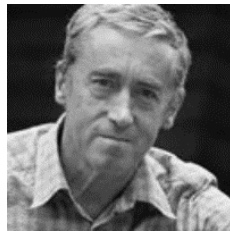


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*To promote the knowledge transfer from the frontier of academic research to policy advice, WPZ invites leading academics to summarize policy relevant insights of their empirical and theoretical research agenda.*

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## The Future of the Euro

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*The recent economic recovery in the Eurozone crisis creates the risk of complacency about the long-term survival of the Eurozone. Despite the recovery, the question of the future of the Euro remains on the agenda. How can we make sure that the Eurozone will survive? In order to answer this question it is important to start from the design failures that have been identified by economists (for a survey of the different views of economists, see in particular Baldwin and Giavazzi, 2015). We stress three of these here. This will allow us discuss possible solutions to these design failures so as to throw some light on the future of the Euro.*

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## 1 Design Failures

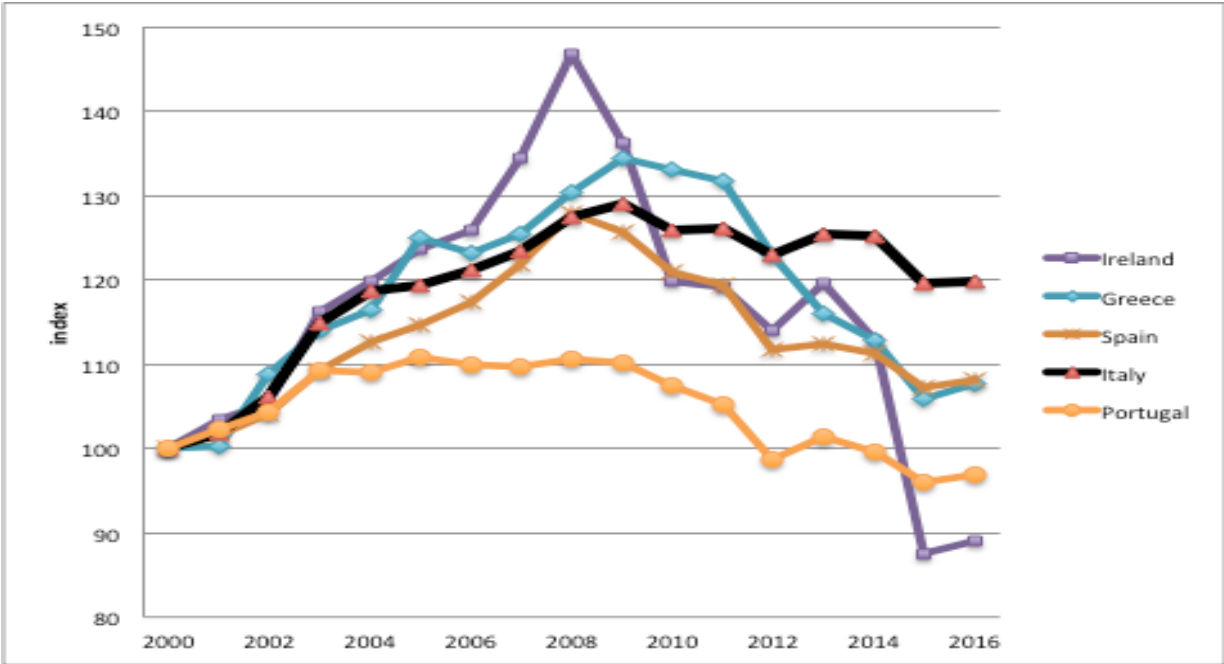
### 1.1 The Eurozone is not an optimal currency area

The European monetary union lacks a mechanism that can deal with divergent economic developments (asymmetric shocks) between countries. These divergent developments often lead to large imbalances, which crystallize in the fact that some countries built up external deficits and others external surpluses.

When these imbalances in the Eurozone have to be redressed, it appears that the mechanisms to do so (“internal devaluations”) are very costly in terms of growth and employment, leading to social and political upheavals. Countries that have their own currency and face such imbalances, can devalue or revalue their currencies. In a monetary union, countries facing external deficits are forced into intense expenditure reducing policies that inevitably lead to rising unemployment and much hardship to millions of people. This problem has been recognized by the economists who pioneered the theory of optimal currency areas (Mundell, 1961, McKinnon, 1963, Kenen, 1969).

In Figures 1 and 2 we show the nature of these imbalances. Figure 1 documents the evolution of the relative unit labour costs in the periphery countries. It shows how these countries experienced a massive reduction in competitiveness (increase in relative unit labour costs). After the crash, they were forced to adjust with large internal devaluations. These introduced strong deflationary forces leading to deep recessions and large increases in unemployment. In Figure 2, we observe that the core countries did not lose competitiveness during the boom years. After the crash, they also did not reflate their economies which would have led to internal revaluations. As a result, the whole of the adjustment costs were borne by the periphery (deficit) countries.

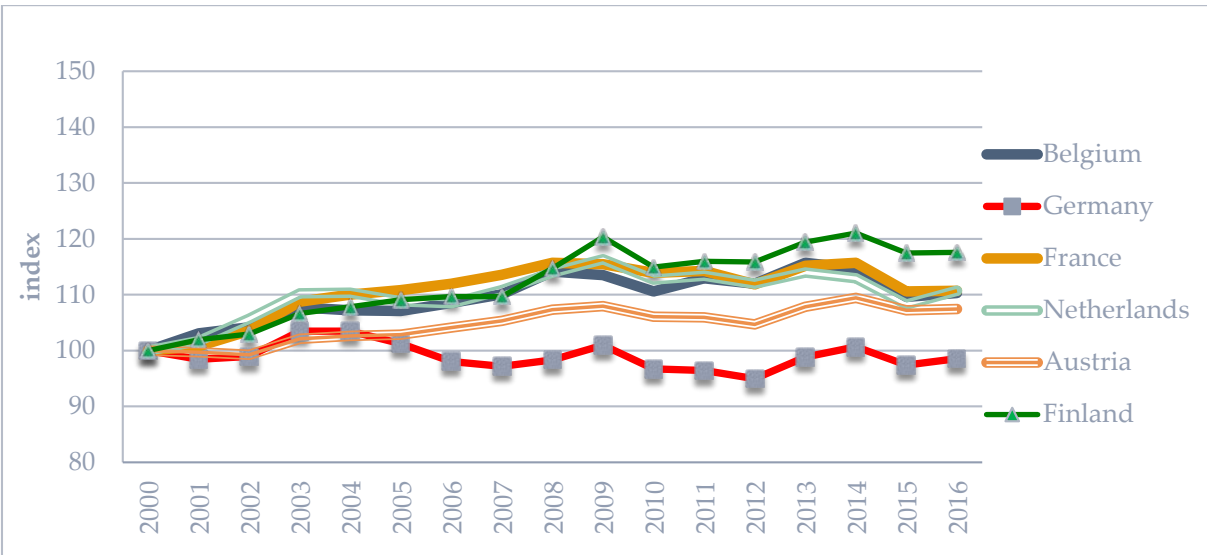
**Figure 1: Relative unit labour costs in periphery Eurozone (2000=100)**



1.2 Fragility of the sovereign in the Eurozone

As stressed by De Grauwe (2011) the fragility of the Eurozone arises from the fact that member countries of the monetary union issue debt in a currency they have no control over. As a result, the governments of these countries can no longer guarantee that the cash will always be available to roll over the government debt. This lack of guarantee by Eurozone governments in turn can trigger self-fulfilling liquidity crises (a sudden stop) that can degenerate into solvency problems. When this occurs, it leads to a massive outflow of liquidity from problem countries, making it impossible for governments to fund the rollover of their debt at reasonable interest rates.

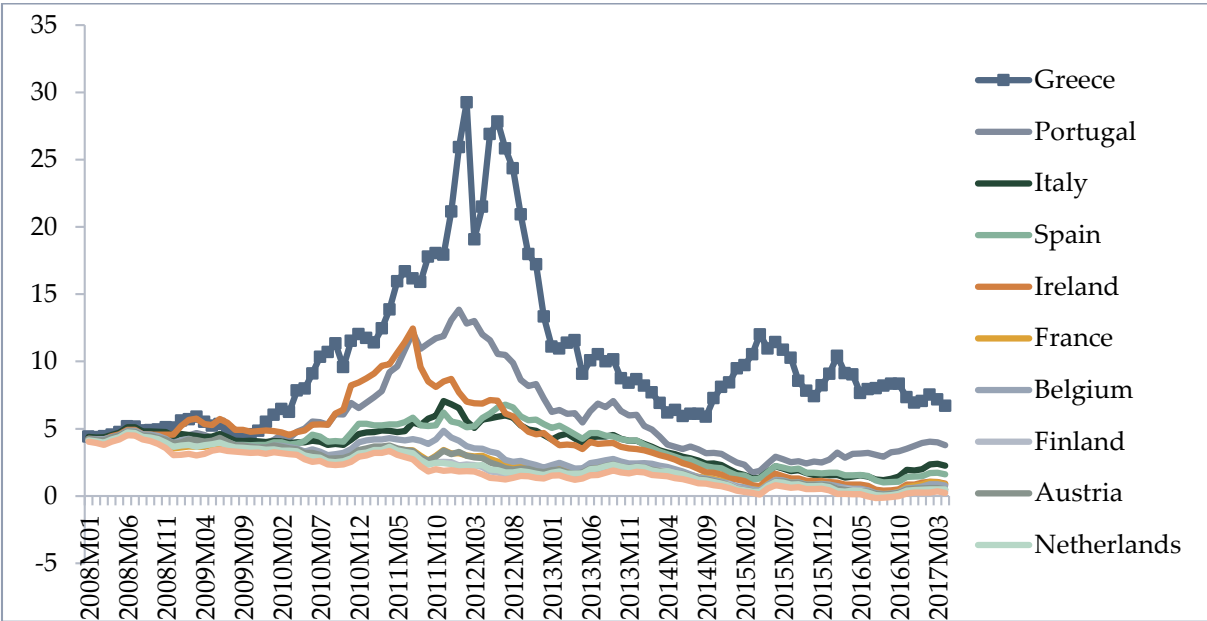
**Figure 2: Relative unit labour costs in core Eurozone (2000=100)**



Source: European Commission, AMECO

This dynamics can force countries into a bad equilibrium with rising interest rates that trigger excessive austerity measures. This in turn leads to a deflationary spiral that aggravates the fiscal crisis (see De Grauwe, 2011, and De Grauwe and Ji, 2012). This is exactly what happened during the sovereign debt crisis in 2010-12. This episode illustrates how unstable government bond markets can become in a monetary union when there is no backstop provided by a central bank. Figure 3 illustrates.

**Figure 3: 10-year government bond yields in %, monthly data**



Source: Eurostat

### 1.3 Doom loop between sovereign and banking sector

The absence of a backstop for the sovereign in a monetary union also creates the possibility of generating a “deadly embrace” between the sovereign and the banking sector. When the sovereign is pushed into a bad equilibrium, it becomes very likely that domestic banks will experience solvency problems. The reason is that domestic banks are the major holders of the sovereign bonds. When the latter drop in value domestic banks make losses that can drive them into solvency. A hellish doo loop is set in motion where the sovereign debt crisis engenders a banking crisis. The reverse causality is equally possible, as the Irish crisis has demonstrated: a domestic banking crisis forces the sovereign to step in to save the banking system. This typically requires the government to take on more debt thereby creating a risk of insolvency.

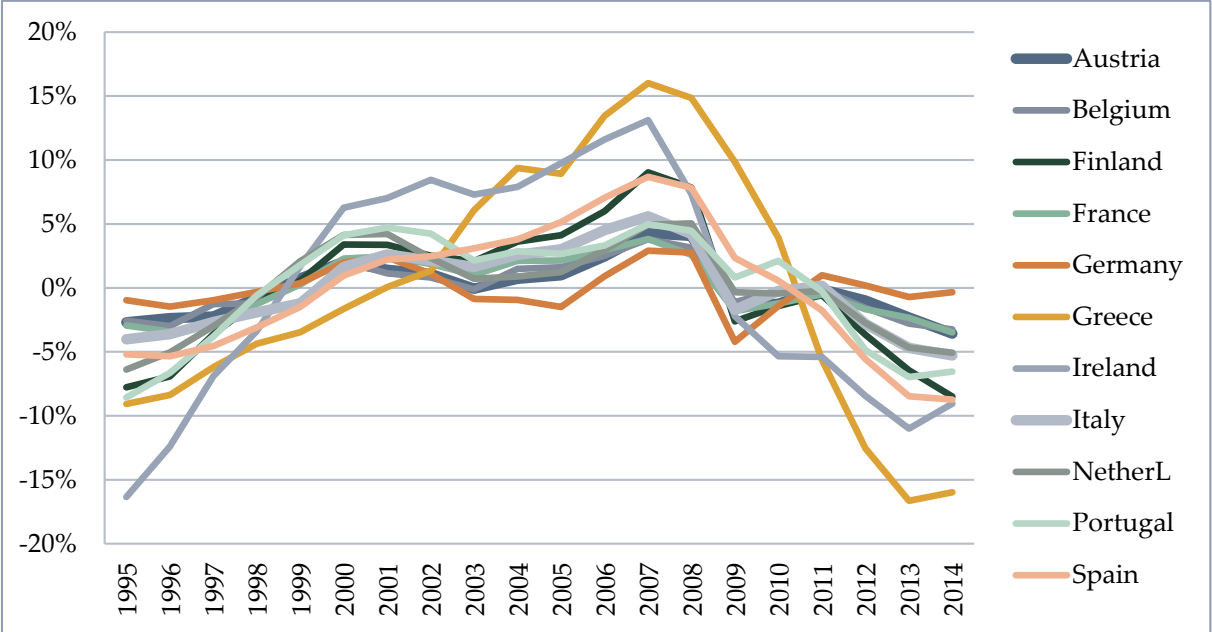
## 2 Redesigning the Eurozone

### 2.1 How to deal with the OCA problem?

The standard response derived from the theory of optimal currency areas (OCA) is that member countries of a monetary union should do structural reforms so as to make their labour and product markets more flexible. By increasing flexibility through structural reforms the costs of adjustments to asymmetric shocks can be reduced and the Eurozone can become an optimal currency area. This has been a very influential idea and has led Eurozone countries into programs of structural reforms.

It is often forgotten that although the theoretical arguments in favour of flexibility are strong the fine print of flexibility is often harsh. It implies wage cuts, less unemployment benefits, lower minimum wages, easier firing. Many people hit by structural reforms, resist and turn to parties that promise another way to deal with the problem, including an exit from the Eurozone. From an economic point of view flexibility is the solution. From a social and political point of view flexibility can become a problem. Stressing flexibility as the way out of the conundrum risks creating enemies of the monetary union that as time moves on leads to an increasing political momentum favouring an exit from the union.

**Figure 4: Business cycle component of GDP growth**



Source: Eurostat. The business component is obtained by applying a HP-filter to growth numbers.

There is a second reason why the structural reform path should be taken with caution. The nature of asymmetric shocks has been quite different from the traditional asymmetric shocks analyzed in the OCA-literature. In fact, business cycles in the Eurozone have been relatively well synchronized. This is shown in Figure 4.

We observe that most Eurozone countries were booming in the period 2000-07 and experienced a downturn since then. If there was asymmetry it was in the amplitudes of the same cycle. Some countries (Ireland, Spain, Greece) experienced a very strong boom and later a deep and protracted recession. Other countries (Belgium, Germany, France, Italy, Netherlands) experienced a much more modest period of booming conditions followed by less intense recessions. Germany stands out as having experienced booms and busts with the lowest amplitude.

If there is asymmetry in the business cycle movements in the Eurozone it is in the amplitude of these cycles. This asymmetry led to a situation in which countries in the group experiencing the highest amplitudes were hit very hard when the recession came, leading to an explosion of government debt. That's when the second problem of the Eurozone stepped in. Markets singled out these countries, leading to massive capital outflows from the first group of countries to the second one. The whole of the Eurozone was destabilized. This problem risks popping up each time the Eurozone is pushed into a recession. Each time some countries will be hit more than others. As a result, large internal capital flows risk further destabilizing the system.

The implications for the governance of the Eurozone from the finding of the overwhelming importance of the cyclical and temporary component of output growth is that efforts at stabilizing

the business cycle should be strengthened relative to the efforts that have been made to impose structural reforms. We are not implying that structural reforms are unnecessary, but rather that efforts at creating mechanisms aiming at stabilizing the Eurozone business cycles should be strengthened.

## 2.2 Inter-country versus inter-temporal smoothing

There have been many proposals made to create a fiscal space at the Eurozone level in the form of a common unemployment insurance system (see e.g. the Four Presidents report, 2012, Enderlein et al., 2012, Beblavy et al., 2015, Alcidi and Thirion, 2015).<sup>1</sup> The proposals for such an insurance system have very much been influenced by the standard assumption made in the OCA-theory that shocks are asymmetric, i.e., when one country experiences a recession, and thus increasing unemployment, the other country experiences a boom, and declining unemployment. This facilitates the workings of the common unemployment insurance system. The booming country transfers resources to the country in a recession and thereby smoothens the business cycles in the two countries. Technically and politically such a system encounters relatively few problems.

Problems arise when business cycles are relatively well synchronized but of very different amplitude in the different member countries. In that case most countries will tend to experience a recession at about the same time, but in some countries the recession will be mild in others very intense. This creates both an economic and a political problem. First, countries with a mild recession are asked to transfer resources to countries experiencing a stronger recession. This tends to reduce the intensity of the recession in the receiving country at the expense of making it more intense in the paying country. It is not clear that this is welfare improving. Second, it is likely to create important political problems in the country that is asked to transfer resources when the economy is not doing well.

Another way to formulate the previous insights is the following. The traditional proposals for a Eurozone unemployment insurance mechanism are predicated on the view that there is a need to smooth differences in unemployment changes *across* countries. The insurance mechanism is intended to smoothen these inter-country differences. We have noted however that this is not the typical asymmetry in the Eurozone. Most countries are likely to experience a boom and a recession at about the same time, with different intensities and amplitudes. There is therefore relatively little need for inter-country smoothing of business cycle movements. The more pressing need is to smoothen volatilities over time.

The previous analysis suggests that common unemployment insurance schemes should put emphasis on smoothing over time and not so much on inter-country smoothing. This can be achieved by allowing the common unemployment insurance scheme to accumulate deficits and surpluses over time. The fiscal rule that could be imposed is that the insurance scheme balances over the business cycle.

In principle, inter-temporal smoothing could be done at the national level, by allowing the national budgets to do the job. However, the large differences in the amplitude in the business cycle movements makes such a purely national approach problematic, as it leads to large differences in the budget deficits and debt accumulation between countries. These differences quickly spillover into financial markets when countries that are hit very hard by a downward movement in output are subjected by sudden stops and liquidity crises. This is likely to force them to switch off the automatic stabilizers in their national budgets (De Grauwe and Ji, 2015). In addition, these liquidity outflows are inflows in some other countries in the monetary union, typically those that are hit least by the recession.<sup>2</sup> Their economic conditions improve at the expense of the others.

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<sup>1</sup> There is an older literature making similar proposals. See e.g. Italianer and Vanheukelen (1992), Hammond and von Hagen (1993) and Méltz and Vori (1993).

<sup>2</sup> This is confirmed by the empirical work of Furceri and Zdzienicka (2013) and Hoffmann and Nitschka (2012) who find that during recessions risk sharing through financial markets declines dramatically.

Stabilization of common business shocks with different amplitudes at the national level makes the system unstable.

National stabilization efforts do not work and introduce an element of instability in a monetary union, mainly because it leaves the countries most hit by the business cycle shocks unable to stabilize. Thus when business cycle shocks dominate it will be necessary to follow a common approach to the stabilization of the business cycles. A budgetary union can provide this. By centralizing part of the national budgets into a common budget managed by a common political authority, the different increases in budget deficits following from a (common) recession translate into a budget deficit at the union level. As a result, the destabilizing flows of liquidity between countries disappear, and the common budgetary authority can allow the automatic stabilizers in the budget to do their role in smoothing the business cycle. In fact, because a common budget also generates implicit inter-country transfers the countries with the deepest recession will profit from the automatic stabilizing features of the common budget most. As a result, a common budget provides the most effective way to stabilize the business cycle.

The previous discussion illustrates that there is an interaction between what we have called the OCA-problem and the fragility problem. It is because the government bond markets lack a backstop that it becomes unstable during recessions. This makes it impossible to use the automatic stabilizers at the national level, forcing the monetary union to provide stabilization at the union level. Thus the fragility of the Eurozone implies that stabilization cannot be performed exclusively at the national level and that a common stabilization tool becomes necessary.

### 2.3 How to deal with the fragility problem?

Let us now turn to the question of how to deal with the second problem of the Eurozone, its fragility. The ECB has a central role to play here. By promising to provide unlimited support in the government bond markets in times of crisis, it can stop liquidity crises that are likely to emerge each time the Eurozone experiences a recession; liquidity crises that destabilize the system leading to large capital outflows from some country to other countries in the same monetary union.

The ECB recognized this problem when it started its OMT-program in 2012. This certainly helped to pacify financial markets at that time and avoided the collapse of the Eurozone. We can clearly see from Figure 3 that when the OMT-program was announced the yields in the government bond markets of the periphery countries started a steep descent. The beauty of that announcement was that the ECB did not have to buy one Euro in the government bond markets.

The issue arises of how credible the OMT-program is for future use. The credibility problem arises from the fact that when using the OMT program the ECB will have to decide whether the crisis it is facing is due to a liquidity or a solvency problem. If it determines it is a liquidity problem it should step in; if it decides it is a solvency problem it should not. In the latter case the other governments should decide whether or not to support the troubled government.

This creates huge political problems that the ECB cannot take on. It is generally very difficult to determine whether the problem is due to lack of liquidity or to insolvency. The difficulty to be sure makes it difficult for the ECB to step in without creating political controversy. In the Greek crisis of 2015 the ECB decided that the Greek problem was one of insolvency of the Greek government and therefore it refused to support the Greek government bond market, precipitating the crisis and leading to intense political conflicts in the Eurozone.

All this will lead to doubts about the willingness of the ECB to provide liquidity to future governments in times of crisis. As a result, the credibility of OMT is limited, which means that it is not a foolproof insurance mechanism that will stabilize the markets in future crises.

This problem does not exist in standalone countries. The commitment of the central bank to support the sovereign of a standalone country in times of crises is unconditional. As a result, its credibility is 100%. This may come at a price though, because it also implies that the credibility of

the central banks' commitment to price stability is less than 100%. Paradoxically, one may argue that the commitment of the ECB towards price stability is stronger than in standalone countries precisely because the commitment of the ECB towards the support of the 19 different national governments is weak.

The only way to solve the lack of credibility of the ECB as lender of last resort in the government bond market is by creating a budgetary union that includes the consolidation of a significant part of the national debts into one Eurozone debt. This could be achieved by the issuance of Eurobonds that are backed by a joint liability of the issuing governments (see Delpla and von Weizsäcker, 2010, De Grauwe and Moesen, 2010). Such a consolidation mimics the relation between the central bank and the government that exists in standalone countries. It makes the credibility of liquidity support of the sovereign watertight and eliminates the danger of destabilizing capital flows within the union. Clearly, such a consolidation can only occur if it is embedded in a political union, characterized by a central government that has the power to tax and to spend.

This is not how things are seen in official circles today. These have now taken for granted that a further significant budgetary union together with a political union in which the budgetary union must be embedded is out of reach for the foreseeable future. As a result, they have embraced academic theories that promise to create a "safe asset" that can substitute for Eurobonds and that can stabilize otherwise unstable government bond markets without the need of a political union (see Brunnermeier et al., 2016, and ESRB, 2018).

The essence of these proposals consists in the issuance of a new asset that would be backed by a portfolio of national government bonds. Each government, however, would remain fully responsible for the bonds it has issued. Thus there would be no joint liability as is the case with Eurobonds. This new "safe asset" would consist of two tranches, a senior and a junior tranche. The senior tranche (70% of the total issue) would be safe; the junior tranche (the remaining 30%) would carry a risk of sovereign default. Thus, if one or more governments default on their bonds the holders of the junior tranche would take the hit. The holders of the senior tranche would be safeguarded as long as the total of the defaults does not exceed more than 30% of the nationally issued bonds.

It is surprising that those who propose such financial engineering believe that a repackaging of the risks will stabilize the government bond markets in a monetary union. We have argued that during recessions, destabilizing capital flows will occur when investors flee the bond markets that they perceive to be at risk to invest in bond markets deemed safe. It is difficult to see how repackaging the risks will stop this mechanism. These proposals somehow start from a belief that, with suitable financial engineering, inherently unstable financial markets can be stabilized.

## 2.4 Towards a Banking Union

In order to cut the doom loop between the sovereign and the domestic banking sector it is now generally accepted that it is necessary to create a banking union in the Eurozone. This will make it possible to resolve banking crises at the union level thereby insulating the sovereign from the consequences of banking crises and also to eliminate the reverse link between sovereign and banking sector.

In June 2012, a first step towards the creation of a banking union was made. It was decided to create a common supervisor for the Eurozone. As the creation of a new institution would have required a Treaty change and the prospect of lengthy procedures to have a new Treaty accepted, it was decided that the ECB would take over the responsibility of the common supervisor of banks in the Eurozone. In November 2014 the ECB became the common supervisor in the Eurozone. This part of the banking union is called the Single Supervisory Mechanism (SSM), see European Commission (2017a) for more detail.

Within the ECB there is a Board of Supervisors consisting of representatives of the 19 Eurozone member states and four ECB representatives. This Board has the authority to supervise the 'systemic' banks in the Eurozone. These are the banks with a balance sheet exceeding €30 billion



or 20% of the national GDP (about 200 banks). The supervisory tasks include the auditing of balance sheets, the imposition of fines, the recapitalization of banks, and even their closing down when necessary. As can be seen, these are very intrusive powers that have been given to the ECB.

The supervision of the 6,000 smaller banks remains vested with the national supervisors. However, the ECB Board of Supervisors is empowered to issue instructions to these smaller banks if the national supervisors fail to act.

This new supervisory framework became operational at the end of 2014. It certainly signifies an important step towards the transfer of sovereignty in the supervisory power from member states to the European level.

What is still missing at this moment is an effective common resolution framework, i.e. a system that makes it possible to resolve a banking crisis at the level of the Eurozone. The experience of the banking crisis of 2008 has been that when such a crisis erupts in one country, e.g. Ireland, it is the national government that is solely responsible for resolving this crisis. Such a resolution involves taking over insolvent banks and restructuring them by disposing of bad assets. This necessitates that governments recapitalize banks. These are expensive operations, the cost of which is borne exclusively by national governments. In the case of Ireland, the crisis led to a spectacular increase in the Irish government budget deficit and debt level, precipitating a solvency crisis of the Irish government. Some progress has been made in setting up a single resolution mechanism (SRM) in the Eurozone. At the end of 2013, an agreement was reached to set up a resolution fund of €55 billion. This agreement has been criticized for being insufficient. In addition, its governance is so complex as to raise issues about its effectiveness in times of crisis. One can conclude that the common resolution mechanism that was created in 2013 falls short of a mechanism capable of dealing with future banking crises.

A final missing element is a common deposit insurance. Today every country has its own national deposit insurance mechanism. Since it is national it implies that the contributions to the insurance scheme are national. This means that if a new banking crisis were to erupt in a country, the losses of the depositors would be compensated by the national insurance system. In a large-scale crisis, however, a national insurance system turns out to have insufficient resources; thus it would again be national governments that would have to step in. In other words, the 'deadly embrace' between the banks and the sovereign would not be cut. That is why a common Eurozone deposit insurance mechanism is necessary at the Eurozone level. This would make it possible for the cost of compensating the deposit holders in one country to be spread over the Eurozone as a whole, pretty much as it is done in the US. This of course necessitates a willingness of member-countries to transfer resources to a member-country hit by banking crisis. Up to now the willingness to do so has been very thin.

We can conclude that we are still far removed from a full banking union. Such a banking union consists of three components: common supervision, common resolution, and common deposit insurance. The first component is a reality; the second one is partially realized; the third one is completely absent. The result of all this is that the Eurozone is still unprepared to face a major banking crisis.

### 3 Conclusion

We have identified the conditions under which the Eurozone's fragility can be eliminated making it possible for the monetary union to survive. But these conditions are politically very intrusive, requiring a very large transfer of sovereignty from nation states to a central Eurozone authority. The conclusion can only be that this is politically impossible today.

History teaches us that what one considers politically impossible at one moment of time can quickly change and become possible when conditions become extreme. Nevertheless, today a political union such as the one we have spelled out appears for most of us to be out of reach.

There are two possible reactions to this situation. One is to despair and to conclude that it would be better to dissolve the monetary union. It will never work anyway. The other reaction is to say, yes it will be very difficult, and the chances of success are slim, but let's try anyway. That is the position we are taking.

If one takes this attitude one quickly comes to the conclusion that success can only occur by following a strategy of small steps. A revolutionary approach will simply not work.

What are these small steps?

We see essentially two. One is to create some fiscal space at the level of the Eurozone. An example is a common unemployment insurance scheme that would insure the cyclical component of unemployment (so as to minimize moral hazard problems). This insurance scheme should have a large component of insurance over time.

Another small step is to start with a limited program of debt consolidation. That must take care of moral hazard issues that naturally arise with such schemes. The best way to achieve this is by introducing an element of co-insurance. This can be done by limiting the common issue of government bonds to a given percent of GDP, e.g. 60%. What exceeds this limit must be issued by individual governments (see Delpla and von Weizsäcker, 2010, De Grauwe and Moesen, 2009).

These are small steps. Even these small steps, however, encounter severe hostility and will be difficult to take. Yet these steps will have to be taken if we want to avoid the future disintegration of the Eurozone.

Policy makers often hesitate to make hard choices. This is also the case today. The recent official proposals to create a "safe asset" suffer from this syndrome. These proposals take the view that by some financial engineering safe assets can be created without the need for creating Eurobonds characterized by common liability of the participating national governments. Financial markets will maintain stability. We have argued that this is illusory. Financial markets do not create stability, on the contrary they are often the source of major instability. Financial markets provide insurance in normal times when the need for such an insurance is minimal. In times of crisis, private investors run away and the insurance mechanism brakes down when one needs it most. This insurance can only be provided by budgetary and political unification.

We are forced to conclude that without willingness to moving forward into further political and budgetary unification the fragility of the Eurozone will not disappear. The future of the Euro is not guaranteed.

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