of Interest Rate Spreads



The Doom Loop: From the Periphery to the Core

- Both banks and sovereigns are subject to the possibility of a debt vortex.

- Banks borrow money short term to lend long term. For every euro borrowed in the short term, the bank makes long-term loans of twelve or more euro - this is called leverage.

- In good times, leverage increases profitability in poor times it increases the risks.

- The Irish banks had loans in 2008 approximately 7.8 times Irish GDP. Despite the low public debt of Ireland, the banking crisis led Ireland to a “bailout” in November 2010. This was the first example of the “doom loop” between bank debt and sovereign debt.

- The Irish "bailout" exacerbated the crisis. Followed by Portugal in May 2011 and the second Greek "bailout" in July 2011.

- In July 2011, the second Greek package was agreed in principle, but one of its elements enflamed the overall situation. As part of the EZ leaders’ new view that the private sector should bear part of the cost of the bailout, private holders of Greek government debt would see about half the face value of investment disappear in what was called Private Sector Involvement (PSI). This was a wake-up call for investors who still believed the Maastricht Treaty’s no-default clause.

- The markets began to demand higher yields on government bonds of Belgium, Spain and Italy. Particularly Italy was a deadly threat to the eurozone, given the size of its economy and huge debt.

Fiscal Adjustment Programs

- Budget cuts exacerbated the problem, as countries in rescue programs or those involved in the debt vortex had no choice but to cut their budget deficits.

- The eurozone as a whole saw a primary deficit of about € 350 billion in 2010 to be reduced to € 10 billion in 2014. This was a massive recessionary shock - equal to four percentage points of the EZ economy.

- Budget cuts came from both the countries of the periphery and from the core countries that had not faced a debt crisis. Greece, Ireland, Italy, Portugal and Spain accounted for about 48% of the budget cuts, although they represent only one third of the GDP of the Eurozone. However, budget cuts in Germany accounted for 32% of the total, and those in France 13% of the total budget cuts in the eurozone.

- Because budget cuts were mainly tax increases, and to a lesser extent primary expenditure reductions, the negative repercussions on economic activity were even greater.

Fiscal Adjustment
2010-2014

	% of own potential GDP	bill EUR	%	%
	2010 to 2014 swing	2010 to 2014 swing	Share of EZ swing	Share EZ 2014 GDP
Greece	7%	14	4%	2%
Ireland	28%	49	14%	2%
Italy	2%	28	8%	16%
Portugal	9%	17	5%	2%
Spain	5%	53	16%	11%
EZ	4%	340	100%	100%
Austria	1%	2	1%	3%
Belgium	0%	2	0%	4%
Finland	0%	0	0%	2%
France	2%	46	13%	21%
Germany	4%	108	32%	29%
Luxembourg	1%	1	0%	0%
Netherlands	2%	15	5%	6%

Draghi “Will Do Whatever it Takes”

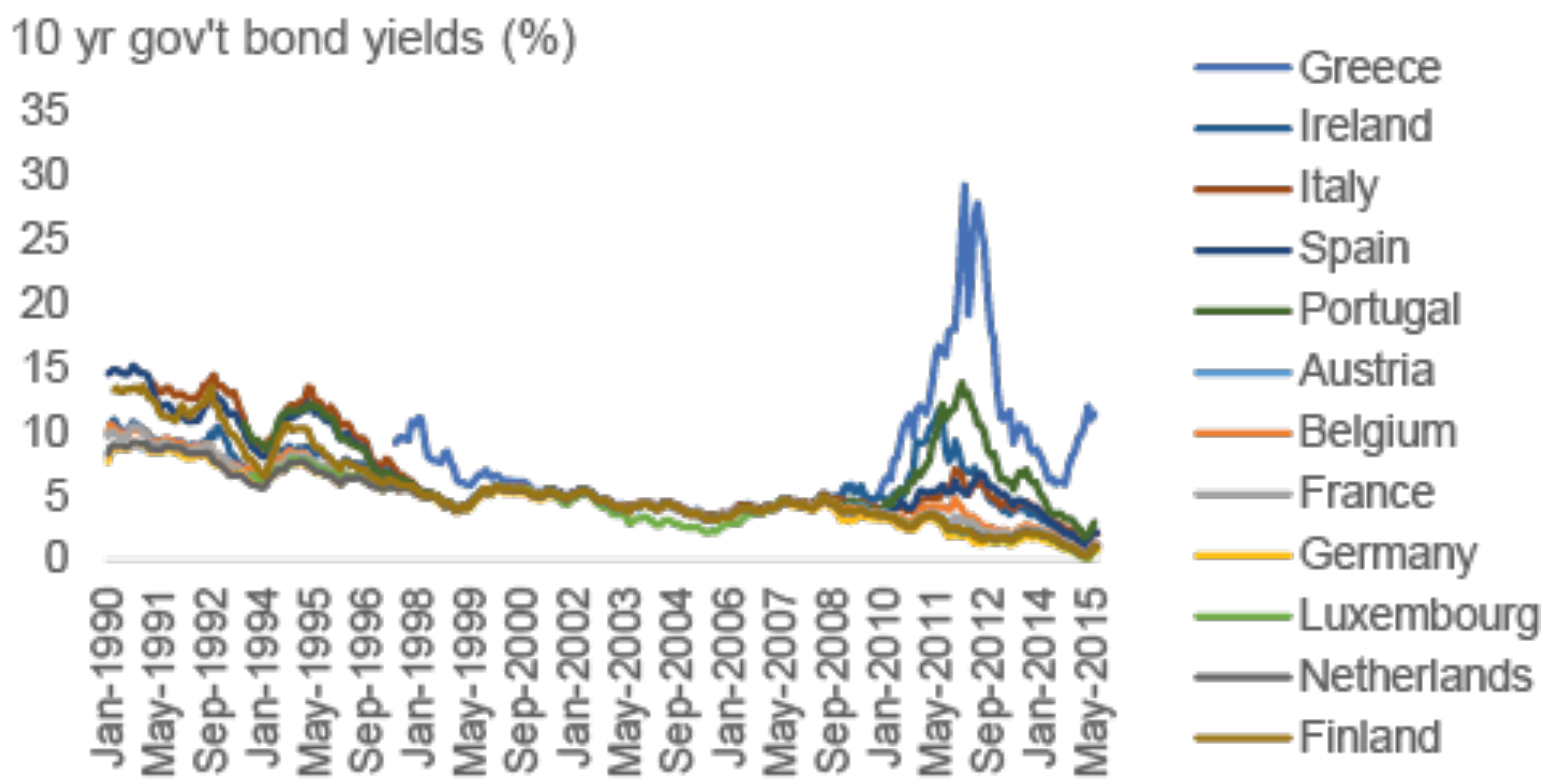
- Things were plainly going from bad to worse. Each attempt to end the crisis seemed to make matters worse.

- By this time, the contagion spread all the way to France. Its debt was downgraded and market yields rose substantially above those of other ‘core’ EZ nations like Germany and the Netherlands. British Prime Minister Gordon Brown unhelpfully suggested that Italy and France might need a bailout. The Belgian problem – domestic banks in trouble due to Greek lending – spread to Cyprus. Its banks were severely affected by the Greek debt write down, so the nation asked for a bailout in June 2012 (granted in March 2013).

- Needless to say, a crisis that threatened Italy and France was a crisis of global dimension. This was no longer an issue of Greece. This had the potential of blowing up the Eurozone and the EU itself. The world economy was looking at another Lehman-sized shock. With EZ leaders manifestly incapable of mastering events, something had to be done.

- That something was a forceful intervention by ECB President Mario Draghi in his famous July 2012 speech. He told markets that the ECB would do “whatever it takes” to keep the Eurozone together. That did the trick. It switched expectations from 2011 and 2012’s doom-is-inevitable back to the old we-will-get-through-this-thing expectations of 2009 and 2010. Borrow cost returned to pre-Crisis levels

The Impact of the Crisis and the Draghi Intervention
Interest Rate Spreads



Why “Whatever it Takes” Worked

- Ο βασικός μηχανισμός μεταγωγής που προκάλεσε ο Mario Draghi αποτελεί άμεση απόρροια της λογικής της δίνης του χρέους.

- Το κίνητρο των επενδυτών να ξεφορτωθούν το δημόσιο χρέος διαφόρων χωρών της ευρωζώνης ήταν ο φόβος. Ο φόβος οδηγείται από την προσδοκία ότι όλοι οι άλλοι επενδυτές θα μειώσουν τη διακράτηση του δημοσίου χρέους, οδηγώντας στα ύψη το κόστος δανεισμού, και κάνοντας ακόμη μη βιώσιμο ακόμη και το χρέος “φερέγγυων” χωρών.

- Ωστόσο, αν υπάρχει κάποιος “δανειστής ύστατης προσφυγής”, ο οποίος μπορεί να αγοράσει απεριόριστα ποσά χρέους - ο φόβος εξαφανίζεται, καθώς οι επενδυτές γνωρίζουν πως πάντα θα υπάρχει κάποιος που θα αγοράσει στη σωστή τιμή το χρέος που διακρατούν. Το καλοκαίρι του 2012, ο Mario Draghi τους έπεισε ότι αυτός ο αγοραστής είναι η ΕΚΤ. Μέχρι στιγμής ο μηχανισμός αυτός έχει λειτουργήσει.

Why “Whatever it Takes” Worked

- The basic switching mechanism that Draghi triggered is a a direct corollary of the debt-vortex logic.
- The rush to unload debt is driven by fear. The fear is driven by the suspicion that everyone else will sell the nation’s debt, thus driving borrowing costs up to the point where the nation actually goes broke. But if there is a debt buyer-of-last- resort – someone who can buy unlimited amounts of debt – the suspicion dissolves and investors are happy to hold the debt.
- This is what Mario Draghi did in the Summer of 2012. So far it has worked.

Proximate Causes of the Eurozone Crisis

- The proximate cause of the EZ crisis was the rapid unwinding of intra-EZ lending/borrowing imbalances that built up in the 2000s. Some of this was to private borrowers (especially in Ireland and Spain) and some of it to public borrowers (especially in Greece and Portugal), but in every case the difficult debt mostly ended up in government hands.

- Often private over-indebtedness ends up on governments' balance sheets, so that the rise in public debt is more a consequence than a cause of a financial crisis.

- The 'sudden stop' was a crisis rather than a problem since EZ members could not devalue and their central banks could not bail out the government.

- A confidence crisis was thus created, first about the countries of the periphery, but later about some of the core countries, regarding their ability to service their public and private debts. This was exacerbated by the unsuccessful efforts to address the debt problem.

Deeper Causes of the Crisis

- The proximate causes of the crisis – imbalances and lack of crisis management mechanisms –tell us that there are really three sorts of underlying causes:

- Policy failures that allowed the imbalances to get so large

- Lack of institutions to absorb shocks at the EZ level

- Crisis mismanagement

- Some of these failures involved unanticipated events. Others were a failure to implement the provisions agreed in the Maastricht Treaty.

Design Weaknesses in the Eurozone

- Begg et al (1998), *The ECB: Safe at any Speed?*, Monitoring the ECB, CEPR, wrote:
- “The ECB suffers serious faults in its design that sooner or later will surface. This is likely to happen when large shocks, such as the world financial crisis, hit euroland,” where the world crisis referred to here was the 1997 Asian Crisis.
- “The lack of centralised banking supervision, together with the absence of clear responsibilities in crisis management, risk making the financial system in euroland fragile. No secure mechanism exists for creating liquidity in a crisis, and there remain flaws in proposals for dealing with insolvency during a large banking collapse. ... These design faults are due to a failure to put sufficient decision making power at the centre of the system.”

Reforming the Eurozone

- Completing the Banking Union and relaxation of the relationship between banks and national governments

- Ensuring uniform risk-sharing mechanisms of shocks that affect the whole eurozone. Mainly strengthening the ESM (European Stability Mechanism) both in terms of funds that can be managed, and enhancing the speed and flexibility of its decisions.

- Tackling the problem of public debt management. Completion of the OMT (Outright Monetary Transactions) of the ECB and other initiatives to reduce the risks of high public debt levels.

- Better coordination of fiscal policy in the euro zone level, and ensuring budgetary discipline at national level.

- Promoting structural reforms to improve the functioning of the monetary union, especially strengthening the capacity to tackle asymmetric risks.