

Rebooting the Eurozone: Step I – agreeing a crisis narrative

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Introduction and summary

The Eurozone crisis broke out in May 2010 and it is a long way from finished. Although some positive signs have emerged recently, EZ growth and unemployment are miserable and expected to remain miserable for years.

- A large slice of Europe's youth have been or will be jobless during the critical, formative years of their working lives.
- The economic malaise is feeding extremist views and nationalistic tendencies just when Europe needs to pull together to deal with challenges ranging from the migration crush to possible new financial shocks.

Worse yet, many of the fragilities and imbalances that primed the monetary union for this crisis are still present. Many of Europe's banks face problems of non-performing loans. Many are still heavily invested in their own nation's public debt – a tie that means problems with banks threaten the solvency of the government and vice versa. Borrowers across the Continent are vulnerable to the inevitable normalisation of interest rates that have been near-zero for years.

As a first step to finding a broad consensus on what needs to be done to fix the Eurozone, this essay presents what we believe is a consensus answer to the question:

- “What caused the Eurozone Crisis?”

Although the authors hark from diverse backgrounds, we found it surprisingly easy to agree upon a narrative and a list of the main causes of the EZ Crisis. We say “surprisingly” since EZ policymakers remain attached to very diverse narratives of the Eurozone Crisis.

The need for a consensus narrative

Formulating a consensus on the causes of the EZ Crisis is essential. When terrible things happen, the natural tendency is to fix the immediate damage and take steps to avoid similar problems in the future. It is impossible to agree upon the steps to be taken without agreement on what went wrong. Absent such agreement, half-measures and messy compromises are the typical outcome. But this will not be good enough to put the EZ Crisis behind us and restore growth.

This is why formulating a consensus narrative of the EZ Crisis matters so much. Eurozone decision-makers will never agree upon the changes needed to prevent future crises unless they agree upon the basic facts that explain how the Crisis got so bad and lasted so long.

The causes of the EZ Crisis

The core reality behind virtually every crisis is the rapid unwinding of economic imbalances. In the case of the EZ Crisis, the imbalances were extremely unoriginal – too much public and private debt borrowed from abroad. From the euro's launch till the Crisis, there were big capital flows from EZ core nations like Germany, France, and the Netherlands to EZ periphery nations like Ireland, Portugal, Spain and Greece.

A major share of these capital inflows were invested in non-traded sectors – housing and public consumption. This meant assets were not being created to pay off the borrowing – and thus rebalance the balance of payments. Foreign-financed domestic spending tended to drive up wages and costs in a way that harmed the competitiveness of the receivers' export earnings and encouraged further worsening of their current accounts.

The EZ Crisis was a 'sudden stop' crisis

Importantly, the EZ Crisis should **not** be thought of as **a government debt crisis** in its origin – even though it evolved into one. **Apart from Greece, the nations that ended up with bailouts were not those with the highest debt-to-GDP ratios.** Belgium and Italy sailed into the Crisis with public debts of about 100% of GDP and yet did not end up with Troika programmes, while Ireland and Spain, with ratios under 40%, needed bailouts. The real culprits were the large intra-EZ capital flows that emerged in the decade before the Crisis. These imbalances baked problems into the EZ 'cake' that would explode in the 2010s. **All the nations stricken by the Crisis were running current account deficits. None of those running current account surpluses were hit.**

When the EZ Crisis started, there was **a 'sudden stop' in cross-border lending.** Investors became reluctant to lend – especially to banks and governments in other nations. **The special features of a monetary union meant that the 'sudden stop' was not precipitous (as it was, for example, in Iceland). Rather this 'sudden stop with monetary-union characteristics' showed up in rising risk premiums.** The abrupt end of capital flows raised concerns about the viability of banks and governments in nations dependent on foreign lending, i.e. those running current account deficits. Slowing growth produced big deficits and rapidly increasing public debt ratios. **When things got bad enough, several governments had to take on some of their banks' debt,** thus increasing national debt ratios even further. This is how a balance of payments crisis became a public debt crisis.

Why EZ membership mattered: Crisis amplifiers

Burgeoning debt was not a Eurozone-specific issue in the 2000s. **Debt run-ups also occurred in the US, Britain and Japan. The period 2003-2007 was characterised by a credit-supply shock with the global financial system bankrolling large net debt flows to advanced economies.** Policy interest rates were extraordinarily low and financial innovations shifted beliefs about the system's risk-absorption capacity. International capital flows rose as never before. In this mix, **monetary union mattered since it allowed the cross-border imbalances to get so large with such little notice.**

EZ membership also mattered since the incomplete institutional infrastructure amplified the initial loss of trust in the deficit nations in several ways.

- **EZ governments who got into trouble had no lender of last resort.**

National central banks could not create money to lend to their government and **the ECB was explicitly forbidden from doing so.**

Absent a lender of last resort, a small sustainability shock could be amplified without bound due to the deadly helix of rising risk premiums and deteriorating budget deficits stemming from

higher debt servicing costs. The difference between developments in the UK – with an active lender of last resort – and in the Eurozone is telling. This debt-default-risk vortex caught Portugal and came close to catching Italy, Spain and Belgium. Even France and Austria floated into the penumbra of debt vortexes at the height of the Crisis.

- The other classic crisis response – devaluation – was impossible for euro-using nations.

Taken together, these two features meant their euro-denominated borrowing was akin to foreign currency debt in a traditional, developing nation 'sudden stop' crisis.

- The close links between EZ banks and national governments greatly amplified and spread the Crisis.

This is the so-called 'doom loop' – the potential for a vicious feedback cycle between banks and their government. It was one of the key reasons that a single surprise in Greece could swell into a systemic crisis of historic proportions.

In many EZ nations, banks were thinly capitalised and extremely large relative to their countries' GDP. They were so large that they had to be saved, but their size also created a 'double drowning' scenario. Ireland's overleveraged banking system went down as borrowing costs rose and housing prices crashed. The Irish government went down trying to save its banks. Spain and Belgium flirted with, but ultimately avoided, the same fate. Cyprus was not so lucky.

The 'doom loop' also operated in the opposite direction. **EZ banks tended to lend heavily to their own governments, especially as the Crisis expanded. But absent an EZ-wide bank resolution regime, this meant that the governments relied on the banks for the funds that would be needed for any eventual bank bailout. In this unstable situation, fears about the solvency of the banks fanned fears about governments' solvency and vice versa.**

- The predominance of bank financing transmitted bank problems to the wider economy.

As the 'doom loop' and slowing economy raised uncertainty, investment suffered much more than in countries where bank financing is less central, such as the US. This weakened economies in ways that worsened the sustainability outlook for nations and banks.

- The rigidity of factor and product markets made the process of restoring competitiveness slow and painful in terms of lost output.

Indeed, five years down the road, few of the EZ nations have recovered their pre-Crisis growth or employment rates, although Spain surprises observers with the strength of its recovery.

The whole situation was made much worse by poor crisis management. Mistakes were made, but

above all there was a lack of crisis planning. For instance, notwithstanding the predominance of bank financing and its direct channel to the real economy, the Eurozone took years to understand that bank recapitalisation was the condition for avoiding the 'doom loop'. In the US, where bank lending is half as important as in the Eurozone, bank recapitalisation was the first brick of the policy response to the 2008 Global Crisis.

Moreover, nothing in the EZ institutional infrastructure was set up to deal with a crisis on this scale. The possibility simply had not been considered. As a result, EZ leaders faced the dual challenge of fire-fighting and institution-building – all in a situation where the interests of debtors and creditors diverged sharply and European electorates were closely following developments.

Judging from market reactions, each policy intervention 'saved the day' but made things worse from the next day on. The corner was only turned in the summer of 2012 with the decision to set up a banking union and the "whatever it takes" assertion by ECB President Mario Draghi.

The rest of this essay is organised in three parts. The next section lays out our consensus view of how and why the Crisis unfolded as it did. The subsequent section considers the proximate causes of the Crisis and the causes of these causes. The final section presents our concluding remarks and discusses the next steps in the "Rebooting the Eurozone" project.

EZ Crisis: A consensus narrative

This section presents what we believe is a convincing narrative of what went wrong and why. To keep it fairly simple and fairly clear, it focuses on the major economic causes and consequences. All sorts of ancillary effects are left to the side in order to highlight the things that really mattered and how they interconnected.

Building up problems

The 1990s were marked by large differences in European nations' cost of borrowing. In the face of high and quite different inflation rates – and the occasional crisis-driven devaluation – markets demanded very large risk premiums for lending to some of Europe's governments.

- As Figure 1 (top panel) shows, some nations had to pay double-digit interest rates to get the markets to buy their bonds, while others faced much lower borrowing costs.

That all changed with the move towards monetary union.

- From 1995, EZ interest rates converged in anticipation of the single currency.

Risk premiums evaporated as markets believed the Maastricht Treaty promises of "no devaluation" and "low inflation forever for all". At the time, such convergence was viewed as a good thing

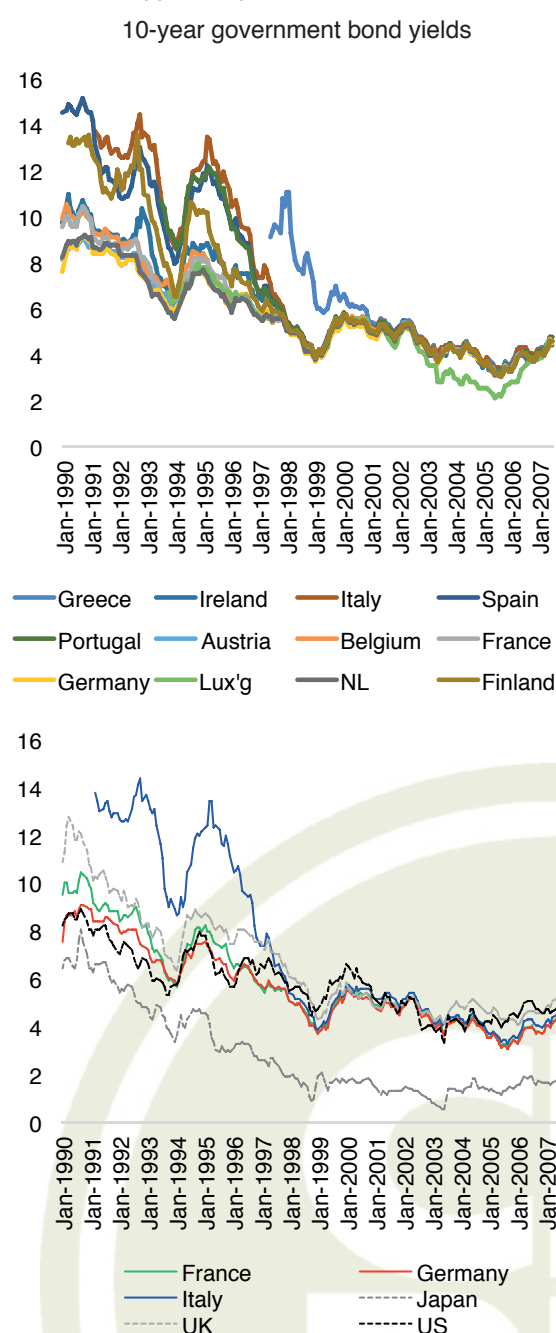
– evidence that monetary union was fostering real core-periphery convergence.

The magnitudes of the changes were astounding. Italy saw the nominal cost of borrowing fall from 13% to 3% in less than a decade. Even German government bond yields dropped from 7% to 3%.

The sharp drop in sovereign borrowing costs was not particular to the Eurozone. Most advanced economies saw similar drops in their long-run rates (Figure 1, bottom panel).

The drop in rates and disappearance of interest rate spreads had consequences. Cheaper credit encouraged borrowing throughout the monetary union – some public, some private and some foreign. Each type of borrowing played a role in setting up the pre-Crisis imbalances.

Figure 1 Interest rates fell and risk premiums disappeared pre-Crisis



Source: OECD online database with authors' elaboration.

The critical imbalance: Intra-EZ lending and borrowing

The EZ Crisis was not, at its roots, a government debt crisis. The key imbalance was the large intra-EZ capital flows that emerged before the Crisis.

Current account deficits

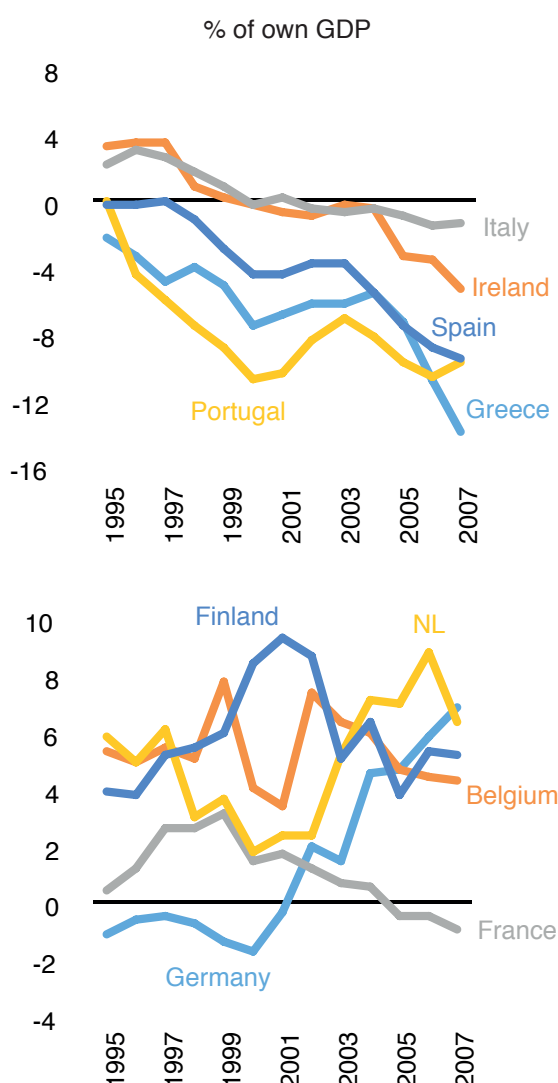
A nation's current account deficit reflects its net borrowing from abroad. A negative current account indicates net borrowing from foreigners, while a positive current account indicates net lending to foreigners.

Figure 2 shows the evolution of the current account surplus for the turnkey nations as a share of each nation's own GDP. The top panel shows:

- The nations that eventually ended up in trouble – Greece, Ireland, Portugal and Spain, or the GIPS for short – ran substantial and increasing current account deficits in the run-up to the Crisis.

Italy, which almost got into trouble, was also increasingly relying on foreign lenders, albeit to a much lesser extent than, for example, Spain.

Figure 2 Peripheral EZ members generally ran current account deficits while core members generally ran current account surpluses



Note: Current account deficit (-) and surplus (+).

Source: WEO online database with authors' elaboration.

- The bottom panel of Figure 2 shows that the main contributors to the bailouts were net lenders.

France and Italy are exceptions that test the rule. In the mid-1990s they had positive current accounts, but they saw their positions deteriorate in the late 2000s. Unlike the other nations shown in the right panel, France, and especially Italy, started to have problems at the height of the Crisis.

Balance-of-payment numbers as a share of GDP illustrate the importance of foreign capital flows from the perspective of the individual nations. But given the gigantic size differences among EZ members, the ratios hide important information about who were the biggest lenders and borrowers.

The numbers (not shown) point to two outliers. By 2007, Germany was, on net, lending almost \$250 billion per year to other nations. The figure for the next biggest net lender, the Netherlands, was \$50 billion or less. Spain was by far the largest net borrower, with its capital inflows reaching \$150 billion in the year before the Crisis. In the decade preceding the Crisis, Spain borrowed about €1 trillion – roughly 100% of its GDP. No other nation came close to those magnitudes.

Investment versus savings

The current account is, by construction, the difference between the amounts a nation invests and saves. Looking at savings and investment thus provides hints as to the drivers of current account imbalances.

Figure 3 makes it clear that the core nations, broadly speaking, had above-average savings, while the GIIPS had below-average savings (Ireland being the exception). The Dutch, Belgian and (at the end) German cases stand out in particular. Italy, Spain and Portugal, by contrast, stand out on the low side.

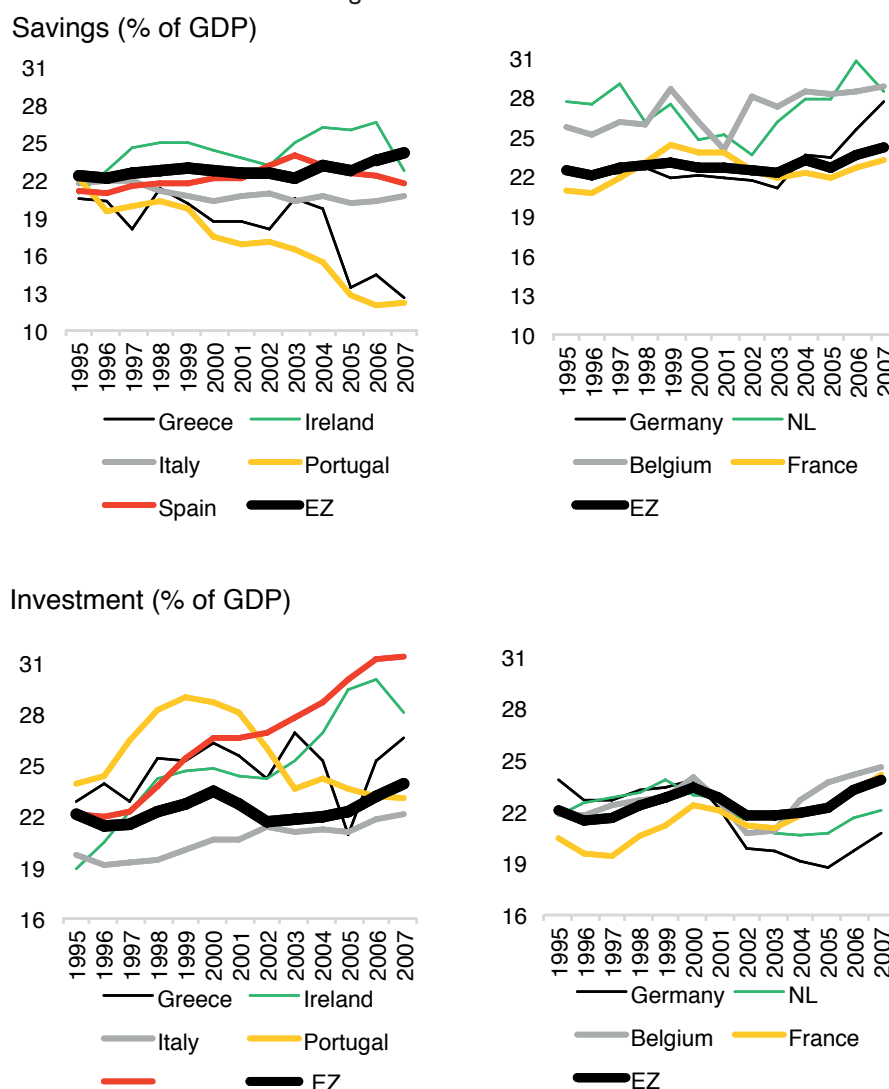
When it comes to investment, the core nations tended to underinvest at home (compared to the EZ average), while the GIIPS tended to overinvest. Spain and Ireland are the outliers here; they invested far more than the EZ average during the pre-Crisis years.

Note that this basic pattern was viewed as a 'feature' of the system rather than a 'bug'. It was widely believed that the periphery EZ members, which had abundant investment opportunities, were attracting investors from richer nations where capital faced diminishing returns.

Competitiveness imbalances

A big part of the eventual problems caused by these flows stemmed from the fact that much of the investment headed towards non-traded sectors like government consumption and housing. The inflows tended to drive up wages and costs, which resulted in competitiveness losses that validated the current account deficits.

Figure 3 The GIIPS generally saved less and invested more than the average, while core EZ nations generally saved more and invested less than the average



Note: Current account deficit (-) and surplus (+).

Source: WEO online database with authors' elaboration.

All four nations that eventually signed bailout packages – Greece, Ireland, Portugal and Spain – had inflation well in excess of the average. By contrast, all the core nations (except the Netherlands and Luxembourg) had inflation below the norm, especially Germany. Funds flowing into housing also contributed to house price bubbles that amplified the Crisis when they inevitably burst.

Public debt build up

Figure 4 provides clear evidence that the EZ Crisis was not driven primarily by the irresponsible piling up of public debt. Taken as a group, the Eurozone lowered its debt-to-GDP ratio from 72% in 1999 to 66% in 2007 and most EZ members followed this trend.

The key point is that the debt dynamics shown in Figure 4 do not line up well with the nations that subsequently got into trouble (Greece, Ireland, Portugal, Spain, and Cyprus).

- For Ireland and Spain, public debt was not a problem before the Crisis.

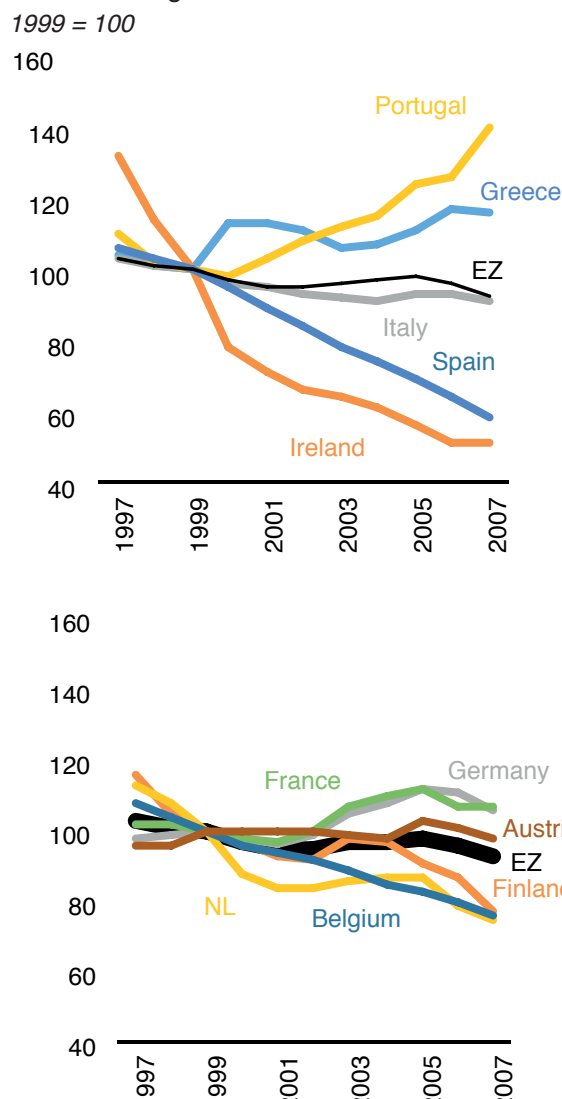
These two were paragons of fiscal rectitude, dramatically lowering their public debt burden to far below the Maastricht limit of 60%. In 2007, Ireland's and Spain's ratios were, respectively, just 24% and 34% of GDP.²

- The debt evolution was not a core versus periphery story.

Italy lowered its public debt pile by ten percentage points of GDP along with EZ core nations Belgium, the Netherlands and Finland. Germany and France, by contrast, allowed their debt ratios to rise above the 60% Maastricht limit. This was despite the sharp decline in the budgetary burden of interest payments that came with lower borrowing costs compared to the 1990s.

² It should be noted that both countries' government revenues were kept artificially high by tax revenues associated with a real estate boom.

Figure 4 Government debt ratios improved for most EZ nations (especially Ireland and Spain) but Portugal's debt burden soared



Note: These are debt-to-GDP ratios rebased to 1999; see Table 2 for data on the levels of debt ratios in 2008. Source: IMF WEO online database with authors' elaboration

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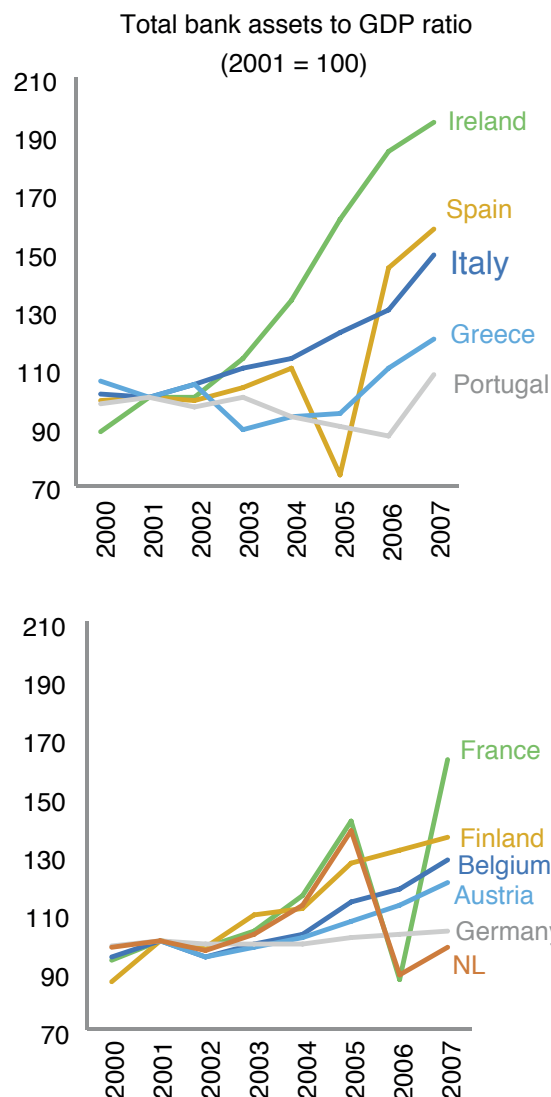
- Public debt became an issue for only two of the Crisis-hit nations – Greece and Portugal.

During the calm years leading up to the Crisis, Portugal and Greece both ran-up their debt ratios. The big difference was that Greece started high and pushed steadily higher (from 88% in 1999 to 103% in 2007). Portugal's debt-addition started and below the Maastricht limit and ended just above it (from just 49% in 1999 to just 68% in 2007).

Private debt build up

Private debt – which became a huge issue during the Crisis – was run up during the heydays of the Eurozone's first decade in some EZ members (Figure 5). Ireland's total bank assets as a percentage of GDP almost doubled from 2001 to 2007, with the end point being an incredible seven times national income. The numbers for France and Spain are not as extreme, but French and Spanish banks added debt that was worth more than 100% of GDP.

Figure 5 Rapid accumulation of bank debt was a problem, especially in Ireland, Spain, Italy and France



Source: OECD online database with authors' elaboration.

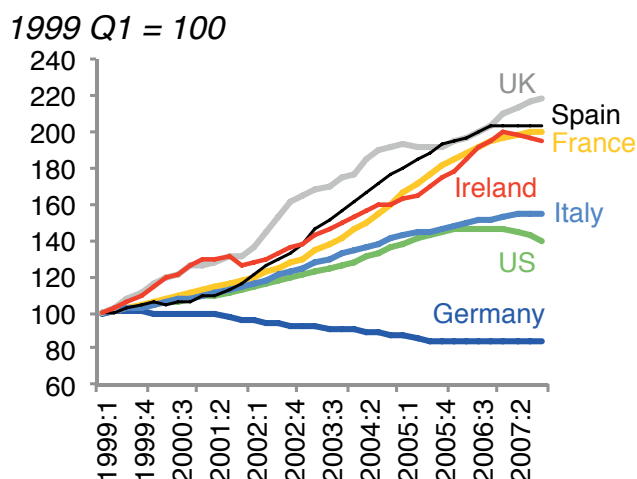
Italian banks ran up debt of about 70% of the nation's income.

Much of the bank lending went to the housing sector, especially in Spain and Ireland, which experienced significant growth in housing prices (Figure 6). But as with government debt, there was no simple core versus periphery distinction. House prices rose sharply in France but actually fell in Germany. The trend in the Italian housing price index was positive but only half as marked as in Spain. For comparison, the US numbers are also shown.

EZ banks' cross-border lending

The data allow a closer look at one particularly important form of cross-border private lending/borrowing – that of banks. Table 1 shows that banks from the 'core' (Germany, France, Austria, Belgium and the Netherlands) bought very large amounts of debt from the nations that would eventually get into trouble.

Figure 6 House prices rose in the GIIPS more than in the US, while they fell in Germany



Note: 199 Q1 = 100.

Source: OECD online database. House price indices in real terms

Table 1 Total lending from core countries' banks to the periphery (billion 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
GIIPS	204	1,212	495
Total	463	2,033	340

Note: EZ core is Germany, France, Austria, Belgium and the Netherlands

This interlinkage between core-nation banks and periphery-nation borrowers created one of the fragilities that made the Crisis politically difficult to manage. It meant that restructuring the debt of Crisis-stricken nations like Greece would have forced the problem back onto banks in nations leading the bailout. In other words, the obvious solution of writing down Greek debt might well have increased the risk of classic bank-solvency crises in France and Germany. Indeed, this is exactly what happened to Cyprus when investors were eventually forced to take a haircut on Greek debt.

Crisis prelude

The EZ Crisis was intimately linked to the Global Crisis. The Global Crisis started life as the US Subprime Crisis in August 2007. It became a Global Crisis when Lehman Brothers failed in September 2008. Slowing growth and heightened fear soon started to tell on the Eurozone economy as a whole, but especially for those that had built up

large stocks of public and private debt, or had run up large current account deficits.

Risk premiums that had been measured in basis points for years jumped up to two or three percentage points for Greece, Ireland, Italy and Portugal. As it became clear that the Lehman shock would not create a second Great Depression, EZ spreads declined substantially. The shock seemed to be dissipating. This was not to last.

Triggers of the Crisis

Every crisis has a trigger. In Europe, it was revelation of the Greek 'deficit deceit'. In October 2009, the newly elected Greek government announced that previous governments had masked the size of the budget deficit. The true deficit was – at a whopping 12.5% – twice as large as previously announced.

What followed was a six-month attempt by Greece at 'self-rescue'. This failed. Greece was caught in a classic public debt vortex.

A nation's debt is sustainable when the debt burden – commonly measured by the debt-to-GDP ratio – is not rising forever. When investors begin to fear that a nation's debt may not be sustainable, they demand higher interest rates. While sensible at the investor level, this can trigger a public-debt vortex – a self-fuelling cycle whereby the fears of default become a reality. The mechanism is simple.

The higher borrowing costs take a larger bite out of the budget and thus tend to shift the country into a situation where it has to borrow more. If it does borrow more, the rise in the debt-to-GDP ratio can lead markets to push borrowing costs even higher.

Attempts to close the budget deficit by cutting spending and/or raising taxes is another common reaction, but this too can backfire. It may trigger an austerity loop whereby fiscal tightening pushes the economy into a recession that both lowers tax revenue and raises social spending. The budget balance may deteriorate despite the balancing efforts. The cycle begins to feed on itself when investors see all this and conclude that the struggling government is a worse credit risk than they thought. Interest rates rise as the economy crashes.

This is the public-debt vortex that dragged down Greece during its self-rescue attempt. Soaring debt-service costs, combined with plummeting GDP, pulled the nation ever closer to the precipice of unsustainability. Credit agencies repeatedly downgraded Greek government debt and its borrowing cost leapt from 1.5% to 5%. All this happened before the first bailout.

Phase One: Failed bailouts and contagion

If a public-debt vortex goes on for long enough, there are only two ways to stop it: a default, or a bailout by a 'lender of last resort'.

Europe's leaders decided it was unthinkable for a Eurozone member to default, so Greece had to be bailed out. In the event, the 'lenders of last resort' were the Troika – the European Commission, the ECB and the IMF.

The rescue did not work. Greece's package was too little too late. Markets did the maths and realised that Greek debt remained unsustainable. The rushed and politically charged way in which the package was put together did nothing to bolster market confidence in EZ leaders' ability to handle fast-moving crises.

Greece's borrowing cost continued to soar (Figure 7). But worse was to come.

Contagion in the periphery: Sudden stops and debt vortexes

From early 2010, markets wondered whether Greece's inability to save itself might also apply to other nations. These doubts drove up the yields in other Eurozone nations (Figure 7).

This was the beginning of a 'sudden stop' for the EZ nations that relied on foreign capital to cover their savings-investment gap, namely, Ireland, Portugal, Spain and Italy. Given the worldwide recession, all Eurozone governments were running deficits and thus having to borrow more on the markets. But only those nations that relied on net foreign lending (i.e. were running current account deficits) faced contagion. The borrowing costs of Portugal and Ireland rose briskly once the Greek bailout was announced (Figure 7).

The rise in the risk premiums set in train debt vortexes that pulled down both Ireland and Portugal, although via very different mechanisms. In Ireland's case, it was the excessive borrowing of banks that mattered. Banks, like nations, can be subject to debt vortexes. See Box 1.

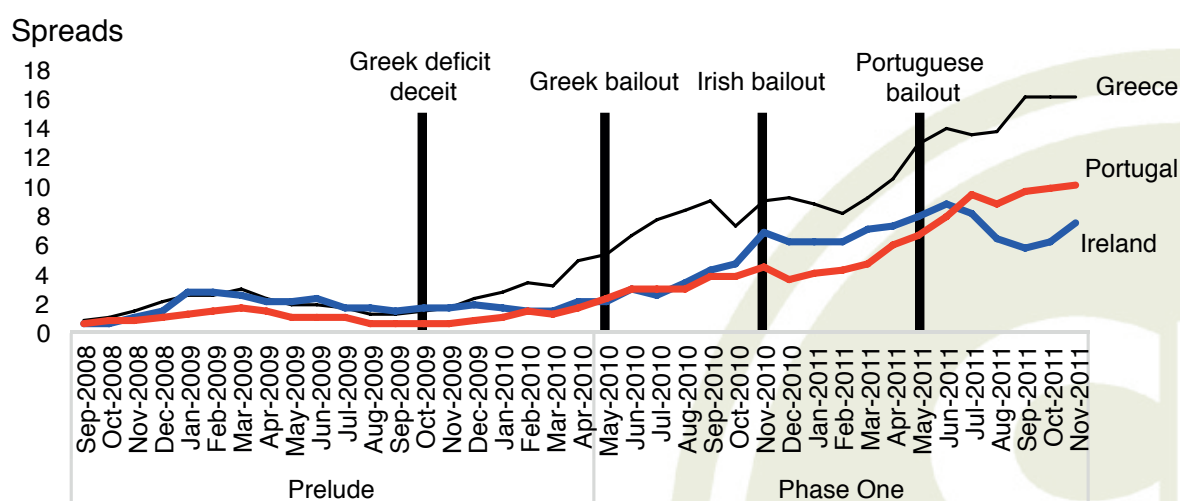
Box 1 Bank debt vortexes: The 'doom loop' or 'diabolic loop'

Banks borrow short to lend long; for each euro borrowed over the short term, the bank makes long-term loans of a dozen or more euros. Given this, banks go broke any time their short-term funders refuse to rollover the short-term funding – a situation known as 'liquidity problems'. This house of cards is stable since people believe that the banks can overcome liquidity problems by turning to a 'lender of last resort' – typically the national government or national central bank.

Bank-debt vortexes tend to move much faster than public-debt vortexes. A typical Eurozone government may have to seek fresh loans to cover, say, 10% of its outstanding debt *per year*. A typical EZ bank has to seek fresh loans worth 10% or more of its total debt *per day*. With a daily need for billions, the vortex – once it gets going – can accelerate at a frightening pace. During the Lehman Brothers debacle, one bit of bad news – Lehman's default – brought the entire US credit market to a halt within hours; it spread to the rest of the world within days.

The 'doom loop' is a loop since it reaches back to the governments. Banks view their national government as their lender of last resort. But banks are also major lenders to the governments (via bond purchases). The rescue, in essence, would require the rescuers to borrow from the rescued.

Figure 7 Prelude and Phase One of the Crisis: Contagion in the periphery



Note: The spreads are the difference between national 10-year government bond yields and those of Germany, in percentage points.

Source: OECD online database with authors' elaboration.

In 2007 and 2008, the leverage of EZ banks did not look particularly high, at least relative to that of US investment banks. But this was only because the assumption was that government bonds were a safe asset – an assumption confirmed by the ECB treating all EZ government bonds as perfect substitutes.

As the Crisis broke, these levels of leverage looked immediately dangerous. The response should have been a rush to cut bank leverage and put fresh capital into the banks, ideally from foreign investors or EU institutions to avoid the concentration of risk within individual countries. This is what the US did, concentrating the risk on the public balance sheet. In the Eurozone, the rules of the monetary union forbade this. The consequence is that, even today, the problem of weak banks still remains largely unaddressed.

When Irish banks got into trouble in 2008, the Irish government bailed them out. This turned a private debt problem into a public debt problem. Despite having a very low debt-to-GDP ratio going into the Crisis, this extra dollop of debt pushed Ireland closer to the debt vortex. After fear in the markets pushed up Irish borrowing costs, the Irish bailout was signed in November 2010. This was the Eurozone's first example of the 'doom loop' linking bad bank debt to national solvency.

As with the Greek bailout, the Irish bailout saved the day but worsened the Crisis. The borrowing costs of Greece, Portugal and Ireland continued to rise (Figure 7).

By the time of the Portuguese bailout in May 2011, markets were demanding 16% for holding Greek bonds – a ruinous level even for nations in good economic shape. The Greek economy, however, was in anything but 'good shape'. After contracting about 5% in both 2009 and 2010, Greek GDP crashed by almost 9% in 2011. A second bailout

was needed. This was agreed (in principle) in July 2011, but one of its elements enflamed the overall situation.

Private Sector Involvement

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 their investment disappear in what was called Private Sector Involvement (PSI). This was a wake-up call for investors who still believed governments would bear all the costs of the Crisis.

Seeing private investors explicitly having to write down EZ government debt, and seeing how EZ leaders seemed unable to put the Crisis behind them, markets drew the natural conclusion that a write-down was also possible for other EZ government debt.

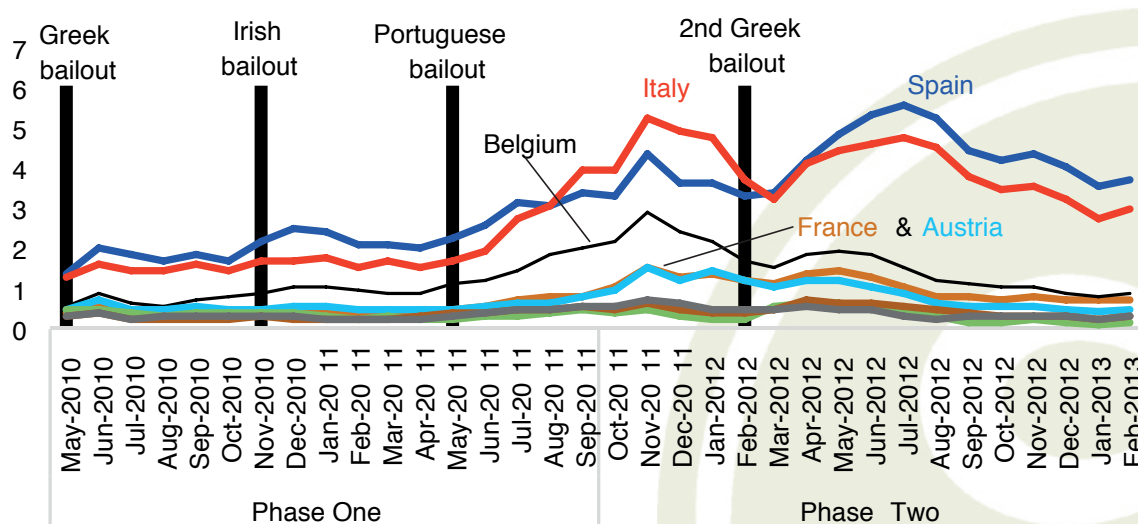
Markets, already leery of lending across borders, became even more reluctant. Portugal, which had borrowed 10% of its GDP abroad in 2009 and 2010 (via the current account), was the next to suffer a sudden stop. Its bailout was signed in May 2011.

Once again, the bailout saved the day but worsened the Crisis; after a brief respite, rates continued their ascent towards levels that would bankrupt almost any nation (Figure 8) – and not just for Portugal. Greek rates also rose. But worse was to come.

Phase Two: Contagion spreads to the core

The three countries hereto caught in the Crisis were small and their debts were insignificant compared to the overall EZ economy. Worries mounted when markets started demanding higher rates for the government bonds of Belgium, Spain and Italy (Figure 8). Italy in particular was a mortal threat to the Eurozone, given the size of its economy and its massive debt.

Figure 8 Phase Two: Contagion spreads to the EZ core



Note: The spreads are the difference between national 10-year government bond yields and those of Germany, in percentage points.

Source: OECD online database with authors' elaboration.

'Phase Two' of the Eurozone Crisis had started. As IMF Chief Christine Lagarde put it: "Developments this summer have indicated we are in a dangerous new phase" (Lagarde 2011). Repeated attempts to get ahead of the curve failed, giving rise to a general fear that the EZ Crisis might be spiralling out of control. Borrowing costs started to move in ways that threatened to validate the fears. Nations that had previously been considered safe investments were now seen as possibly sliding into the clutches of public-debt vortexes.

This self-feeding aspect is one feature of the Crisis that is both essential and elusive, as it rests on perceptions. See Box 2.

Box 2 Self-feeding panic: Good equilibrium, bad equilibrium

When investors start to lose confidence in a country's ability to pay its debts, they sell government bonds in an effort to avoid future losses. These sales push interest rates up, making it harder for the nation to rollover its debt at reasonable rates. Seeing the funding difficulties, markets may demand even higher interest rates and the helix spirals upwards. In this way, a liquidity crisis (i.e. difficulty in rolling over debt) can – all on its own – become a solvency crisis. It's a matter of expectations.

A good way to think of this is as there being two equilibrium situations. In the first, the 'good equilibrium', markets believe the nation is solvent and thus are willing to rollover its debt at reasonable rates. This validates the belief and the nation remains solvent. In the 'bad equilibrium', markets suspect the nation is insolvent and demand interest rates that make the debt unsustainable, thus confirming their suspicions.

The botched bailouts and EZ leaders' repeated inability to prevent contagion seemed to have switched Europe from a 'good equilibrium', where government debt could be financed at reasonable costs since investors thought it was sustainable, to a 'bad equilibrium' where investors demand interest rates that make the debt unsustainable.

It is impossible to know why markets think what they do, but many point to the 50% 'haircut' that was a pre-condition for Greece's second bailout. By insisting that private holders of Greek debt lose money, Eurozone leaders transformed fears of losses into real losses. Any lingering belief that default was unthinkable inside the Eurozone was erased. The thought foundations that supported the pre-Crisis imbalances were shattered. The consequences were not long in coming.

The massive pre-2008 lending across EZ borders had exposed banks in the core to government debt in the periphery. In early October 2011, a Franco-Belgian bank, Dexia, was pushed into a bank-debt vortex by worries over its exposure to Greek government debt. It was nationalised by Belgium by month's end. Fearing an Irish-like end to the

story, the 'sudden stop disease' spread to Belgium. Belgium had, by this point of the recession, turned from a net creditor to foreigners into a net borrower (its current account was in deficit from 2008, Figure 8). Belgian borrowing costs started to rise worryingly.

Given Spain's large bank debt and collapsing property markets, similar worries spread to Spain. Events in Belgium accelerated the process.

Italian yields also soared, but not due to bank problems. With a debt-to-GDP ratio over 120%, Italy needed both good growth and reasonable borrowing costs to stay afloat. It was becoming vulnerable to a sudden stop since its implicit reliance on foreign investors rose along with its current account deficit (Figure 8). Italy, in short, was showing symptoms of the 'sudden stop disease'.

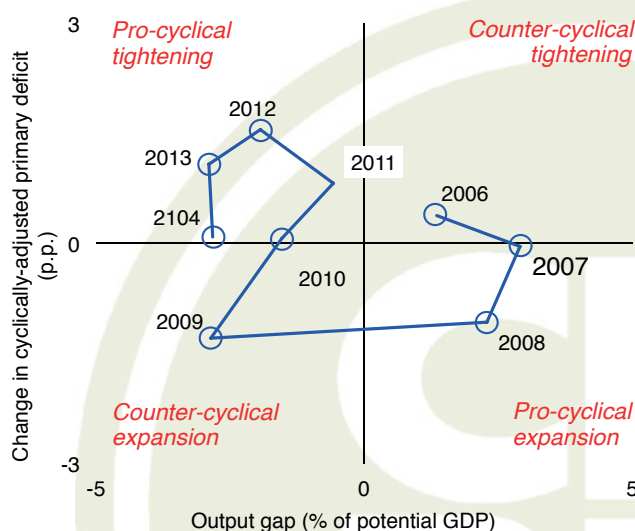
Sharp actions by national governments calmed waters for a few months, but attempts to switch investors from bad-equilibrium expectations to good-equilibrium expectations failed. It all started up again when implementation of the second Greek bailout once again disappointed markets.

Pro-cyclical fiscal tightening

Mismanagement of the bailouts was not the only thing stoking contagion. Even as EZ governments were pulling together to fight the Crisis collectively, they were individually adopting fiscal policies that made things worse. But it did not start that way.

The Great Recession produced counter-cyclical fiscal policy via the usual automatic stabilisers – falling tax receipts and rising social spending. This surely dampened the shock and prevented the Great Recession from becoming the second Great Depression. From 2010, however, the fiscal policy stance flipped from stimulus to contraction, as Figure 9 shows. The Eurozone as a whole saw its 2010 primary deficit move from about minus

Figure 9 Fiscal policy turned pro-cyclical from 2010



Source: Inspired by Carnot and de Castro (2015) with authors' elaboration using IMF WEO data.

€350 billion in 2010 to €10 billion in 2014. This was a massive contractionary shock – equal to four percentage points of the monetary union's economy.

The tightening by the GIIPS was unavoidable, as they were either in bailout packages that prescribed fiscal tightening or they were doing the tightening themselves to avoid being dragged into a Portuguese-style debt vortex.

The GIIPS accounted for 48% of the fiscal swing, even though they accounted for only a third of EZ GDP. The effects on the economy were amplified by the fact that countries typically achieved the tightening mostly by raising taxes. Cutting public spending would have been less contractionary, but governments felt there was no time for the reforms needed to bring down public spending on a stable basis (Alesina et al. 2015).

To avoid a lingering recession, active aggregate demand management at the level of the Eurozone would have been needed. But this was not to be. EZ core nations decided that they too had to embrace fiscal rectitude. As the monetary union's largest economy, tightening by Germany accounted for 32% of the Eurozone's overall fiscal tightening. France's austerity amounted to 13% of the EZ total.

Denouement

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

By this time, the contagion had 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. The Belgium 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).

A crisis that threatened Italy and France was a crisis of global dimension. This was no longer an issue of Greece fiddling the books to pay for the Olympics. The Crisis had become something that had the potential to blow up the Eurozone, and possibly the EU along with it.

In short, the world economy was looking at another Lehman-sized shock. With EZ leaders manifestly incapable of mastering events, something had to be done.

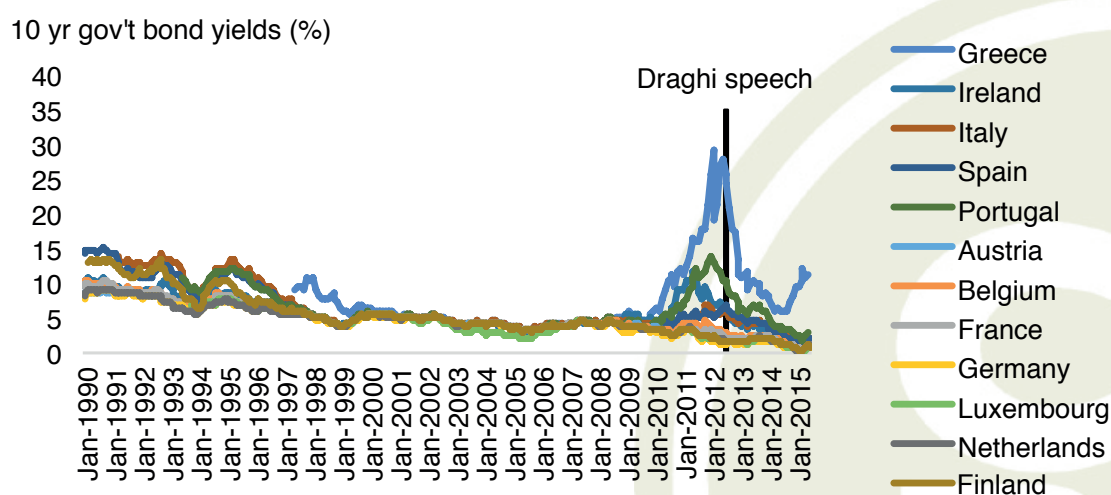
Draghi's "whatever it takes"

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 markets from the "doom is inevitable" expectations back to the old "we will get through this thing" expectations. Borrowing costs returned to pre-Crisis levels (Figure 10).

The basic switching mechanism that Draghi triggered is a direct corollary of the public-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 goes broke. But if there is a debt buyer-of-last-resort – someone who can buy unlimited amounts – 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.

Draghi's intervention was particularly effective since it did not come in isolation. It is not by chance that the speech was delivered shortly after agreement on the Banking Union and the Fiscal Compact – fixes aimed directly at the fragilities that allowed Greece's one-off deficit deceit to explode into a crisis of historic proportions.

Figure 10 Yields converged after Draghi's intervention



Note: OECD online database with authors' elaboration.

Particularly important was progress on the Banking Union, which had begun just before Draghi's speech. By 2012, national banks had become more loaded with their own governments' debt than they had been when the Crisis broke out. While this situation persists today, the rapid progress on Banking Union – and the demonstrable political will to make it work – helped defuse fears of this 'doom loop' pulling more EZ nations into Irish-like double drownings.

Even in Greece, things seemed to be getting better. In April 2014, Greece successfully sold new debt on the open market at reasonable rates and the economy appeared to be recovering slowly. With the election of the far left Syriza coalition, however, borrowing costs soared back to levels that made Greek debt unsustainable.

The third Greek bailout in summer of 2015 seems to have calmed the waters.

Proximate causes, and causes of the causes

The proximate cause of the EZ Crisis was the sudden halt in intra-EZ lending and borrowing that had underpinned the run-up of imbalances in public and private debt in the monetary union's first decade. This 'sudden stop' was a crisis rather than a problem for two key reasons. First, the private debt imbalances had grown too large for individual nations to handle on their own. Second, the monetary union rules prevented EZ members from deploying the time-tested cures for the 'sudden stop disease'. National central banks could not buy the trouble debt and the stricken nations could not depreciate their currency to help balance the external account.

The proximate causes were symptoms rather than the causes of the disease.

Causes of the causes

Up to 2007, the Eurozone was widely judged as somewhere between a good thing and a great thing. The rose-garden feeling, however, started to disintegrate with the fall of Lehman Brothers in September 2008. The proximate causes of the Crisis – imbalances and lack of crisis management mechanisms – tell us that there are really three types of underlying causes:

- Policy failures that allowed the imbalances to get so large;
- Lack of institutions to absorb shocks at the EZ level; and
- Failings in real-time crisis mismanagement.

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

Allowing the imbalances to get so large

The imbalances that set the stage for the Eurozone Crisis involved public and private debt as well as cross-border borrowing and lending (see Table 2). The failures that allowed these imbalances to emerge are quite different, but at the heart of them all is a simple fact – the Eurozone was designed without mechanisms that could moderate divergent economic developments.

Failure to control national debt

The founders of the Eurozone were very much alive to the dangers of fiscal problems arising inside a monetary union, having been alerted by dozens of debt crises suffered by, inter alia, US states and municipalities inside the US monetary union. They thought they could rely on markets to discipline governments, but this turned out to be an illusion. The obvious solution – setting up a fiscal union to match the monetary union – was politically unrealistic. The main safeguard adopted was the Stability and Growth Pact. This was to keep deficits below 3% of GDP in normal times, and debt levels below, or at least heading towards, 60% of GDP.

The Stability and Growth Pact failed even when it succeeded. The rules were widely flaunted in the pre-Crisis years. There were 34 breaches of the 3% threshold for the general government deficit between 1999 and 2007 – including reputation-busting violations by Germany and France. But even those members that followed the Pact's logic were not immune. Ireland and Spain paid down their national debt to far below the recommended 60% level, but were caught in debt vortexes. Germany, by contrast, was unscathed by the Crisis even though it allowed its debt ratio to rise above 60% in the euro's first decade.

Failure to control excessive bank leverage

Nothing in Europe's monetary union architecture was explicitly designed to prevent the massive bank leverage that emerged. Banks' balance sheets were left to national authorities. Coordination of banking rules was at best mentioned in passing in the 1990s, and few thought of moving deposit insurance, supervision, or bank resolution to the EZ level. **There was, however, nothing unique in the emergence of massive bank leverage in the Eurozone. Overleveraged banks turned out to be a problem in advanced economies around the world. The real failure here was the intellectual climate of the 1990s that viewed existing micro-prudential rules as sufficient.**

Failure to monitor intra-EZ lending and borrowing

When the euro institutions were set up, nothing was put in place to monitor large intra-EZ capital flows. The ECB and national central banks in both the surplus and the deficit countries failed to realise what the huge intra-EZ credit flows were financing. To use the language of software engineers, the big flows were viewed as a feature, not a bug.

Table 2 Summary of pre-Crisis imbalances

	1999 to 2007 (% of own GDP)		Bank assets (% of GDP)		%	
	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
NL	48	-5	-9%	375%	55	2.8
Finland	61	33	101%	197%	33	-4.9
Luxembourg	98	23	-577%	2367%	14	5.5

Note: 'Excess' inflation is the nation's cumulative inflation rate minus that of the EZ average.

Source: IMF and European Banking Association online data with authors' elaboration.

Bank supervision focused on how much banks lent without much regard to who was financing the lending. Likewise, the Stability and Growth Pact focused on public funding gaps, not the investors who were funding them.

The risks of credit imbalances can be diminished by surveillance and avoiding the accumulation of excessive imbalances. But the risks will never disappear. Booms and busts are woven into the fabric of Europe's economic system.

Lack of collective action, shock-absorbing mechanisms

There were quite literally no provisions, procedures or institutions for addressing the sort of public- and bank-debt vortexes that made the EZ Crisis so damaging. Again, this was at least in part viewed as a feature rather than a bug when the rules were written into the Maastricht Treaty. The lack of common shock-absorbing mechanisms in the monetary union was meant to avoid 'moral hazard' problems and encourage wise behaviour by its members. The only shock absorber turned out to be the TARGET mechanism. Cumulated TARGET inflows into Greece during the Crisis were similar in size to the official assistance. If Greece had been in a fixed exchange-rate system, it would likely have experienced a more violent, although possibly shorter, crisis.

As the Eurozone has discovered, sovereigns affected by sudden stops in foreign financing often lacked the fiscal resources to cope with them. The size of banks had grown just too large. The threat of the bank-debt vortex will always be present. The same can be said of public-debt vortexes.

Failings in real-time crisis management

The European treaties never anticipated a crisis of this magnitude. No institutions or procedures were set up to deal with the sort of firestorm that made the Eurozone Crisis the most costly European crisis in decades.

It is worth breaking down this failure into three parts:

- Conceptual failures made it hard for EZ leaders to understand the consequences of their actions and inaction.

In many ways, EZ policymakers developed their instincts when they were running small open economies. The Eurozone, as a large closed economy, requires quite a different mind-set. Negative spillovers for the EZ as a whole from policy choices such as austerity and private sector involvement were perhaps not as widely appreciated as they should have been. Moreover, during the monetary union's quiet decade, Eurozone leaders became attached to the illusion that a monetary union could prosper without bailouts, without monetisation and without restructuring. In fact, even without the Lehmann bankruptcy, a major crisis would have probably happened eventually.

- Political 'conflicts of interest' hindered collective action.

By 2007, banks in EZ core nations were heavily invested in the debt of periphery nations. This inhibited some natural solutions, such as the writing down of Greek government debt in the early days of the Crisis. More generally, setting up shock-absorbing mechanisms was and still is

hard. The task, however, is made even harder since it is now clear which EZ members will be directly benefitting from these and which will be directly paying for them in the next decade or so. Eurozone leaders constantly hesitated between short-term objectives and long-term objectives such as avoiding moral hazard and re-establishing market discipline.

- Ill-adapted decision-making procedures produced half-measures that tended to fix short-run problems at the cost of stoking contagion.

Since there were no explicit crisis-management mechanisms in place, almost all decisions had to be made by consensus. This fact, combined with the conflicting interests and lack of expert advice, resulted in measures that repeatedly made the Crisis worse. For example, the decision to set up the ESM went in the right direction, but the choice to structure the new institution as an inter-governmental body weakened the Commission, with long-run consequences.

Concluding remarks

This essay has identified the proximate causes of the Crisis, and the causes of these proximate causes. The EZ Crisis started as a classic 'sudden stop' of cross-border capital flows. For several EZ nations, such as Ireland and Spain, this turned a private debt problem into a public debt crisis. For others, such as Greece and Portugal, public debt was the Achilles heel. For most, the highly leveraged banking system and its tight links to national governments provided the fuel that turned an economic problem into a system-wide crisis. The lack of crisis-management tools and shock-absorbing mechanisms prolonged the Crisis and fostered contagion from the EZ periphery to the EZ core.

How we got here

When Europe's monetary union was designed in the 1980s, several fundamental design flaws were papered over. There was no shared vision on the standards of political and institutional cohesion that would be required to make the project viable. Shocks would create fault lines and conflicts, but the historical importance of the European project would provide the motivation to overcome obstacles, smooth differences over policy, and elicit solidarity. **As Jean Monnet famously put it, "l'Europe se fera dans les crises"** as it had done for six decades.

Europe's bad luck exposed the costs of relying on Monnet's view. Shocks the size of the Global Crisis and the Great Recession were not really what the Eurozone's architects had in mind when they thought they could rely on muddling-through.

Although **Monnet was right** in the sense that progress on Banking Union would have been impossible without the Crisis, from 2010 to 2012, Monnet's logic was turned on its head. Discussions

of how to complete the currency union proved divisive and destabilising. It made matters worse that a consensus had to be reached on institutional issues while knitting together agreements on emergency measures.

The consequences were and still are dreadful. Europe's lingering economic malaise is not just a slow recovery. Mainstream forecasts predict that millions of Europeans will miss out on the opportunities that past generations took for granted. The Crisis burden falls hardest on Europe's youth, whose lifetime earning profiles have already suffered.

Money, however, is not the main issue. This is no longer just an economic crisis. The economic hardship has fuelled populism and political extremism. In an international setting that is more unstable than any since the 1930s, nationalistic, anti-euro, anti-EU rhetoric is becoming mainstream. It is no longer the case that only fringe political parties argue for breaking up the Eurozone and the EU. It is not inconceivable that far-right or far-left populist parties could soon hold or share power in several EU nations.

The way ahead

Many influential observers recognise the bind in which Europe finds itself. A broad gamut of useful solutions have been suggested. Yet existing rules, institutions and political bargains prevent effective action. Policymakers seem to have painted themselves into a corner. It is not easy to agree on where Europe needs to go to overcome this existential crisis, but it is even harder to agree on how Europe should get there. Be that as it may, even the longest journey is made one step at a time. This essay is a first step in a bigger project called "Rebooting Europe". It seeks to marshal a critical mass of Europe's economists in developing ways to get Europe working again – to undertake a systematic rethink of today's European socio-economic-political system. In short, to figure out a way to update Europe's 'operating system' and to reboot.

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The Rebooting Europe project

Europe's economic malaise is not just a slow recovery and it is no longer just an economic problem. The economic hardship has fuelled populism and political extremism. In a social and international setting that is more unstable than any time since the 1930s, anti-European rhetoric is becoming mainstream. Political parties that argue for breaking up the Eurozone and the EU are no longer as 'fringe' as they were.

What is needed now is a rethink of today's European socio-economic-political system. Europe needs to update its 'operating system' and reboot.

The Rebooting Europe project aims to provide fresh ideas on how we can restore Europe to a path of prosperity, social stability and European solidarity. To this end, CEPR collected a diverse group of scholars to address the issues. In addition to this Policy Insight, the project has produced one VoxEU.org eBook, *The Eurozone Crisis: A Consensus View of the Causes and a Few Possible Solutions*. Another is in the works for 2016.

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