MEZ 2
2016

Reinforcing the Eurozone and Protecting an Open Society

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Acknowledgements

We would like thank Aurelio Maccario, Jasper McMahon, Richard Portes and Jeromin Zettelmeyer for excellent comments all along this project.

We are extremely grateful to the Tommaso Padoa-Schioppa Chair at the EUI for financial support and for organising seamlessly the February 5th Conference at which the draft report was discussed. We benefitted immensely from the insightful comments of participants at the Conference.

Furthermore we thank thank participants at seminars and workshops at the ECB, the German Ministry of Finance and the London Business School.

We thank Ferdinando Giugliano for his excellent editing and making us clarify some obscure sentences. We are also grateful to CEPR for hosting some of our discussions and Anil Shamdasani for the final editing of this e-book.

Reinforcing the Eurozone and Protecting an Open Society

Monitoring the Eurozone 2

April 2016

"Il nous faut de l'audace, encore de l'audace, toujours de l'audace ».

Danton, 2 Septembre 1792.

Introduction:

A critical juncture for the Euro area and the European Union

The sovereign debt and the refugee crises prove that Europe has failed to design institutions robust enough to weather difficult times. The stakes are high: when economic shocks and political crises coincide, the risk of disintegration rises to alarming levels. Coordinated actions are needed, but these are difficult to implement because of the political climate. In short, we may be contemplating the end of Europe as we know it.

Building on the MEZ1 project, our goal is to propose institutional changes that can help to restore growth and prosperity while being politically feasible. Unlike the Five Presidents Report (EU 2015) and other recent proposals, which suggest progressive steps aimed at achieving a closer economic, financial, and political union in the medium/long term[1], we propose a limited set of measures which can be implemented now without requiring big steps in political or economic integration for which there is little appetite today. This, of course, does not mean

[1] See for example Villeroy de Galhau (2016) who proposes the creation of a Euro area finance minister backed by a legitimacy-enhancing appointment process; a genuine Treasury administration; and a strong democratic control over euro area affairs.

that we do not consider a more ambitious plan desirable. Rather, our approach is motivated by a sense of urgency and by our assessment that major changes towards rapid integration would require a long time, and perhaps too long to make the euro-zone secure now.

The central idea of our report is that a sovereign debt restructuring mechanism for the euro-zone is a major missing element of its fiscal architecture. In the long-run, we think that a fiscal and financial architecture that enforces discipline less by targets for debt and deficits – no matter how flexible – and more by market mechanisms, would be more robust and more credible. To make this objective realistic without major costs, in the short-run, the countries of the euro-zone need a "deal" to redistribute the burden of legacy debt over time and to a minimum extent across countries. Although we consider such redistribution as a condition for financial stability and appropriate macroeconomic adjustment, the proposed "deal" does not require debt mutualisation or a joint debt guarantee.

On the second major challenge of securing common borders and integration of refugees, we argue that a project bond guaranteed by all countries of the European Union can be motivated and promoted on economic grounds given that the costs occur now while the benefits will realize in the future (in terms of peace and new productive European citizens). As there will be Europe-wide gains, it is natural to fund these costs through an EU-wide instrument.

Three core problems

We identify three key problems on which we choose to focus. While we recognise that there are many other important issues at stake including, for example, the question of democratic legitimacy of EU institutions, we believe the three problems we identify have the greatest potential to cause the political and economic disintegration of the euro area and of the EU.

- First, we are living with a *large debt overhang*, a direct legacy of the global and eurozone debt crisis. This debt mountain impairs growth and prevents sensible policy actions, for example constraining governments' ability to cut taxes or raise spending during a downturn. A high level of debt also hinders the effective transmission of monetary policy and may cause financial instability. For example, the implementation of the new bail–in rules to resolve failing banks by shifting the financial burden to investors before taxpayers can prove hazardous in an environment of high debt, even if they are desirable from an ex ante point of view.
- Second, the *link between sovereign risk (and more broadly national risk) and banks* is still hanging over our heads like a sword of Damocles, despite progress made with the banking union. The completion of the banking union, via a common deposit guarantee scheme, is blocked in part because of this issue.

- Third, the *refugee crisis* is not just a huge humanitarian catastrophe, but has boosted the forces of disintegration within the EU.

These three problems have the potential to destroy Europe as we know it. Conversely, solving them would have the potential to create a virtuous circle of prosperity. We now review briefly the importance of these three problems before discussing some possible solutions.

1. *The legacy debt problem: with us for a long time*

Consider the euro area as if it were a single economic entity. This means that its gross domestic product is the sum of the GDPs of the 19 member states; its sovereign debt the sum of the sovereign debts; and its deficit the sum of all government deficits.

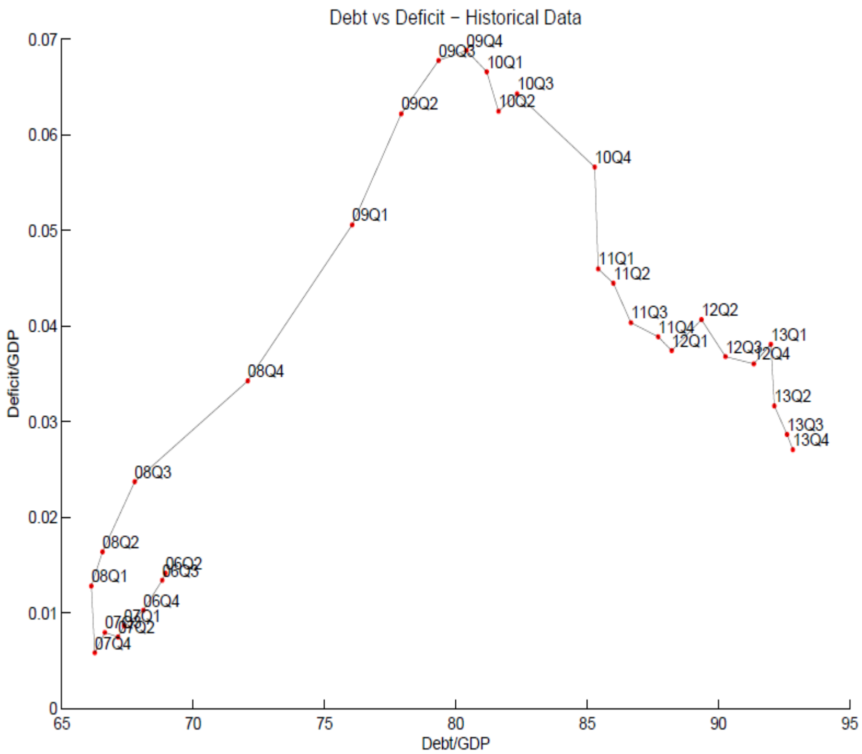
Between 2006 and 2010, when the public deficit of the euro area increased, the aggregate debt-to-GDP ratio increased. Conversely, when the aggregate deficit decreased, the aggregate debt-to-GDP ratio decreased. This is exactly what one would expect.

After 2010, the aggregate deficit decreased year after year. The question is whether, as one would expect, the aggregate debt-to-GDP ratio also fell. The answer can be seen in the following graph taken from Caruso, Reichlin and Rico (2016). The aggregate debt-to-GDP ratio kept growing even though deficits were sizably reduced. This emphasizes the difficulty to eliminate the stock of legacy debt in a period of low economic growth.

While this relation between debt and deficits differs across countries, our main point is clear in the aggregate data: it is very hard to run down the legacy debt for the eurozone as a whole. As a result, the debt overhang is very persistent. Simple calculations show that debt-to-GDP ratios are not going to reach pre-crisis levels in the next 10 years.

The debt overhang poses both acute (crisis) risks and chronic (low growth) risks. Large debt levels eat up fiscal space for a number of countries who badly need it; they prevent the adoption of desirable reforms because of risk to financial stability; they jeopardize the implementation of other reforms, such as the bail-in of bank creditors; finally, they contribute to blocking the completion of the banking union.

As discussed extensively in MEZ 1, a public debt overhang also weakens long-term growth prospects as the burden of debt servicing acts like a tax on private investment and labour income. Uncertainty about the fiscal adjustments required to ensure debt sustainability has a depressing effect on economic activity. Furthermore, a large debt exposes a country to potential self-fulfilling debt crises and liquidity problems.



2. *The bank-sovereign loop problem: still a threat to financial stability*

While important progress has been made with regard to creating a banking union**,** the sovereign–bank loop is still alive and well. However, the holdings of domestic sovereign bonds in the balance sheets of euro-zone banks have increased during the crisis. The so-called 'home bias' is a natural response to risk within and outside the Eurozone. Yet, within the Eurozone it has specific characteristics, with several possible interpretations: the first is that investing in sovereign debt of the periphery while refinancing at the ECB was a "great carry trade" (see Acharya and Steffen (2014)) at a time when the banks of the periphery, in particular, needed to increase retained earnings to rebuild their capital base. The second is financial repression, meaning that regulators and governments forced banks to hold more sovereign debt at a time when foreign buyers were selling these bonds (see Becker and Ivashina (2014)). The third is moral hazard: fearing a breakup of the currency union and/or a default, the banks may have chosen to bet on a possible preferential treatment by the domestic authorities in case of a partial default, or realized that, in the case of a large sovereign crisis, their fate and the fate of their sovereign was highly correlated.

The issue of home bias in the holding of government bonds by banks has recently stabilized but is still high in particular for Italy and Spain. This is a problem not just for financial stability but also for monetary policy, as it segments the credit market across national lines, hindering the monetary transmission of policy changes. Our solution would have the advantage of putting in place the right incentives for the creation of a eurozone-wide safe asset, which would be useful for the implementation of monetary policy too.

We present aggregate and bank level evidence in Chapter 2 of the report. We also note that the resolution of the sovereign-bank loop is seen by some as a prerequisite for the implementation of the third pillar of the banking union, the creation of a common deposit guarantee.

3. *The refugee crisis: a new shock in an already fragile system*

The refugee crisis has put the EU under severe strain, strengthening the centrifugal forces that have rattled the Union since the beginning of the sovereign debt crisis. In the first half of 2015, there were almost as many asylum applicants as in the whole of 2014, and this number is destined to grow rapidly, as we show in Chapter 4 of this report. The refugee crisis is first and foremost a humanitarian crisis. The political dynamics in various countries of the EU, including the rise of extremist and xenophobic parties, mean that what in theory should be a manageable issue becomes quickly a force pushing for political disintegration. Since the proper integration of refugees is an EU-wide problem, it requires an EU-wide response, which has not emerged so far.

If we could rebuild European Institutions from scratch*…*

We have now a better idea of what type of EU-wide institutions we should have to ensure financial stability and boost growth. If we could start from scratch, we would design euro area institutions differently from what was done in the past.

First, since deficit rules are routinely ignored, we would have *a sovereign debt restructuring regime.* This would make it impossible for politicians to simply increase the size of public debt to unsustainable levels, creating an endgame and giving credibility to the principle that fellow member states should not bail out a eurozone country.

Building in the system common restructuring rules has another advantage: it allows to enforce discipline and, at the same time, to manage orderly a default when a serious problem occurs. Knowing this *ex ante*, market participants would also price risk appropriately and not expect bail outs.

The restructuring regime is of course no substitute for other institutions, at national and euro-area level. By way of example, it strengthens the role of independent fiscal councils, which would naturally be called to define the space for budget initiatives compatible with keeping debt in the safe zone. The restructuring regime could also be usefully supplemented, perhaps at a later stage, by a eurozone-wide public spending capacity. We discuss what a Eurozone-wide sovereign debt restructuring regime could look like in Chapter 1.

Second, having observed the existence of a sizeable home bias in the balance sheet of financial institutions and acknowledging the significant risks arising from the presence of a strong link between the sovereign and the banks, we would *delink banks from their national risk.* This would be achieved by imposing one of the following: i) diversification via the creation of a composite asset; ii) maximum exposure rules; iii) risk weights on sovereign debt holdings. We discuss the approaches of financial regulation to the bank-sovereign loop and our solutions in Chapter 2.

Third, having observed the weakness of the external Schengen borders and the tragic fate of many refugees, we would design a *EU-wide refugee policy*. Such policy would require increased spending for the EU agencies in charge of securing the borders and on projects aimed at the economic integration of refugees[2]. Obviously this is a complex subject and we do not aim in this report at proposing a comprehensive package. Rather we have the more limited aim of designing a EU-wide financial instrument appropriate for dealing with the kind of challenge that the refugee crisis represents for the Union. We discuss how the motivation for it as well as its features are specific to the nature of the shock represented by this crisis and differ from the broader discussion on euro-bonds in the context of the financial and fiscal crisis of the euro-zone. This analysis is presented in Chapter 4.

The problem of the transition

Can we then simply proceed to remodel our existing institutions as described above? The answer is a resounding no. This would be dangerous, as the transition path towards any desired long run institutional setting is often highly treacherous. By implementing regulatory changes without solving the legacy debt problem and thinking very carefully about the current structure of the balance sheets in the financial sector we would simply create a very unstable situation.

Imagine, for example, announcing a debt restructuring mechanism for highly indebted countries in an environment where several countries are already highly indebted. The result would be a run on their debt. Alternatively, imagine announcing the implementation of risk

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[2] To do so one could think for example of the following actions: i) reinforcing the EU's external borders and build hot-spots to identify refugees rapidly; ii) investing in the countries of origin of the migrants to secure safe and liveable zones wherever possible; iii) designing integration policies for the refugees who are in Europe (language courses, quality housing, labour market openness). Even more ambitious (but also out of the scope of this report), would be to work towards a strong common foreign policy and defence policy.

weights on sovereign debt in an environment where balance sheets are loaded with government bonds in some countries. The result would be a banking panic.

One very important message, developed in Chapter 3, is that managing the transition towards better institutions is essential and that the current starting point cannot be ignored. Therefore, the solution to this problem is a *quid pro quo*: we propose in Chapter 3 a coordinated *one–off* solution to deal with the legacy debt in exchange for a permanent change in institutions (the adoption of the fiscal framework described in Chapter 1 and of the accompanying banking regulation framework described in Chapter 2). The most obvious alternative approach – letting the ECB hold government debt bought via quantitative easing indefinitely – would end up placing an excessive burden on the central bank. Conversely, our approach eliminates the risk of moral hazard linked to the coordinated elimination of the legacy debt. Every country ends up in a better place.

One final point is that the proposals included in this report should be thought of as a comprehensive package. If there were insufficient political will to implement all of them, one should be careful about picking only parts of this report. For example, only implementing the ideas relative to the steady state, without managing carefully how one gets there would be risky.

In a nutshell, in this report, we are trying to navigate a treacherous transition to end up on the right shore.

The difference a year makes (for our MEZ 1 readers)

This group has presented similar proposals (joint and severally) most recently in the precursor to this report (MEZ 1, CEPR 2015). The events over the course of last year, in particular the Greek debt confrontation, the start of large scale QE, and the emergence of strong popular discontent with the ECB in some parts of the Eurozone, have validated many of our concerns. Thus, we reiterate some of our earlier proposals, develop them and adapt them to both the new world and our own learnings.

The importance of fixing the fiscal and financial framework on sovereign debt remains crucial. The Greek debt dispute, which absorbed almost all political capital for half a year, clearly showed that the current framework of dealing with excessive debt is deficient. In the meantime, the IMF has strengthened its own lending policy and the case for the European Stability Mechanism (ESM) reform is even stronger. Compared to last year, our framework on debt restructuring (Chapter 1) is now amended to accommodate concessional lending by the

ESM. We also suggest to use the net present value of debt with a fixed discount rate for the sustainability thresholds of ESM program countries.

Our proposal for dealing with the bank-sovereign loop (Chapter 2) is the in the same spirit as what was discussed in MEZ 1 insofar that it provides incentives for financial institutions to hold a geographically diversified bundle of sovereign bonds which is also the first step for the creation of a euro area safe asset. However, we now go much further in providing details on the practical implementation of such proposal and we define the senior tranche of such diversified bundle in relation to the parameters proposed for the debt restructuring regime. We believe that this is the first convincing proposal for the market creation of a euro area safe asset integrated within a coherent fiscal framework.

We have modified the debt reduction strategy (Chapter 3) to lighten the burden on the ECB in recognition that QE has already taken a toll on its risk capacity. Therefore, we now focus on our fiscal risk sharing proposal, which we have updated. The other avenues for debt reduction do remain valid, however.

Chapter 1:

Sovereign Debt Restructuring Regime for the Eurozone

The first pillar of this proposal involves building an effective sovereign debt restructuring regime (SDRR), which would fulfil the dual purpose of acting as discipline in preventing sovereign debt buildup and crises in the first place and providing an instrument to deal with such crisis, should they occur nevertheless. Our proposal is anchored in ESM access policies and uses thresholds for debt and gross financing needs as trigger mechanisms in a similar fashion as practiced at the IMF.

This mechanism cannot be introduced, however, unless a preliminary, one-off sizeable debt reduction operation has been completed (see Chapter 3). A necessary pre-condition for its implementation is, therefore, that the debt overhang which strains governments has been cleared and that all eurozone countries are outside the vulnerability zone we identify in this chapter.

1. The Rationale for a SDRR and Proposal

Rationale for an SDRR in the Euro area

Without an effective restructuring mechanism in place, official lenders will always be tempted to deal with excessive debt with a combination of (a) procrastination *(kicking the can down the road)* and (b) provision of additional lending even in case of serious solvency concerns *(gambling for resurrection).* The outcome is usually the worst of both worlds: countries in difficulty have faced burdensome fiscal adjustment programmes and undergone substantial social harm, while debt levels have remained unsustainably high. This describes the present situation in the Eurozone pretty accurately.

This approach also creates perverse incentives on two fronts: countries in difficulty tend to borrow excessively from other member states, hurting European taxpayers when these loans have to be written down. Meanwhile, the private sector continues to lend to countries in difficulty, as investors know they will be repaid, at least in part, by domestic taxpayers. The result is the underpricing of debt and over-borrowing.

Thus, the countries of the Eurozone have ended up with large amounts of debt and without the mechanisms that will allow the reduction of this debt. The alternative to this approach is creating a sovereign debt restructuring regime.

In a monetary union the need for such a mechanism is even greater for two reasons: First, in a monetary union, member states of a monetary union cannot count on devaluation or accommodative monetary policy either to foster adjustment so to contain debt accumulation, or to reduce the value of their debt ex post *(debt sustainability*). Second, a debt crisis can hardly be isolated in a single member state, and can be expected to have strong spill over and become a problem for the entire currency area. This is because of the close trade and financial linkages between countries and, in particular, the threat of the collapse of the common currency, which affects investors across the monetary union *(excess debt externality).*

The Role of the ESM

A sovereign debt restructuring regime is also a necessary complement to the eurozone's crisis-lending facility, the European Stability Mechanism (ESM). The main principle of crisis lending is not to lend into insolvency, since this can create the kind of perverse outcomes we described above. The ESM should therefore only lend to countries that are conditionally solvent, meaning that, once in the programme, they are able and willing to undergo the required programme of fiscal adjustment and structural reform and pay back their debts. If a country fails the test of conditional solvency, then debt restructuring is needed.

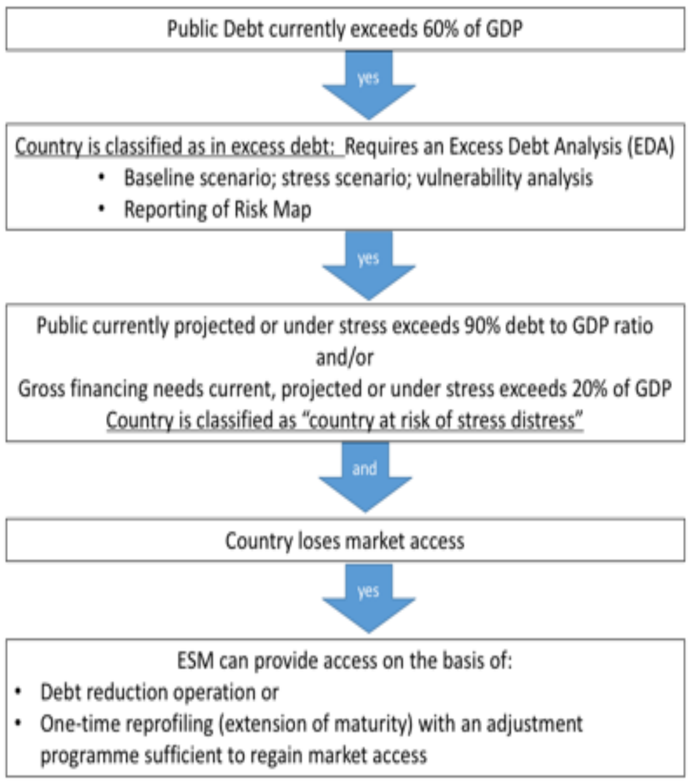
A well-designed SDRR has three characteristics. First, it must define insolvency via a debt-sustainability analysis. This will act as gatekeeper to any lending from the ESM. Second, it must define the instruments for orderly restructuring. Third, it must credibly "tie the hands" of lending institutions, to avoid that they renege on the principle of not lending into insolvency once a country is in difficulty.

The proposal in a nutshell (See MEZ1 2015)

To achieve these objectives, we design a mechanism made of two parts. The first part acts as the preventive tool, in that it corrects the existing *ex ante* incentives to postpone debt restructuring indefinitely. The second part fixes *ex post* incentives, ensuring that a restructuring is viable by limiting the power of holdouts.

The first part therefore amends the existing ESM lending policies, inserting hard thresholds for the risk of debt distress. We propose there should be two such thresholds: the ESM should only lend to countries when their sovereign debt is less than 90% of Gross Domestic Product (GDP). In the case of countries with previous ESM programmes, the net present value of the debt should be less than 90% of GDP.[3] The proposal of 90% should be read as an attempt to be concrete: a more careful study could pick an alternative number, while leaving our conclusions unchanged.

Secondly, the ESM should only lend to countries whose gross financial needs are less than 20% of GDP. (Again take the 20% exact figure as indicative rather than definitive.) If any of these two thresholds are broken, and the country loses market access, access to the ESM is subject to one of the following options: either one-time reprofiling, or a debt-reduction operation.



The second part involves dealing with the "hold-out problem", preventing small minorities of creditors from free riding on a restructuring which is agreed to by a majority. Hold-outs may thus prevent restructurings by refusing to participate even when they are in the collective interest of creditors. There are contractual remedies for the holdout problems (Collective action clauses with strong aggregation features) or statutory solutions. We propose a statutory solution by inserting a clause in the ESM Treaty that would extend immunity from judicial

[3] Our proposal is to use net present Value of the debt in line with IMF and WorldBank practice , i.e. using a 5% discount rate.The reference for NPV use in The IMF/WB debt Sustainability Framework can be found at https://www.imf.org/external/np/exr/facts/jdsf.htm

process to sovereigns that negotiated a debt restructuring with a (super-)majority of creditors in the context of an ESM programme (see CIEPR 2013 for more detailed explanation):

ARTICLE ___Immunity from judicial process
"The assets and revenue streams of an ESM Member receiving stability support under this Treaty which are held in, originate from, or pass through the jurisdiction of an ESM Member shall not be subject to any form of attachment … in connection with a claim based on or arising out of a debt instrument that was eligible to participate in a restructuring of the debt of the beneficiary ESM Member after the effective date of this Treaty."

Difference between proposed ESM regime and new IMF lending policy

In principle, the differences between the proposed ESM regime and the new IMF lending policy are not large. The IMF has recently standardized its debt sustainability analysis (DSA) tool, which serves as gatekeeper to any lending by determining the probability of debt sustainability. The thresholds underlying the IMF's DSA are that a country's sovereign debt should be less than 85% of GDP, while its gross financing needs should be less than 15% of GDP. Hence, in terms of thresholds, the IMF's policy is stricter than our proposal. Furthermore, as of 29 January 2016, the IMF has amended its exceptional access policy: the IMF abolished the so-called "systemic exception", which meant it would still lend to countries which did not pass the DSA when there would be systemic consequences for the global economy and financial system, while at the same time the IMF introduced the option of debt reprofiling, instead of full-blown write downs. The IMF, however, did preserve the possibility to lend in highly doubtful cases without demanding an immediate restructuring, provided that the borrowing country also receives assistance from other official or private creditors during the programme.

As a result, the IMF framework still retains a good measure of discretion to delay restructuring. Our proposal for the ESM, similar in spirit, however reduces the degree of discretion as we want to ensure the right incentives to prevent debt from spiraling out of control are in place. The ESM proposal is also stronger with regard to its second part – the one aimed at improving *ex post* incentives. Our plan is, in fact, treaty-based, while the IMF has merely endorsed some contractual changes to reduce the power of holdouts.

Another difference between IMF and ESM

One dimension in which the IMF and the ESM differ significantly is in their ***lending conditions***. While the IMF lends at market rates and for short maturities, the ESM has revised its lending conditions repeatedly and now lends at highly concessional rates: it passes on its financing cost without additional charges and the maturity of loans has been extended to up to 30 years.

The implications of this evolution of the ESM lending policy have not been widely recognized. On the one hand, the concessional lending has given borrowing countries a sizeable automatic buffer, which softens and stretches the post-crises adjustment-path. Another way to look at it is that the ESM has added quite a large fiscal buffer to the architecture of the eurozone. On the other hand, the concessional rates and extremely long repayment schedules create some disadvantages, in that they may give rise to debt dependence and continuous renegotiations.

2. Frequently asked questions

We have received many comments, objections and questions to our proposal over the last year. Some of them are questions of principle ("why do we need such a regime?") others are technical questions ("why do we need this type of restructuring regime?")

Here are some of the FAQs and our Answers:

1. **There is no SDRR at the international level. What is different about the eurozone?**

   While the eurozone has many central institutions, including the Commission and its Stability and Growth Pact (SGP) and Macroeconomic Imbalances Procedures (MIP), it is unclear whether it is better than the rest of the world at preventing crisis. Firstly, the eurozone has no central budget and no automatic stabilizers. Secondly, it has a higher risk of crisis spillover, mainly because of the possibility that investors may question the irreversibility of the single currency. This means that the quality of prevention is a big issue and it depends on whether the SGP and the MIP actually work.

   The eurozone also has stronger incentives to delay restructuring because of the larger externalities and because there is an exceptionally high stigma for sovereign insolvency. Furthermore, the ESM is larger and softer than the IMF and thus has a greater commitment problem. Finally, the complications arising from debt restructuring are worse than elsewhere. For a start, there is less willingness to use unilateral debt exchange offers. Secondly, the Greek precedent – where hold-outs were repaid in full – is a dangerous one. Finally, euro-collective action clauses are not the answer, as there is not enough aggregation.

2. **A Debt Restructuring Regime will always create instability because it weakens the sovereign signature (see Deauville)**

This would be true if countries' debt levels were above or very close to the thresholds. However if they are clearly below, the effect would be stabilizing since the threshold would reduce the incentive to borrow too much. As soon as debt levels increased towards the threshold, risk levels would increase and countries would be cut off from financing at lower levels. But this is an intended effect.

3. **Don't hard thresholds open the door for self-fulfilling runs**

   The thresholds do not depend on market interest rates, so they do not suffer from the usual feedback loop for runs whereby perceptions of insolvency affect market prices, which in turn affect the thresholds determining default. At the same time, while private creditors know that once 90% will be reached, restructuring will happen if market access is lost, there is some uncertainty on how large could be the private losses, as well as on whether unexpected shocks could push a country beyond that threshold. Therefore, well before a country is near the threshold, market interest rates should start increasing, providing the market incentives that keep countries away from accumulating as much as 90% of debt to GDP (there is also a role for financial regulation that reinforces market discipline, as explained in Chapter 2). The key to our proposal is that the upfront operation of debt reduction described in Chapter 3 lowers the stock of debt enough to bring all countries within the 'safe zone'. 'A restructuring regime with stricter terms cannot but strengthen the role of market discipline, making debt price more responsive to fiscal deterioration and debt accumulation. Increasing rates at lower levels of debt are an intended effect of the new regime, which relies more on market discipline. Finally, the proposal is no substitutes for other instruments and institutions, e.g. banking union or the role of the ECB as a lender of last resort, that should contain the risk of financial instability via both ex ante prevention and ex post provision of liquidity assistance.

4. **Why a Debt Restucturing Regime? Would it not be better to ensure future discipline through strong fiscal rules and stronger powers at the supranational level?**

   In principle, this would be an alternative disciplining mechanism. However, our proposal started from the premise that treaty change is not a near-term option and that there is insufficient consensus for moving toward full fiscal union.

5. **Why should this SDRR be credible? Even at the IMF the framework was regularly broken or amended when convenient.**

This does not mean that the framework was irrelevant to begin with. The breaking of the framework of the IMF occurred at the time of the first Greek program and involved a heated debate at the IMF board. The Fund eventually responded by amending lending policies for the entire membership and by introducing the systemic exemption. But this softening of the framework continued to give rise to much debate and concerns about the credibility of the Fund. In January 2016, the systemic exemption was abolished and the lending framework has been tightened.

6. **Debt sustainability is not a precise science. It requires judgment for each case. Why a common threshold? Shouldn't it be country-specific?**

   In principle, the unobserved real border between illiquidity and insolvency is probably country-specific and may even vary over time. However, this indeterminacy would open the door to discretion, and debt restructuring is an area where political interference and time inconsistency are very significant. Official lenders (of last resort) need a framework that they can apply consistently across their membership.

   At the IMF one distinction is applied, namely between low-income and market-access countries. The former have lower thresholds for debt sustainability, that are also linked to the institutional quality as assessed by the World Bank (see table below). For the ESM this would not be a feasible approach. First for all its differences, the Eurozone is a more homogenous block. Second, it would hardly be politically acceptable to assign lower level of permissible debt and financing needs to countries with a weaker institutional quality. The European approach has always supposed equal treatment.

   There is a tradeoff between devising the most correct assessment of sustainability, which seems important once a country is in the grey zone of vulnerability, and fixing incentives in such a way that countries will not even get into that zone. Our stricter framework puts a greater weight on the preventive function, which is particularly important in a monetary union. (See Question 1).

7. **Are you not creating incentives to move debt off balance sheet?**

   The incentives to mask a government's "true" fiscal position already exist for various reasons. Window-dressing may be attractive for political reasons, or to circumvent European rules, such as the SGP. This is why it is important to have a strong and independent European statistical agency, with powers to oversee national agencies. The SDRR reinforces this case.

8. Why these specific thresholds of 90% Debt/GDP and 15% GFN/GDP?

We arrived at these thresholds in two ways. The first is pragmatic: adding a substantial buffer to the 60% baseline Debt/GDP ratio used in Maastricht and checking in historic crisis events how large the effective buffers were (see CIEPR 2013). The second is analytical: the IMF and the EU have derived their thresholds from early warning models that are similar to ours (see Table X below. We have added an additional buffer since our thresholds are hard.

Table 1: Thresholds in various frameworks to assess the risk of debt distress

	European Commission	**IMF**			
	EU member states	*Market-access countries*		*Low-income countries*	
		Advanced economies WEO convention	Emerging markets WEO convenction	Low-income countries PRGT-eligible, PPP GDP < USD 1,195	
				Policy-rating	
Debt/GDP	90%	85%	70%	Weak	38%
	(face value)	*(face value)*	*(face value)*	Medium	56%
				Strong	74%
				(present value)	
Gross financing needs	15%	20%	15%		
Debt profile					
Bond spreads	< 231 - 276.6	< 400, < 600, > 600	< 200, < 600, > 600		-
External financing requirement/GDP		< 17%, < 25%, > 25%	< 5%, < 15%, > 15%		-
Foreign currency debt/Total debt	29.82%	-	< 20%, < 60%, > 60%		-
Non-resident-held debt/Total debt	49.02%	< 30%, < 45%, > 45%	< 15%, < 45%, > 45%		-
Change in short-term debt	2.76	< 1, < 1.5, > 1.5	< 0.5, < 1, > 1		-
PPG external debt/GDP	-	-	-	Weak	30%
				Medium	40%
				Strong	50%
PPG external debt/exports	-	-	-	Weak	100%
				Medium	150%
				Strong	200%
PPG external debt/revenues	-	-	-	Weak	200%
				Medium	250%
				Strong	300%
PPG external debt service/exports	-	-	-	Weak	15%
				Medium	20%
				Strong	25%
PPG external debt service/revenues	-	-	-	Weak	18%
				Medium	20%
				Strong	22%

Source: Schumacher and Weder di Mauro (2016) “Diagnosing Greek debt sustainability: Why is it so hard?”, Brookings Papers on Economic Activity, Fall 2015 Conference

Chapter 2. Steady-state financial regime: Delinking the banks from sovereigns, in particular from their own.

In MEZ1 we proposed a change in the regulatory regime for the treatment of sovereign bonds held by financial institutions. Our proposal had two aims:

(i) Encouraging geographical diversification in the holdings of sovereign bonds and thereby breaking the 'diabolic loop' between sovereign and bank creditworthiness.

(ii) Providing the market with the incentive to create a "safe" euro area synthetic bond thereby producing a natural target for European Central Bank operations in the context of quantitative easing.

The proposal also builds on ideas put forward by Brunnermeier et al. (2011) and Garicano and Reichlin (2014)[4]. In the present report we go into more details on how the two objectives can be achieved in practice and we introduce a new key feature which explicitly links attributions of the risk-weighted assets framework to the debt restructuring rules proposed in Chapter 1.

The "diabolic" sovereign-bank loop

The sovereign-bank loop has been widely recognized as an important factor contributing to the financial instability of the euro area. The vicious dynamics is well-known: when sovereigns are in trouble, so are the banks, as their government debt holdings lose value and weigh on the banks' valuations. Conversely, if large credit institutions have difficulties, sovereigns can also be dragged down, as the fiscal capacity of governments is deemed too small to backstop the banks, making investors question the overall stability of the financial system.

Some progress has been made to break this loop with the creation of the Banking Union and the establishment of Single Supervisory Mechanism (SSM) as well as a Single Resolution Authority (SRA). The role of these institutions is to ensure an orderly resolution of failing banks, with minimum impact on the real economy and on the public finances.

Yet, there are problems. For a start, a joint deposit guarantee, the third pillar of the Banking Union together with the SSM and the SRA, is still missing. Furthermore, the Resolution Fund is very small compared to the size of the banking system and the strict application of the resolution rules (bail in) seems problematic in some countries. For example, in Italy, the implications of the new rules for junior and senior debtholders had not been made sufficiently clear to retail investors, causing widespread discontent when losses were imposed on some savers in December 2015. As a result, the authorities are unwilling to slash the value of investment made by small investors via bail in. Likewise, the application of bail in in Portugal

[4] See also Benassy-Quere (2012)

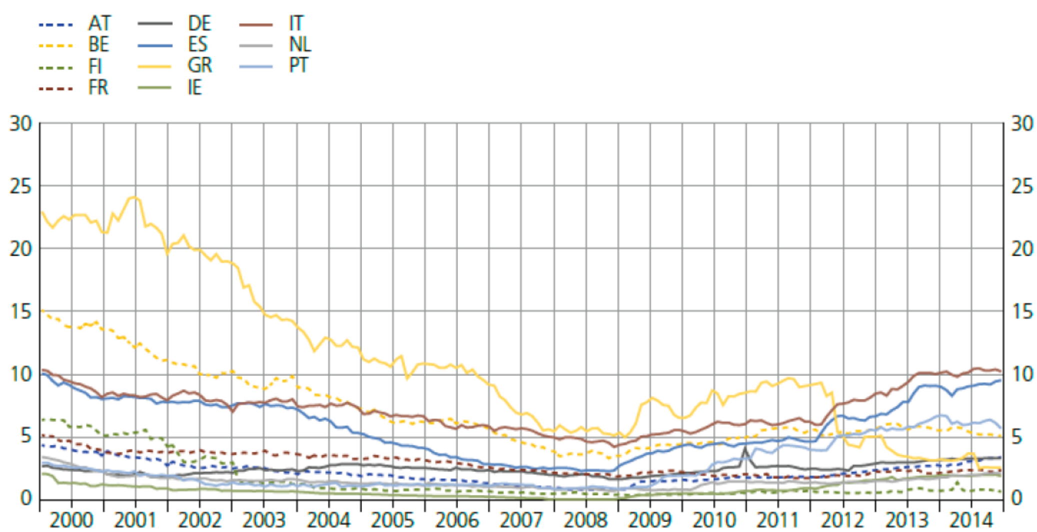
has led to court cases and uncertainty. Finally, for the banks of some countries, the home bias in sovereign debt holdings is still substantial.

There have been some important steps forward. For example, the European Stability Mechanism (ESM) can finance the recapitalisation of financial institutions by issuing loans to the governments of member states. However, that adds to the debt burden of the sovereign and reinforces concerns over the size of the legacy debt from the crisis. The ESM can also in principle directly recapitalise financial institutions - a more effective circuit-breaker. But this is politically toxic and is really construed as an instrument of last resort.

A persistent and large exposure of banks to the domestic sovereign

As shown in Figure 1, banks' home bias in their holdings of sovereign debt increased during the crisis and then stabilized. However, for countries such as Portugal, Spain and Italy, the exposure of the banking system to their own government debt is still high. For both Italy and Spain, domestic holdings of sovereign bonds by monetary and financial institutions amount to about 10% of their total assets. This means that, in a conservative case where bank leverage is equal to 10, a 50% loss on sovereign debt would wipe out half of the equity of the banks.

Figure 1 – Domestic sovereign debt holdings of Monetary and Financial Institutions as a percentage of total assets, January 2000 – September 2014



Source: ESRB report on the regulatory treatment of sovereign exposures March 2015

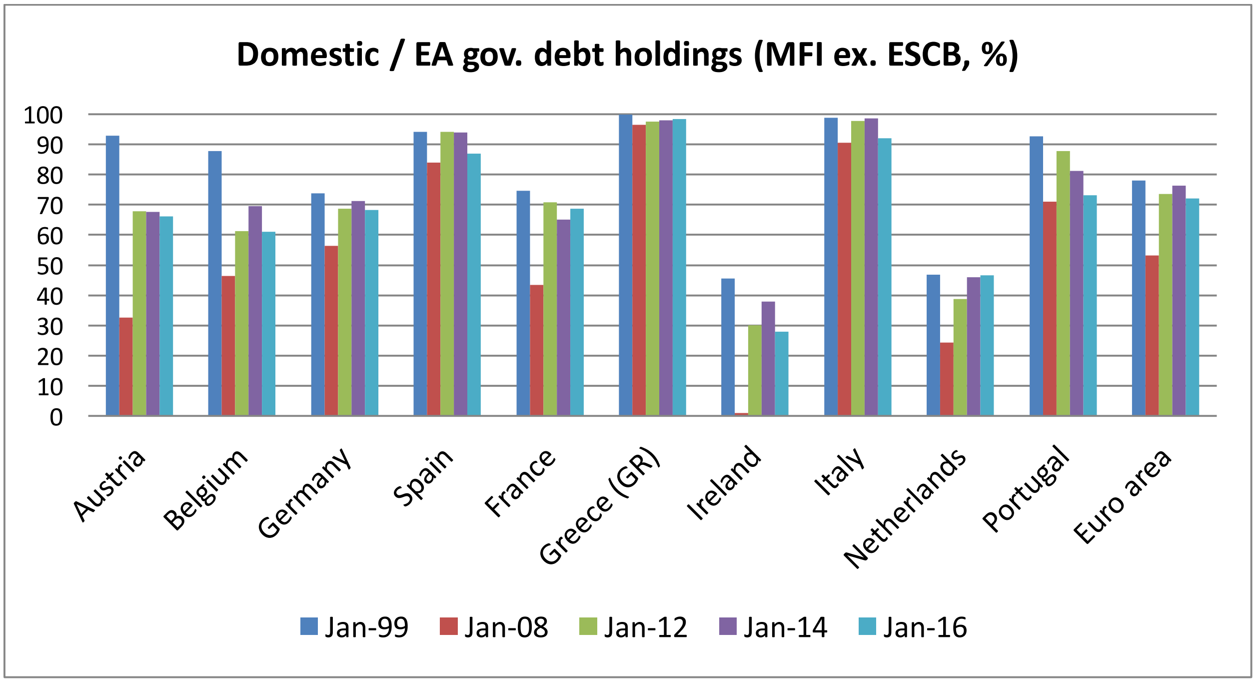


Figure 2: Strong Home bias in most countries. Source: ECB.

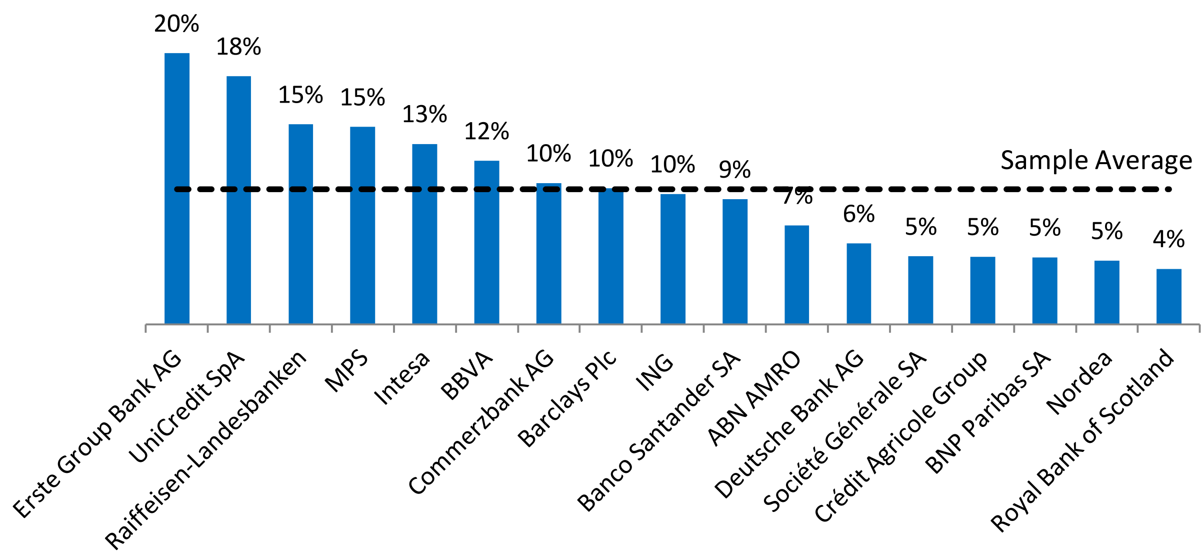
The preference of eurozone banks for sovereign debt may have been linked to their need to increase retained earnings to build or rebuild their capital base and gradually meet the new Basel III requirements. Investing in high-yielding peripheral sovereign debt, while refinancing cheaply thanks to the European Central Bank's low rates was considered "the greatest carry trade ever" (Acharya and Steffen (2015)).

But banks did not invest in just any sovereign bonds of the periphery. They mostly invested in the bonds of their *own* sovereign. This can be seen in Figure 2, where - except for Ireland and the Netherlands (two small open economies) - all countries have a sovereign debt portfolio strongly tilted towards domestic debt holdings.

We can think of several explanations for this home bias. The first is moral suasion by domestic authorities (see for example Becker and Ivashina (2014)). The second is that banks may be (or have been) betting on a preferential treatment by the domestic authorities in case of a partial sovereign default. The third is the realization that in the case of a large sovereign crisis, their own fate is closely linked to the one of the sovereign anyway, so that there is less reason to diversify risk. The fourth is that the risk of a disintegration of the euro area is still very much present: banks therefore strive to match the currency of their assets and liabilities in case countries were to return to their national currencies. For example, Battistini et al. (2013) have persuasively argued that market segmentation is a reaction of the banks to the sharp increase in systemic risk.[5] This last explanation is comforted by the fact that insurance companies and mutual funds also exhibit some home bias (see Koijen, Kulischer, Nguyen and Yogo (2016)). Whichever the true explanation, the outcome is the same: the degree of home bias tends to increase when risk goes up (Reichlin (2014) and Colangelo et al. (2016)) .

When looking at disaggregated bank data (see Figure 3), the bank-sovereign loop problem seems, if anything, more acute. A small but significant number of important banks have exposures to their sovereigns (including both securities and loans), which are well in excess of 10% of their assets. Sovereign exposure in Figure 3 encompasses both securities and loans. They are large and heterogeneous across institutions.

Figure 3: Net Sovereign Exposure over Total Assets

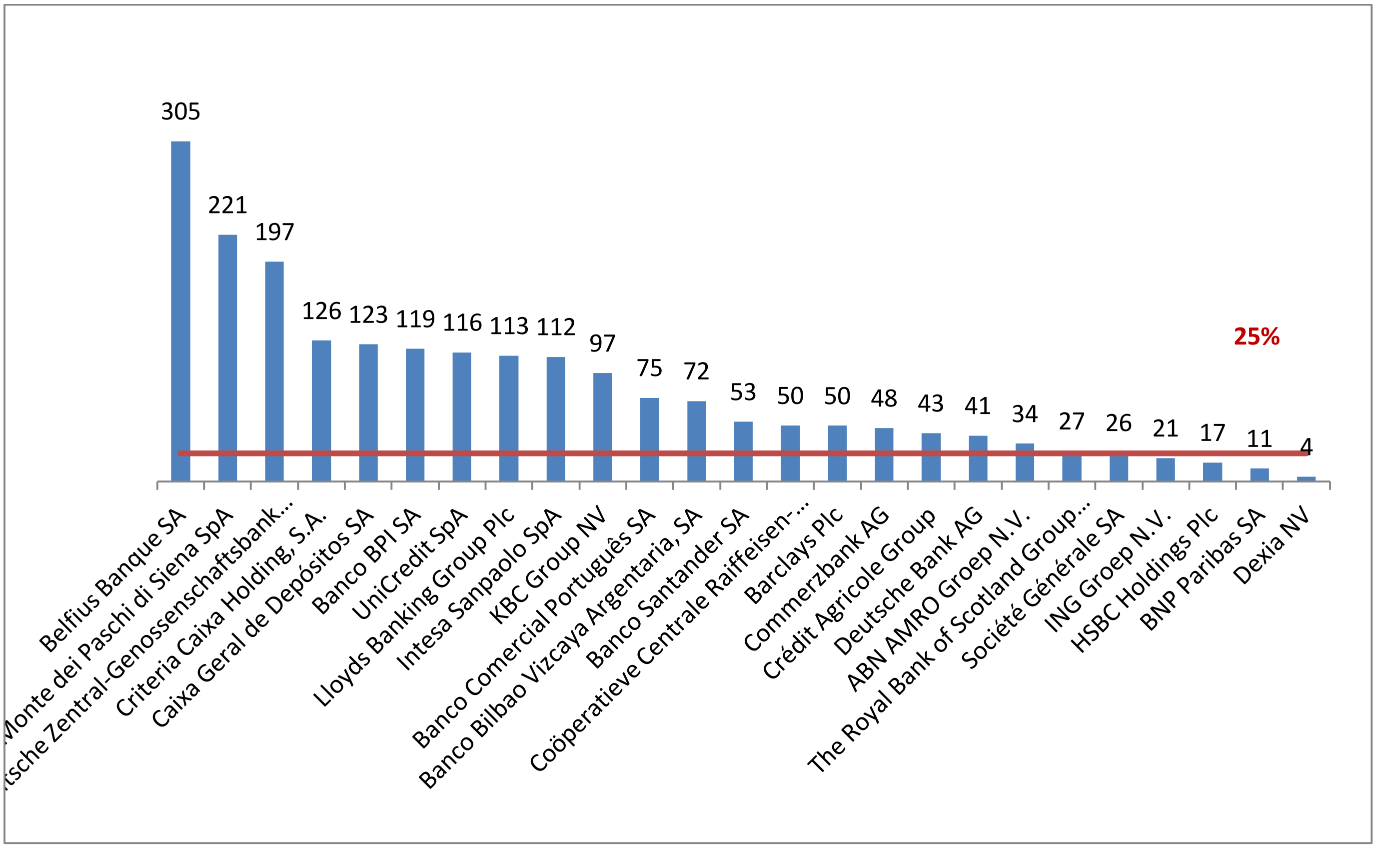


Source EBA and UCG.

Figure 4 shows the exposure to sovereign risk (including sovereign debt and loans) as a percentage of bank capital (own funds). The numbers are very high for a number of key banks, in particular of the periphery. It seems clear to us that there is a high risk of banks and sovereigns entering a dangerous dynamic.

Figure 4: Home country net sovereign exposure over capital (own funds), %.

[5] Specifically, they find that banks in peripheral countries respond to an increase in own-country risk premia by raising their domestic exposure, while in core countries they do not; and that all banks' home bias increases as a result of an increase in systemic risk. They conclude that for peripheral countries, this can be explained in part by carry trade, but that something like hedging redenomination risk must be playing a role throughout the euro area.



Source: EBA, 2015 and EU-wide transparency exercise,

Moral hazard and the ECB dilemma of doing "too little" or "too much"

The legacy debt issue and the sovereign-bank loop, taken together, place an excessively large burden on the ECB, making it more difficult for central bankers to fulfil their mandate.

First, since home bias increases when investors are more risk averse and when risks increase, financial segmentation in the euro area tends to increase in time of stress. This impairs significantly the functioning of monetary policy and makes the realization of the ECB's inflation– that is to keep inflation close to, but below 2% – very difficult.

Second, in a world of volatile financial markets and unstable risk premia, a high legacy debt is a cause of financial fragility and segmentation. This puts a heavy burden on the ECB, since it has to monitor market conditions continuously and intervene occasionally in order to safeguard the monetary transmission channel. The role of the ECB in stabilising the system has become paramount. This was made clear by the July 2012 intervention of President Mario Draghi when he stated the ECB would do "whatever it takes" to save the monetary union, contributing to a sharp reduction in risk premia on sovereign bonds.

When there are shocks to the risk premium, the debt burden of sovereigns rises and may prevent them from stabilizing their debt-to-GDP ratios. In some cases, reducing the stock of national debt while serving soaring interest rates would require unattainable primary surpluses equal to several percentage points of GDP. Seeing this, market participants might require an even higher risk premium, which further tightens monetary conditions. The ECB then has to counteract this destabilizing process by loosening monetary policy and coordinating market participants on the stable low interest rate equilibrium that helps to make the debt service manageable. But this has not been uncontroversial and several policymakers have highlighted the moral hazard consequences of this policy stance.

It is important to realize however that adverse shocks to risk premia may not be necessarily have domestic reasons, but have their origins abroad and reflect global economic conditions and risk aversion of international investors (Global Financial Cycle, see Rey (2015)). Because of the existence of self-fulfilling debt crises, the lines between solvency and liquidity problems are continuously blurred and are endogenous to monetary policy. Indeed, the experience of the euro area debt crisis has shown that the risk assessment of markets has gone from extreme paranoia to excessive tranquillity. This severe volatility may be partly explained by the uncertain governance of the eurozone: Markets either believe in the strong commitment of the central bank to backstop individual sovereigns, in which case credit risk is low everywhere; or they doubt the commitment to monetary union. This can cause a flight to safety that generates risk premia so large that they are plausible only under (possibly self-fulfilling) expectations of currency redenomination with a breakup of the euro area. In either case, but especially in the second one, market signals appear unable to provide a realistic assessment of the fundamentals of each country's fiscal position and thus fail to discipline adequately government policies.

In all jurisdictions, the lender of last resort function of the central bank is an essential pillar of financial stability. In the euro area, however, this must be exercised in a context in which there is no transparent framework for countries to default and in which national debt, even when denominated in euro, remains national. This is why we need changes to the regulatory framework and to economic governance that (a) make it possible for a country to default within the eurozone according to rules which are clear ex-ante (see chapter 1 of this report) and (b) recognise risk in government bonds, but (c) provide a diversification incentive to avoid market segmentation, in particular when financial markets are volatile. The key feature of our proposal is that the rules for achieving (a), (b) and (c) are coherent.

Principles for regulation of sovereign holdings by banks

The current regulatory treatment of government bonds for the purpose of both capital charges and collateral considers all sovereign bonds essentially riskless, independently of the level of public indebtedness of the country of reference. This framework introduces moral hazard and does not reflect a country's fundamental risk.

When regulating the banks' holdings of sovereign debt, the following principles should be taken into account:

- Limit systemic risk. This implies reducing the incentives to accumulate excess holdings of sovereign debt, and in particular, domestic sovereign debt.
- Limit transition costs and asymmetric effects across countries. This implies preserving financial stability during the transition period when portfolios are reshuffled.
- Ensure consistency with other Basel prudential regulation such the Liquidity Coverage Ratio (LCR) or Net Stable Funding Ratio (NSFR).
- Ensure consistency with regulation of other financial intermediaries such as prudential regulation of insurance companies to avoid regulatory arbitrage.
- Avoid imposing regulations which are pro-cyclical.
- Ensure consistency with the objectives of monetary policy and financial integration.
- Promote the use of a safe asset, which will avoid future destabilizing portfolio shifts.

There are several options which can be enacted to achieve some of these objectives. We review them briefly and then put forward our preferred proposal.

1) **Impose limits on banks' exposure to all sovereigns.** For example, regulators could lift the exemption of sovereign bonds to the limited exposure rule and decide that banks can hold no more than, say 25% of their core Tier 1 capital in sovereign debt. If enacted, this proposal would have several drawbacks: firstly, it would give banks an incentive to load up on the riskiest sovereign debt, in order to increase profitability. Secondly, it would do nothing to promote the creation of a safe asset. Thirdly and most importantly, it could cause large portfolio shifts during the transition period and an immediate shock to asset prices. Many banks, especially in the periphery, would need to downsize massively their holdings of domestic sovereign debt. While we have no precise estimates to date for the absorption capacity of the non-bank sector for additional sovereign debt holdings, it is likely that this would be limited and that the ensuing price effects would be high. This sudden shift is risky in an environment of high legacy debt. Imposing this limit on bank exposure with a long transition period could somewhat mitigate this problem. However, since asset prices are forward looking, some price adjustment would take place right away. Another way to limit this shift would be via asset purchases by the European Central Bank, though quantities could be very large, placing an excessive burden on the ECB.

2) **Impose risk weights on sovereign debt.** The weights could be decided by the credit ratings agencies and based on market measures such as CDS prices or on economic fundamentals. This proposal also has several drawbacks. First, it introduces an element of procyclicality, since banks could be forced to sell some sovereign bonds at a time of

stress. This may amplify sovereign distress especially if the weights are based on market indicators. Second, just as the first proposal, it may lead to substantial portfolio shifts during the transition. Conversely, this proposal has the advantage of making banks more solid by increasing their loss-absorption capacity.

3) **Impose risk diversification.** Regulators could decide that baskets of euro area bonds - weighted by GDP or by ECB capital share - should carry a zero risk weight. These diversified securities would be tranched in senior and junior debt. Meanwhile, governments would not be jointly liable for these securities. The advantage of this proposal is to create a safe asset (the senior tranche) that would be geographically diversified. By combining tranching with diversification, this framework expands the fiscal capacity that backs the safe asset and provides robustness to swings in perceived creditworthiness during episodes of flight to safety (see Brunnermeier et al, 2011 for the original proposal, and Brunnermeier et al, 2016, for why both tranching and diversification are necessary). This safe asset could also be used in monetary policy operations of the ECB (see Garicano and Reichlin, 2014). It would be parallel to US Treasuries whose vast and liquid markets enable the US to fund itself at low costs and provide insurance to the rest of the world during periods of global market turmoil (see Gourinchas, Rey and Govillot (2010)). The disadvantage of this proposal is that it would reduce risk premia and limit market discipline.

Our proposal is a hybrid of promoting diversification (with creation of a safe asset) (3) and imposing risk weights (2). It has the additional advantage of being consistent with our steady state regime of sovereign debt restructuring described in Chapter 1.

Before outlining in detail the mechanics of our scheme, we first provide its general guiding principles:

- First, we propose that the ESM/ECB assign risk weights to each eurozone country's sovereign debt. These weights should be computed from the marginal bands based on the Debt Sustainability Exercise described in Chapter 1 and then aggregated into an average risk weight for each country. As a result, the riskiness of a sovereign bond would be consistent with the fiscal position of its government, as assessed and monitored by the ESM, within our steady state fiscal framework.
- Second, we propose that the ESM/ECB introduce a registration scheme to encourage the private sector to create sovereign-debt-backed CDOs. Under the scheme, CDOs backed by qualifying portfolios of sovereign bonds could be divided into tranches. The tranches would then be registered, and each would thereby attract a different quantity of risk weighted assets (RWAs). To qualify, the underlying portfolio would have to contain

sovereign bonds from the different euro area sovereigns in proportion to their shares of euro area gross domestic product (or ECB capital keys), within some explicit tolerance bands. The rule whereby different tranches would attract different RWAs would ensure that in aggregate these tranches attracted the same RWAs as if the bonds were held directly by a bank. At the same time the rule would allow one tranche to attract zero RWAs while the others attracted more. In addition, the registration scheme would require that the tranches be given differential seniority, so that the tranche attracting zero RWAs was also senior to the other tranches. These measures combined would encourage the creation of a set of securities ("Series A" of the registered CDOs) which would be able to play the role of a euro area safe asset.

This proposal has several advantages. First, the risk weights will ensure that each bank builds some risk absorption capacity when exposed to sovereign risk. Secondly, there is differentiation of credit risk across countries and market discipline is more easily enforced.

Meanwhile, this scheme helps deal with the transition problem and stabilize debt prices as portfolio shifts are less pronounced because of the geographical diversification principle. We could even avoid any price effects by organizing swaps of national debt against GDP-weighted baskets of bonds between the ECB and the banking sector. For example, an Italian bank could swap Italian sovereign bonds against an equivalent amount of diversified sovereign bonds (at the market price) held on the balance sheet of the ECB. Given the current, expanded balance sheet of the ECB, this swap operation could absorb a large amount of necessary portfolio rebalancing without any price effect and without changing the portfolio of the ECB. Note that the risk profile of the ECB would not change: the central bank receives inflows from Spain, Germany, Italy, and repackages it to return the portfolio. Given their large inventory, they can swap it right away. So, in effect, the ECB would be the intermediary of the swap of debt between national debts and the diversified bonds.

This scheme also helps the ECB meet its objective of price stability as it prevents segmentation from impairing the channels of monetary policy in stressed times. Finally, this proposal creates a euro area safe asset with most of the desirable properties of the US Treasury Bonds.

There are, however, some limitations: (a) it will take some time to build up sufficient quantity of these securities in the market to match the liquidity of the market for Treasury bonds, and (b) while protected by their senior status, these CDOs, unlike Treasury bonds, are still backed by the several, not joint, obligations of the euro area sovereigns.

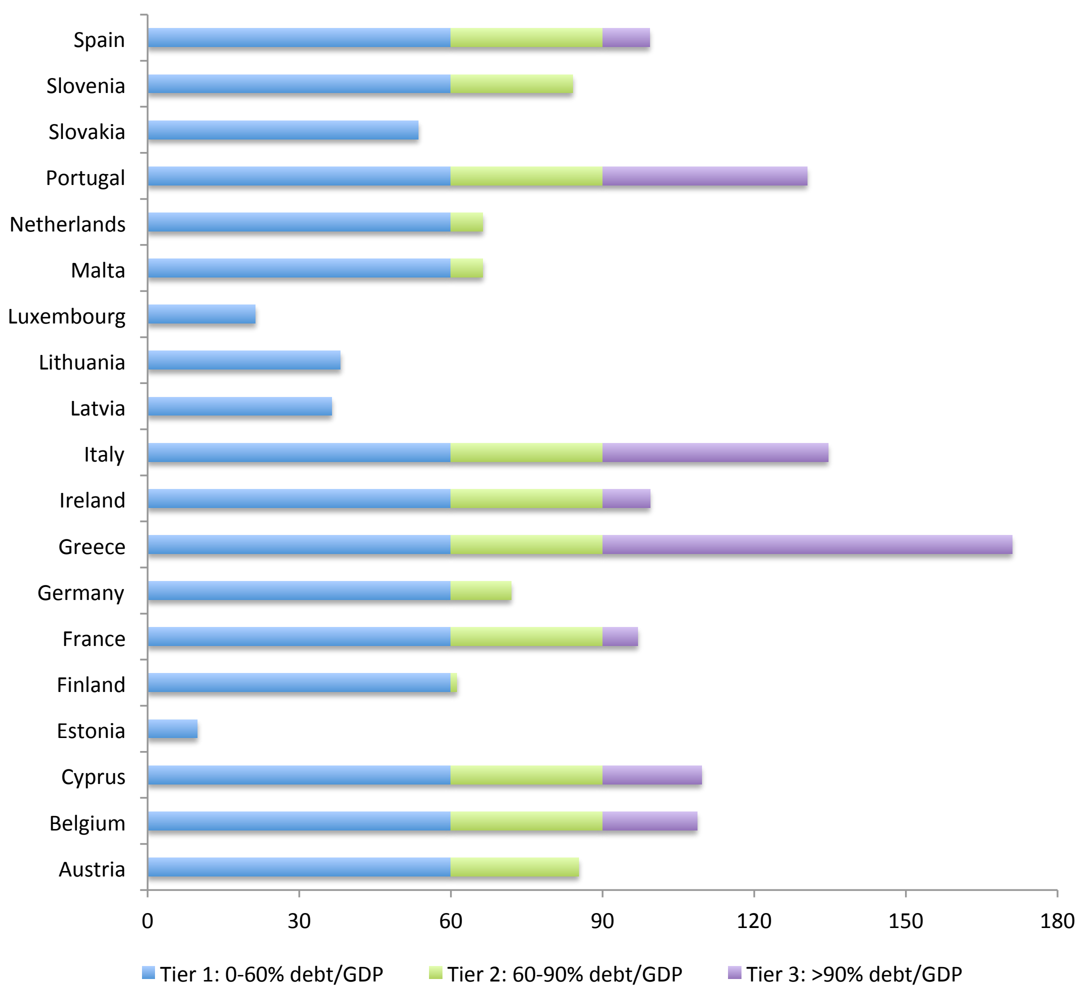
Detailed mechanics

- *Step 1*: Assign different risk weights to the sovereign debt of each eurozone member state. This is done by letting the ESM conduct its Debt Assessment exercise as described in Chapter 1, using a series of marginal bands. For the sake of simplicity, we will choose risk weights using debt-to-GDP thresholds. In practice, these thresholds might be determined by the ESM using a number of criteria, including gross financing needs, and may not coincide exactly with these numbers

- <60%: zero RWA (Tier 1)
- 60-90%: x % RWA (Tier 2)
- >90%: y% RWA (Tier 3)

Figure 5 shows an example where the DSA weights are based purely on debt-to-GDP ratios.

Figure 5: EA members' public debt/GDP (%)



The different colours correspond to the different % RWAs. The whole of a country's public debt attracts the same % RWA, calculated as the *weighted average* of the different risk weights, depending on how much debt is in each of the three bands. The table below shows an example of how high the risk weights would be if one used 0, 10% and 20%, respectively, for Tier 1, 2 and 3 debt.

STEP 1: SETTING RISK WEIGHTED ASSETS FOR SOVEREIGN DEBT

1. The [ECB] would set RWA rules so that each sovereign's debt attracts different amounts of RWAs according to that country's debt-to-GDP ratio

2. The RWA rules would identify bands of debt-to-GDP, each carrying a different RWA ratio

3. The bands would operate on a marginal basis, so that each country's debt would carry a single RWA ratio, calculated according to the combined effect of the bands

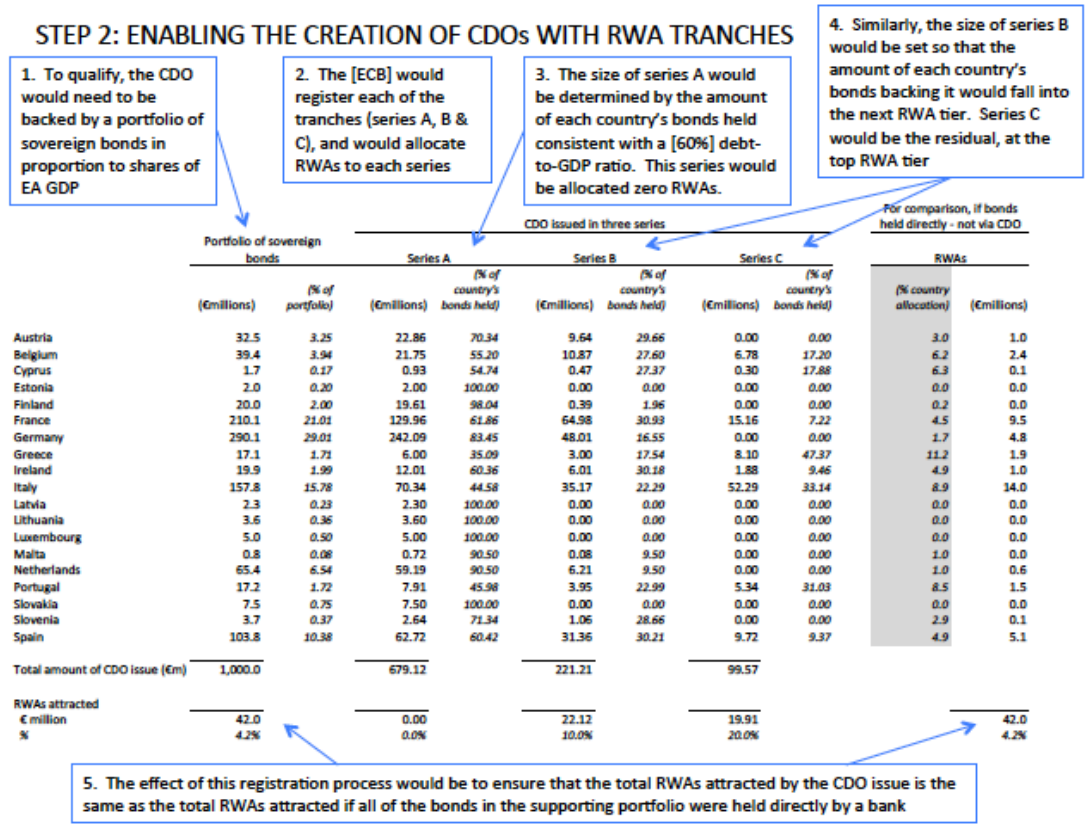
	GDP	Public debt	Public debt/GDP	RWA allocation (illustrative) Tier 1 0-60% GDP		Tier 2 60-90% GDP		Tier 3 >90% GDP		Resulting RWAs	
	(€bn)	(€bn)	(%)	(€bn)	*(% total debt)*	(€bn)	*(% total debt)*	(€bn)	*(% total debt)*	(€bn)	*(% total debt)*
Possible RWA allocation				0%		10%		20%			
Austria	335.1	285.8	85.3	201.0	*70.3*	84.8	*29.7*	0.0	*0.0*	8.5	*3.0*
Belgium	406.8	442.2	108.7	244.1	*55.2*	122.0	*27.6*	76.1	*17.2*	27.4	*6.2*
Cyprus	17.4	19.1	109.6	10.5	*54.7*	5.2	*27.4*	3.4	*17.9*	1.2	*6.3*
Estonia	20.4	2.0	9.8	2.0	*100.0*	0.0	*0.0*	0.0	*0.0*	0.0	*0.0*
Finland	206.4	126.3	61.2	123.9	*98.0*	2.5	*2.0*	0.0	*0.0*	0.2	*0.2*
France	2,168.1	2,103.0	97	1,300.9	*61.9*	650.4	*30.9*	151.8	*7.2*	95.4	*4.5*
Germany	2,993.4	2,152.2	71.9	1,796.0	*83.4*	356.2	*16.6*	0.0	*0.0*	35.6	*1.7*
Greece	176.5	301.8	171	105.9	*35.1*	52.9	*17.5*	143.0	*47.4*	33.9	*11.2*
Ireland	205.4	204.2	99.4	123.3	*60.4*	61.6	*30.2*	19.3	*9.5*	10.0	*4.9*
Italy	1,628.0	2,191.3	134.6	976.8	*44.6*	488.4	*22.3*	726.1	*33.1*	194.1	*8.9*
Latvia	24.2	8.8	36.4	8.8	*100.0*	0.0	*0.0*	0.0	*0.0*	0.0	*0.0*
Lithuania	37.0	14.1	38.1	14.1	*100.0*	0.0	*0.0*	0.0	*0.0*	0.0	*0.0*
Luxembourg	52.1	11.1	21.3	11.1	*100.0*	0.0	*0.0*	0.0	*0.0*	0.0	*0.0*
Malta	8.6	5.7	66.3	5.1	*90.5*	0.5	*9.5*	0.0	*0.0*	0.1	*1.0*
Netherlands	674.6	447.3	66.3	404.8	*90.5*	42.5	*9.5*	0.0	*0.0*	4.3	*1.0*
Portugal	177.8	232.0	130.5	106.7	*46.0*	53.3	*23.0*	72.0	*31.0*	19.7	*8.5*
Slovakia	77.3	41.3	53.5	41.3	*100.0*	0.0	*0.0*	0.0	*0.0*	0.0	*0.0*
Slovenia	38.1	32.1	84.1	22.9	*71.3*	9.2	*28.7*	0.0	*0.0*	0.9	*2.9*
Spain	1,070.5	1,063.0	99.3	642.3	*60.4*	321.2	*30.2*	99.6	*9.4*	52.0	*4.9*

Source: EuroStat (Q3 2015)

4. The RWA calculation for each country would be made periodically, perhaps every year, on a fixed date

5. The RWA ratios, and perhaps the debt-to-GDP bands, would be subject to less frequent review

- Step 2: Allow qualifying collateralised debt obligations (CDOs) backed by portfolios of eurozone sovereign bonds to be registered with the European Central Bank/Bank for International Settlements and thereby qualify different tranches for different RWAs
    - To qualify, a CDO must be backed by a portfolio of sovereign bonds held in certain proportions (e.g., % of eurozone gross domestic product, or ECB keys)
    - Different tranches (e.g., series A, B & C), are given different seniority and each are designated to attract different RWAs according to the composition of the whole portfolio.



STEP 2: ENABLING THE CREATION OF CDOs WITH RWA TRANCHES

1. To qualify, the CDO would need to be backed by a portfolio of sovereign bonds in proportion to shares of EA GDP

2. The [ECB] would register each of the tranches (series A, B & C), and would allocate RWAs to each series

3. The size of series A would be determined by the amount of each country's bonds held consistent with a [60%] debt-to-GDP ratio. This series would be allocated zero RWAs.

4. Similarly, the size of series B would be set so that the amount of each country's bonds backing it would fall into the next RWA tier. Series C would be the residual, at the top RWA tier

	Portfolio of sovereign bonds		CDO issued in three series: Series A		Series B		Series C		For comparison, if bonds held directly - not via CDO: RWAs	
	(€millions)	(% of portfolio)	(€millions)	(% of country's bonds held)	(€millions)	(% of country's bonds held)	(€millions)	(% of country's bonds held)	(% country allocation)	(€millions)
Austria	32.5	3.25	22.86	70.34	9.64	29.66	0.00	0.00	3.0	1.0
Belgium	39.4	3.94	21.75	55.20	10.87	27.60	6.78	17.20	6.2	2.4
Cyprus	1.7	0.17	0.93	54.74	0.47	27.37	0.30	17.88	6.3	0.1
Estonia	2.0	0.20	2.00	100.00	0.00	0.00	0.00	0.00	0.0	0.0
Finland	20.0	2.00	19.61	98.04	0.39	1.96	0.00	0.00	0.2	0.0
France	210.1	21.01	129.96	61.86	64.98	30.93	15.16	7.22	4.5	9.5
Germany	290.1	29.01	242.09	83.45	48.01	16.55	0.00	0.00	1.7	4.8
Greece	17.1	1.71	6.00	35.09	3.00	17.54	8.10	47.37	11.2	1.9
Ireland	19.9	1.99	12.01	60.36	6.01	30.18	1.88	9.46	4.9	1.0
Italy	157.8	15.78	70.34	44.58	35.17	22.29	52.29	33.14	8.9	14.0
Latvia	2.3	0.23	2.30	100.00	0.00	0.00	0.00	0.00	0.0	0.0
Lithuania	3.6	0.36	3.60	100.00	0.00	0.00	0.00	0.00	0.0	0.0
Luxembourg	5.0	0.50	5.00	100.00	0.00	0.00	0.00	0.00	0.0	0.0
Malta	0.8	0.08	0.72	90.50	0.08	9.50	0.00	0.00	1.0	0.0
Netherlands	65.4	6.54	59.19	90.50	6.21	9.50	0.00	0.00	1.0	0.6
Portugal	17.2	1.72	7.91	45.98	3.95	22.99	5.34	31.03	8.5	1.5
Slovakia	7.5	0.75	7.50	100.00	0.00	0.00	0.00	0.00	0.0	0.0
Slovenia	3.7	0.37	2.64	71.34	1.06	28.66	0.00	0.00	2.9	0.1
Spain	103.8	10.38	62.72	60.42	31.36	30.21	9.72	9.37	4.9	5.1
Total amount of CDO issue (€m)	1,000.0		679.12		221.21		99.57			
RWAs attracted										
€ million	42.0		0.00		22.12		19.91			42.0
%	4.2%		0.0%		10.0%		20.0%			4.2%

5. The effect of this registration process would be to ensure that the total RWAs attracted by the CDO issue is the same as the total RWAs attracted if all of the bonds in the supporting portfolio were held directly by a bank

A few more points on the mechanics

- CDOs can be constructed not only from new issues but also from bonds purchased in the secondary market.
- In our steady state fiscal framework, when debt restructuring happens in one country it will be important to ensure that we never cut the debt-to-GDP ratio below 60%. This means that the debt restructuring exercise may affect tranches B and C of the CDO, but will never affect tranche A, validating its status as "safe" asset.
- It would also be important to prevent any sovereign from issuing new debt with a status senior to that of the bonds backing the qualifying CDOs.
- The governance structure of the ESM is key and should guarantee competence, independence and accountability. The risk weights based on the assessment of the fundamentals in the debt sustainability analysis are key determinants of financial stability and market incentives.
- The rule governing "qualifying" CDOs would also restrict the maturities of the bonds in the underlying portfolio, so as to ensure a consistent maturity structure across the

portfolio. For example, a typical qualifying CDO might be issued backed only by liquid 10 year bonds at the time of the CDO's issue.

- At the limit, the construction of qualifying CDOs would be restricted by the availability of each member state's sovereign bonds. However, an appropriate rule for the tolerance within which the portfolio construction would have to reflect shares of EA GDP should mean that this threshold is quite high. It is easy to define a set of rules that allow for the creation of up to € 100 billion of such securities, for example. These rules will need to be validated by the ESM/ECB.

Summary of the advantages of our proposal

Our hybrid approach offers several advantages. It ensures that there is some risk absorption capacity for sovereigns while still allowing the market to enforce discipline. It encourages the creation of a large safe asset market (CDO series A) carrying zero risk weight, which is valuable for financial institutions and for the ECB's conduct of monetary policy. It also minimizes the disruptions caused by the transition to a new steady state and avoids damaging portfolio shifts linked to geographic flight to quality. We could even avoid any price effects by organizing swaps of national debt versus GDP-weighted basket of bonds between the ECB and the banking sector.

It is also consistent with our long-run fiscal framework and ensures risk weights within that framework have an economic rationale and provide banks and sovereigns the right incentives. Furthermore, the way the risk weights are constructed avoids the excessive procyclicality that market measures such as CDS spreads would cause. It can be implemented centrally – by setting RWAs and CDO registration rules – without the need to involve each sovereign issuer directly. Finally, our framework severs the sovereign debt loop and helps the ECB fulfill its price stability mandate.

Chapter 3: Managing the transition: the quid pro quo

Given the status quo of high debt, we cannot simply re-model our existing fiscal and regulatory institutions as described in Chapters 1 and 2. This would be dangerous, as the transition path would be highly destabilizing. Imagine, for example, announcing the implementation of the debt restructuring mechanism described in Chapter 1 in an environment where several countries are already highly indebted. The result could be a run on their debt.

Managing the transition towards better institutions is essential and the starting point cannot be ignored. The way to deal with the transition path problem is **a *quid pro quo*: we propose a coordinated *one–off* solution to decrease the legacy debt in exchange for a permanent change in institutions.** This permanent change in institutions is the adoption of the fiscal framework described in Chapter 1 and of the accompanying banking regulation framework described in Chapter 2. The most obvious alternative approach – letting the ECB hold government debt bought via quantitative easing indefinitely – would end up placing an excessive burden on the Central Bank and would let the situation drag on for decades. Conversely, our approach reduces the risk of moral hazard linked to the coordinated elimination of the legacy debt. Every country ends up in a better place.

Dealing with the legacy debt: a one-time debt stock operation

In this chapter, we articulate strategies to implement a one-time debt stock operation aimed at eliminating the public debt overhang in all participating countries at the same time. The ultimate goal is to boost growth in the Eurozone by eliminating the overhang – thus increasing the incentives to invest and decreasing the uncertainty due to possible self-fulfilling runs in highly indebted countries – in a sustainable manner by improving the long-run fiscal and financial framework of the Euro area. This is the quid pro quo.

We present a menu of possibilities for the debt reduction operation: (i) a debt buyback via a Stability Fund that uses capitalized revenues from either (a) taxes (wealth tax, VAT, carbon tax, etc…) or (b) seigniorage; and (ii) a swap operation through which sovereign bonds are exchanged against a combination of debt and equity (GDP-indexed debt). Since each option has costs associated to it and the scale of the debt reduction needed is large (we aim at bringing each country to below the 90% debt-to-GDP ratio), the best course of action would be to implement a combination of these options.

Furthermore, it is possible to perform the debt buyback using only national resources but it is more efficient to allow limited and temporary risk-sharing across countries. The usual moral hazard issues associated with cross-country risk-sharing are dealt with via the implementation of the new governance framework described in the previous chapters and within which the "no bail out clause" can be credibly enforced. At the same time, switching to the new steady-state framework is made possible only because of the reduction in debt levels. In what follows, we present the different options for retiring debt and how they could be implemented, and we give some ideas about their calibration. For more details, interested readers should refer to MEZ 1.

The Stability Fund

The Stability Fund, established for example under the auspices of the ESM, will buy back a significant portion of countries' debt (to bring their debt to GDP ratios below 90%) and retire it. It will finance its purchases and interest costs by issuing Stability Fund debt, with about the same maturity as the bonds purchased, collateralized by capitalized future fiscal payments of the participating countries. Each Treasury will credibly commit to dedicate some fiscal revenues (some of which can be new fiscal sources) for a period of time to the Stability Fund. The Stability Fund will be guaranteed by the sovereigns of the euro area participating in the operation. The Stability Fund debt will be off the balance sheet of the sovereigns. Stability Fund debt will be accepted by the ECB as top-quality collateral for refinancing purposes. The operation boils down therefore to swapping national debts, subject to default risk into a nominally safe asset issued by the Stability Fund.

Countries will commit to pay some fiscal income into the Stability Fund for an extended period (say 50 years). In order to make sure this promise is credible, one could for example use revenue streams which are generated at the euro area level such as seigniorage. Those could be paid straight into the Stability Fund[6]. One could also use some extra tax revenues which could be generated via wealth taxes, for example on second homes, payable over a number of years (some of the highly indebted countries have high wealth) or via a carbon tax. Another possibility is to use some extra points of VAT for a number of years. Some VAT revenues already find their way into the European budget. In case payments fall short, the length of the payment

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[6] The precise legal modalities of such an arrangement would have to be worked out. For an early proponent of the use of seigniorage see Buiter and Rahbari (2012) and Paris and Wyplosz (2014). See also MEZ 1. One could also implement progressive buy out schemes (instead of retiring all the debt down to 90% in a short time frame). One could for example keep some of the national debt on the books of the Stability Fund (with no interest payments from the sovereigns as long as payments into the Fund are made) and retire it only progressively as the countries honour their obligation vis- a-vis the Fund. Otherwise it could be put back into the markets.

period could be increased. Ultimately the solvency of the Stability Fund is guaranteed jointly by all the Treasuries but this is true during the payment period only, so there is only temporary and very limited risk sharing. The liquidity of the Fund is guaranteed by the ECB.

Example: one simple calibration.

Assume each country of the euro area commits 0.5% of its GDP each year to the Stability Fund for 50 years. Under the conservative assumptions of an average real interest rate of 2% and of an average real growth rate of 1%, the net present value of 0.5% of GDP committed for the next 50 years would be about 2000 bn euros. Assume further that about 1000 bn of future seigniorage of the ECB is committed[7]. The Stability Fund securitizes these 3000 bn euros and uses them to buy back the debt.

Without any redistribution, i.e. using only the net present value of the national resources described above, the new debt levels would be the following (see Table 3.1)

Table 3.1	New debt levels	2015 debt levels
Belgium	78.3%	106.7%
Germany	43.1%	71.4%
Estonia	-22.9%	10.0%
Ireland	71.9%	99.8%
Greece	158.3%	194.8%
Spain	69.3%	100.8%
France	67.4%	96.5%
Italy	102.5%	133.0%
Cyprus	74.5%	106.7%
Latvia	2.1%	38.3%
Luxembourg	-3.3%	22.3%
Malta	35.2%	65.9%
Netherlands	40.4%	68.6%
Austria	58.5%	86.6%
Portugal	94.5%	128.2%
Slovenia	51.6%	84.2%
Slovakia	18.8%	52.7%
Finland	34.1%	62.5%
Lithuania	7.1%	42.9%

Source: AMECO 2015 and authors' calculations

As can be seen from the Table, the scheme leads to sizable national debt reductions but Italy is still above our target of 90% debt to GDP ratio (so is Greece, but Greece is a specific case

[7] The amount of 1000 bn of seigniorage for the ECB on a 50 year period is very conservative . For much larger estimates see Buiter and Rahbari (2012) and Paris and Wyplosz (2014).

and the debt burden of Greece should be dealt with separately).

Small amount of temporary risk sharing

We could also allow for a small amount of risk-sharing. For example, the Stability Fund could distribute its revenues in equal share to each citizen in the euro area (resources divided by countries in proportion to the population).

In our indicative example, each citizen would be "given" a dividend of about 9000 euros, i.e., each country would be given a share of the Stability Fund resources in proportion to its population. In that case the new debt levels in each country after the buy back would be those shown in the following Table 3.2. The transfers in euros per citizen and per year on a fifty year horizon are presented in the second column of the Table. Note that we did not include in the scheme the Baltics and Slovakia as the scheme would lead them to have negative debt (they have low debt to GDP ratios to start with). Some incentives could be given to those countries to nevertheless join the steady state governance framework described in Chapters 1 and 2.

Table 3.2	New debt levels	Transfers per citizen per year (in euros)
Belgium	81.5%	-24
Germany	46.3%	-23
Estonia	10.0%	0
Ireland	79.1%	-63
Greece	137.5%	66
Spain	61.6%	36
France	68.6%	-8
Italy	99.0%	19
Cyprus	61.9%	52
Latvia	38.3%	0
Luxembourg	12.0%	-270
Malta	19.6%	62
Netherlands	45.9%	-44
Austria	63.2%	-37
Portugal	75.4%	66
Slovenia	35.2%	61
Slovakia	52.7%	0
Finland	38.5%	-33
Lithuania	42.9%	0

Source: AMECO 2015 and authors' calculations

In this scheme, the largest net contributor would be Luxembourg who would give out 270 euros per citizen and per year for fifty years. The largest recipients would be Greece and Portugal (66 euros each per citizen and per year). For all the countries except Greece and Italy this scheme would be enough to bring the debt to GDP ratio below 90%. As mentioned above Greece is a specific case. For Italy other fiscal revenues should be added. One possibility is to use or increase the wealth tax for example on second homes, which could be levied during the same 50 year period or any period deemed appropriate. Another possibility is to use debt equity swaps (along the lines of MEZ1).

Is this scheme worth it?

Advantages of this scheme are the following:

- It can be done quickly.
- It would not threaten financial stability as it would boost the values of the assets (indeed it should be designed to avoid windfalls for investors)
- Implementing the scheme in the current environment of high debt valuations due to quantitative easing means that the issue of the market value of the remaining debt increasing significantly after the buy back is likely not to be a concern (see Bulow and Rogoff (1998)). To make sure windfalls remain limited, debt could be bought close to maturity.

Issues:

- It involves committing future revenues in a credible way**.** As discussed above one can think of several mechanisms to increase credibility. One could use euro area resources (seigniorage) or do a progressive buy-back.
- In our preferred scheme, the buy-back involves generating extra tax revenues (for example using wealth taxes), but this increase can be spread out on a long period of time in order not to hurt economic activity in the short run[8].
- In order to more effectively reduce debt, some amount of temporary risk-sharing would be necessary. This does not need to be done for the scheme to work, but it would be more effective.

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[8] Surico and Trezzi (2015) shows that the effect of a tax on secondary homes is very minor for aggregate demand.

Why the debt buy back operation is not an accounting gimmick

The debt buy-back is not a neutral fiscal operation. Even in the case where the buy back is done using only national resources and without generating any additional tax revenues it is not neutral as it involves swapping national debt with default risk for a nominally safe bond issued by the Stability Fund. It also involves committing to a new fiscal framework.

In addition, in our preferred scheme with some temporary risk sharing and some extra tax revenues, it is even more obvious that the buy-back is not a neutral fiscal operation.

The Stability Fund debt is off the national balance sheets for the steady state fiscal governance framework outlined in Chapter 1 which relies in particular on debt to GDP ratios. It carries zero risk weights in the banking regulation framework outlined in Chapter 2.

Chapter 4: Refugee bonds

The recent wave of immigrant refugees to Europe poses great challenges to the European Union. While the most important of these are likely in the political, humanitarian, and security fronts, economics can play a small but non-negligible role in helping to deal with this crisis. In this chapter, we propose a simple financial instrument, "EU refugee bonds", which provide a modest contribution to help deal with the refugee crisis, while possessing interesting properties that can supplement the construction of a new financial architecture in Europe.

The chapter is structured as follows. First, we argue that the integration of refugees and the securing of the borders are European public goods, which therefore require a European-wide policy in response. Second, we discuss how these goods can be partially accomplished by raising expenditures in a few social programs. Third, since the initial expenditure required to set up these programmes is mostly upfront and geographically concentrated, while their benefits materialize over time and may be geographically dispersed in the EU, we argue that their implementation should be financed via a common bond issuance rather than current taxes or large spending cuts, if only temporary, to other chapters of spending in a specific region of the union. For this reason, we propose a type of financial instrument, an EU refugee bond, to finance these expenditures and discuss how they would be integrated with the rest of the European financial architecture. We conclude discussing some potentially broader impacts of these bonds.

Responding to the refugee crisis as a European public good

Within the Schengen area, refugees can move easily and quickly. In fact, part of the crisis has been driven by how quickly the refugees entering mostly through Greece, have moved and especially concentrated in some areas of Europe. At first, the refugee crisis puts particular pressure on the border countries, which have to receive and process the immigrants while securing European borders. Because by their nature these migratory flows are quite mobile, refugees can however quickly move across Europe and respond strongly to relocation incentives, in terms of both local economic conditions as well as policy differences towards refugee integration or social welfare. Therefore, regardless of the original country of the refugees, their destination is Europe as a whole and they are best perceived as an aggregate shock with uncertain differential impacts on different regions.[9]

Aside from being common, the other property of this shock is that it was partly anticipated and it is likely to persist. Figure 1 shows the evolution of asylum applicants to Europe, split between nations, since 2008. While there is certainly a bulge in 2014 and 2015, the number of asylum seekers had been steadily growing in Europe for a long time. Looking further back in time, there was a large migration to Spain and Italy from Northern Africa at the turn of the century, and looking even further back refugees went from the Balkans to the centre of Europe in the early 1990s. Refugees are not a novelty to the European reality, and they are likely to continue coming. Moreover, the large current populations in the Middle East and North Africa make it easy to forecast that, even if the current wave of refugees halts for

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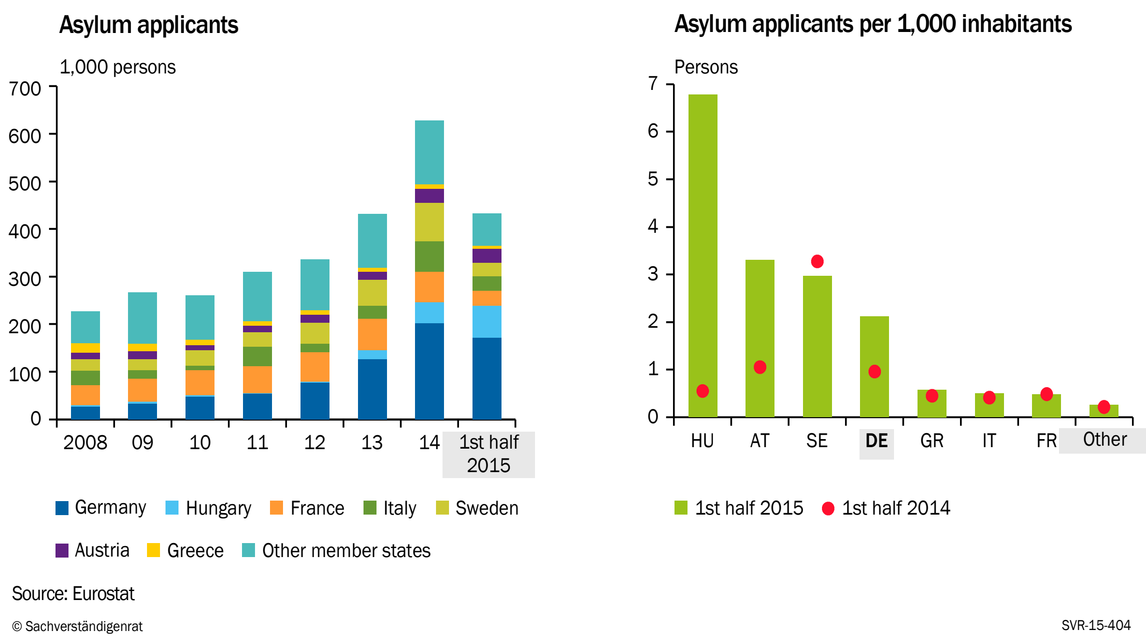
[9] See also the discussion about the refugee crisis as a European problem in Symposium: How to Solve Europe's Migration Crisis, Politico, 2/8/16, http://www.politico.eu/article/solve-migration-crisis-europe-schengen/.

political reasons and even if the refugees maybe end up returning to their home countries, still there will be a constant flow of immigrants and asylum seekers to the European Union in the future.

A common shock that is partly anticipated and persistent is one that is hard to insure against (or self-insure) by individual countries. It is the type of shock that economic principles would suggest is best dealt with via a common policy instead.

Figure 1



Source: German Council of Economic Experts (2016)

Integrating the refugees in turn leads to costs and benefits that are common, and involves externalities across the Union. More fundamentally, the Charter of Fundamental Rights states that Europeans must provide asylum as a basic right to all. The provision of human rights and shelter is a common value of Western societies. The refugee crisis is above all humanitarian aid and foreign affairs policies, which are by definition policies with external social effects. Along the same token, internal and external security are European public goods and so is the free mobility of labour that comes with the Schengen agreement (see also de Vries and Hoffmann 2016).

Second, the costs of integrating refugees are front loaded, and so fall disproportionately on the host country. Yet, the benefits of eventually having a well-integrated and productive citizen of the European Union accrue in the long-run by the country where the immigrant eventually settles. More generally, if we accept the free mobility of labour in Europe, then the benefits are ultimately borne by all. Moreover, as there is wide variety in the extent and costs of labour market integration policies across Europe together with large difference in the taxation of labour, a free riding problem arises where some countries would bear most of the costs and others might get most of the benefits.[10]

[10] For cost estimations see Ruist (2016) and, with a focus on Germany, German Council of Economic Experts (2015).

A third and final externality comes from the costs of securing the border and performing the initial processing of the immigrants. Following the Dublin agreement, a refugee that enters the European Union must have his or her application processed in the country where he or she first lands within the EU. Therefore, countries at the border face the blunt of these costs and may try to prevent the asylum seekers from coming in the first place. If one country at the border of the EU refuses to accept asylum seekers, or treats them harshly or incompetently, this may simply lead to a diversion of the migration routes to cross instead its neighbouring country that is also in the EU. This attempt to shift the costs of processing immigrants arriving in Europe becomes a classic free-rider problem.

The recent surge of refugees has a clear cause in the severe political and humanitarian crises in the countries of origin. A concern increasingly voiced by policymakers and political parties across Europe is that the intensity and persistence of the migratory flow will nonetheless be endogenous to the policies adopted in the receiving countries, and open the door to security breaches. The question is thus whether a common policy can coordinate national states on a convincing and effective strategy to manage the shock. This will require sharing strategies and instruments in a consistent way, preserving the humanitarian and legal goals of the common policies, while policing possible issues in security and managing the access to the programme. Given the size of the shock, and the cross-border spillovers of a country's stand on this issue, an uncoordinated approach at the national level will likely be less effective (in terms of its political and humanitarian goals) and efficient (in terms of its economic costs), than a coordinated approach. While the design of a credible overall strategy pertains to politics, the proposal in this report provides policymakers with an effective instrument of financing and organizing the implementation of its decision.

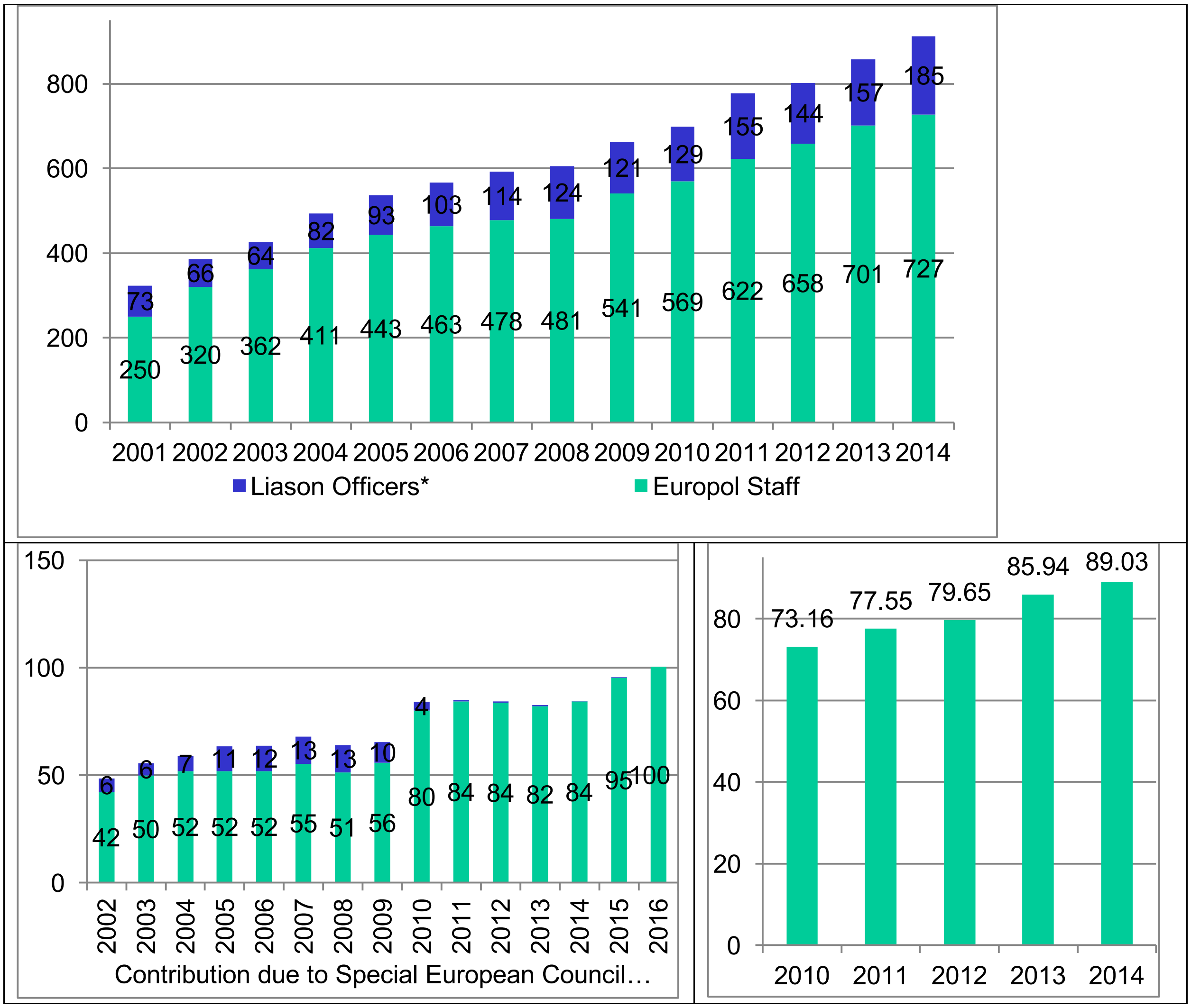
Altogether, the refugee crisis presents a common persistent shock that has to be dealt with via common long-run policies, which internalize the costs and benefits across the European Union. It is a prime candidate for a policy that should be European rather than national in order to share the burden in a solidary way. At the same time, because securing a border or integrating a person requires local knowledge and a flexible approach adaptable to the place and the people involved, it is not necessarily best done by a single European entity instead of the national authorities. Reconciling these two characteristics requires at least that the financing of such a policy is common, even if the implementation may be a mix of European and national policies.

The use of funds for security and integration

The large and quick influx of refugees poses two separate challenges to the European Union. The first concerns the security of the borders, the second the integration of those that arrive. In both, existing European institutions appear to be understaffed and underfunded (see van den Born et al., 2013, European Commission 2015, Ratzel 2016).

Starting with security, under European principles, the European security agencies can only become active when a member state asks for help. This subsidiarity principle implies that they cannot proactively act to take preventive measures, such as providing human and physical resources at points of entry of large waves of migrants. The main security agency is Europol. It provides coordination and intelligence to national security forces in order to share information on organized crime. It was not set up to address the major security concern that comes with waves of immigrants, which is terrorism. It has no coercive powers and it works on a "need to know" rather than a "need to share" basis, so that without the openness and cooperation of the national authorities, it can accomplish little. Figure 2 plots its staff and budget over time. Since the start of the Euro crisis, both have been flat. There is a noticeable contrast between figures 1 and 2: the increase in asylum seekers had little detectable influence on staff and budget of Europol.

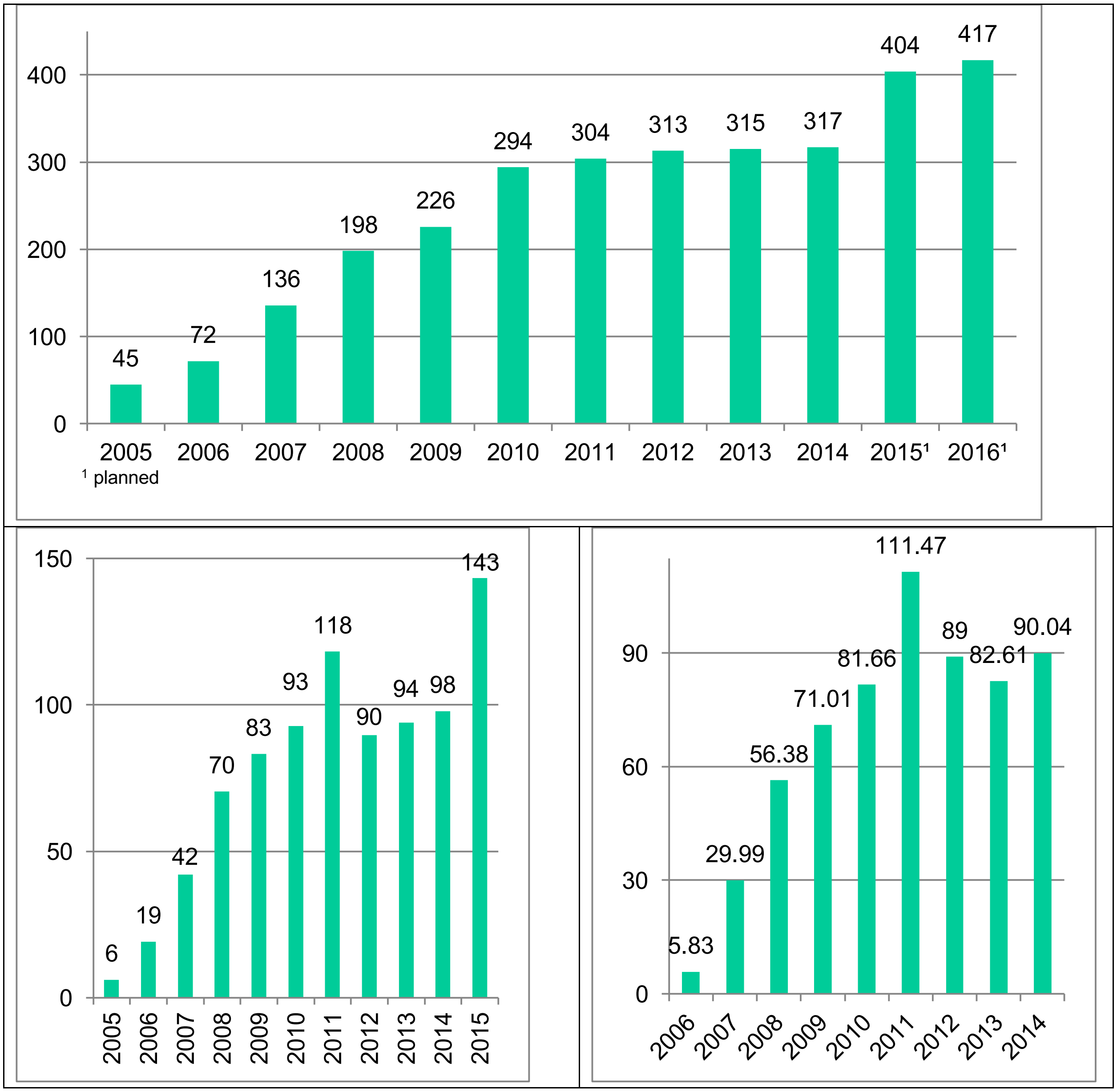
Figure 2



Source: Europol (2016)

Turning to integration of refugees, the main European agency is Frontex in Warsaw, together with the European Asylum Support Office (EASO) in Malta that trains asylum officials and coordinates relocations, as well as eu-LISA, in Tallinn and Strasbourg to provide technical support to the EURODAC regulations on collecting information on asylum seekers. These all command no significant operating resources. Much like EUROPOL, they serve mostly to coordinate information but they have very limited intervention capability. It falls on each individual country to receive the asylum seekers that first land inside its borders, register them, inquire about their skills and human capital, and provide them with food and shelter. Frontex barely contributes to this effort. Figure 3 plots its staff and budget, which much like with EUROPOL were steady after 2010 in spite of the refugee crisis.

Figure 3



Source: Frontex (2016)

Given this status quo, there seems to be large scope for improvement in both security and integration. A few suggestions that would improve security are (see van den Born et al., 2013, European Commission 2015, Ratzel 2016): (1) to operate a legal change so that the European agencies can become active without demand of a member state as long as some narrowly defined conditions are met, such as a refugee crisis; (2) to integrate careers and delegate staff from the national agencies in order to have them better integrated with the European agency; (3) to share information at early stages of investigations; (4) to be able to engage in fast operational (but not coercive) interventions; (5) to give EUROPOL a larger budget and staff, and FRONTEX operational resources so it could intervene in the field; (6) and, perhaps more ambitiously, to create a common European border and coast guard that can intervene in emergency situations.

At the same time, in order to improve the integration of refugees, there are many needs for further resources: (1) the provision of urgent humanitarian aid at the border, (2) to provide housing, either public or private, (3) to make transfer payments to the refugees in order to provide them a minimum standard of living, (4) to provide for language training, education and integration to the new legal environment, (5) to apply active labour market policies, like job training.

All of these proposals build on already existing infrastructures and policies. But scaling them to a level that can respond satisfactorily to the current wave of refugees requires expenditures that can potentially be large. They are hard to estimate since the scope of each of these policies, which already exist today and would only have to be scaled up, differs widely across countries. Berger and Heinemann (2016) estimate that a full provision of asylum services at the EU level would amount to 30 billion Euros allowing for savings of about 40 percent as compared to national provision.

Refugee bonds

Having established that security and integration of refugees are European public goods that should be financed by all the countries in the European Union, and having established that adequately addressing the refugee crisis would require a significant amount of extra spending, we come to our proposal: the issuance of EU refugee bonds.[11]

Why bonds? Because the costs occur now, securing the borders and integrating immigrants, but the benefits come with time, both in terms of peace as well as in terms of new productive European citizens. Debt financing is a way to distribute the expenses over time to match the benefits. Moreover, at present, many European countries would have difficulty raising any taxes to fund even small spending programmes, so that from the perspective of tax smoothing, issuing bonds is also desirable.

Why EU bonds? Since this is a European public good, it should be financed through an EU-wide instrument.

Why refugee bonds? These bonds are meant to be very specifically targeted to deal with the refugee crisis and the expenses described in the previous sub-section.

Therefore, EU refugee bonds are the natural answer to the economic problem that we have described so far. These bonds could be issued in two alternative ways. A straightforward one would be to

[11] A similar proposal called Migration and Mobility Bonds (MMBs) has been aired by Kirkegaard and Philippon (2016). They do however not outline in much detail how these bonds should be designed. De Geus et al. (2016) instead propose a European solidarity fund for financing the refugee crisis. The Italian government in April also proposed a form of bonds to deal with the refugee crisis, but as part of a wider compact on migration policies.

have the European Commission issue them, and pay them from future EU budget funds. This would require minimal institutional change. However, it may be that the EU budget is not enough, given prior commitments, or that there is political resistance to using its funds this way. An alternative would be for another European agency (for instance the European Investment Bank) to issue these bonds in the same mould as the bonds issued by the European Financial Stability Facility. In this case, the bonds would be guaranteed by the member states according to fixed shares of their weight in Europe.

These bonds would be issued in the spirit of "project bonds". Their funds would be earmarked to particular projects that secure the borders and integrate immigrants. They could not be used to fund any arbitrary expense at any arbitrary date. One could envision a strict process by which a project would qualify for this program. As a result, regions that undertake more of these projects, for instance by receiving more immigrants, would receive more of the funds. In order to receive more funds, regions would have to take in more of these projects. Hence, the EU refugee bonds would not fund transfers to regions but rather to projects and people. With the recent failure of sharing refugees across regions, a possibly superior alternative is instead to share the costs in a way that is tied to the projects of security and integration.[12]

This shift from regions to projects has several benefits. First, it provides incentives for regions to undertake the effort needed to address the refugee crisis. Second, it limits the amount of redistribution across regions that would occur, as a result of the competition between different regions. Third, it separates this program from many other European programs where redistribution from the richer to the poorer becomes the overriding principle, in detriment of the program's other goals. There could be large swings from one year to the next on which region is more attractive to immigrant refugees, and setting up projects backed by bonds would allow funds to be quickly reallocated across regions. Fourth, it benefits those regions that have suffered disproportionately from the crisis, due to being closer to the borders or receiving more immigrants, consistent with the solidarity principle in the European Union.

At the same time, different from project bonds, these EU refugee bonds are not tied to a particular stream of income from the project. Because security and integration are European public goods, their benefits accrue to all in the form of prosperity and safety. Therefore, their payment should naturally be done through taxation, including the future taxation of the now-integrated immigrants. Importantly, this is a small program, and one whose payments are smoothed over many years. Therefore, it should not impinge in a substantial way on the regions paying and should not weigh on the sovereign risk at the national level. Moreover, because they are backed by the European Union, these bonds will not affect national fiscal debts and national public debt. A more difficult issue is whether the different country's liabilities should be joint and solidary. We leave this open for discussion acknowledging that there are advantages and disadvantages of doing so.

How do EU refugee bonds compare to other bonds in a new EU financial architecture? The other chapters in this report discuss the need for a European safe asset that breaks the diabolic loop connecting banks and sovereigns. This report suggests pooling bundles of government debt with fixed weights, tranching and securitizing them to create a European safe asset that partly breaks the diabolic loop between banks and sovereigns as well as the destabilizing flight to quality across borders during crisis. In comparison, refugee bonds are too small, and too tied to projects, to provide this safe asset. They are meant to share the common burden of the refugee crisis, not to create a safe asset.

[12] In this sense, refugee bonds resemble tradable quotas (or cap and trade systems) for refugees.

At the same time, there have long been proposals for the European Union to issue Eurobonds that depend on the process of European integration and move towards the creation of a federal state by imposing joint and several liabilities over these debts across the citizens of the EU. Again, refugee bonds are much too small and narrow in scope to provide this federal goal. Their funds would mostly finance already existing initiatives, but at a larger scale, and they are specifically tied to a very specific emergency, the refugee crisis.

EU refugee bonds do not interfere with either of these other debt instruments. A rich financial architecture in Europe should have a variety of instruments, and our claim is that EU refugee bonds might well be one of them. Investors would be willing to buy these bonds at auction-determined prices, in the same way they were willing to buy the bonds issued by the EFSF. Likewise, EU refugee bonds are not *the* solution to the EU refugee crisis, and they are perfectly consistent with other solutions such as a large Marshall-Plan-inspired investment drive, payments to Turkey to contain the refugees, or a comprehensive international action of refugee burden sharing including even a proposal for a market in refugee protection quotes as already outlined by Schuck (1997). For any of these other solutions, EU refugee bonds would help in the financial architecture of how to deal with this problem and how to fund it.

Conclusion

A common driving force of the MEZ reports is that financial markets can offer solutions to European problems, rather than just being a source of problems of their own. The EU refugee bonds discussed in this chapter are an example of flexible financial engineering, envisioned a contribution, however small in relative size, to match one of the most challenging issues affecting the European Union.

The problem of refugees is common to all, is emerging in all its force now and is bound to persist both in the immediate and distant future. With people and expenses shifting quickly across regions, the problem has already exceeded the ability of single states to cope with it on their own, as inward-looking solutions cannot but create cross-border spillovers leading to instability abroad. The refugee crisis requires a common solution that internalizes costs and benefits.

The existing European institutions do not have the resources to respond to the problem. Extra funds are necessary to implement minimal reforms responding to the different dimension of the challenge, ranging from settlement to border security. Responding to the refugee crisis requires expenditure that have most likely a large front-loaded component, with solidarity across regions, and tied to very specific projects. Issuing a common bond is a flexible tool to finance this expenditure.

Besides its immediate contribution to the refugee crisis, the EU refugee bonds can also serve as a leading instance of initiatives reinforcing European coordination where this is mostly (and most naturally) needed, to solve uncontested common problems. In relative terms, the programmes financed by these bonds are quite small in scope, so the scale of the initiative should be relatively easy to manage. Yet, there is a lot to be learnt from its implementation, especially regarding how financial markets value the risk of obligations at the European level, and what type of institutions and institutional arrangements are required to make sure that member states contribute funds and foster the demand and circulation of refugee bonds as safe, risk free, European assets.

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Comments

This section reflects the comments on the draft report by the participants in the EUI-RSCAS Conference "Monitoring the Eurozone 2016: Reinforcing the Eurozone and Protecting and Open Society" at the EUI, 5 February 2016. The final report benefitted substantially from these discussions and was extensively rewritten.

1. Motivation: Eurozone, where do we stand?

Daniel Gros noted how the IMF framework has changed frequently over time and said it may not be appropriate to build a long-term solution on something which is often revised. He added that contagion is extremely important and is likely to take place with an automatic extension of maturities in the so-called "grey zone". Furthermore, the paper should take into account the fact that policymakers may not necessarily seek to maximise the welfare of their own country. For example, they may prefer to win the next election instead of doing what is good for the economy. The authors should think about how to incorporate this distinction into their framework.

Ramon Marimon said that having a buffer in the form of concessional ESM lending is extremely useful, but may lead European countries to postpone the problem until later this century. By then, the European demographic profile will worsen, making it much harder to deal with a fiscal crisis.

A discussant said that the European Union tends to pick one threshold and to apply it to every country, as it happened, for example, in the Maastricht Treaty. He thinks this may be unreasonable in a Union which consists of countries with different administrative structures and ability to tax their citizens. He called for a different kind of framework which incorporates a more differentiated approach.

Juan Francisco Jimeno said that conditional lending typically forces governments to adopt austerity and deflationary structural reforms during a recession - the wrong time to implement these measures. He suggested a different approach, which he first presented in a paper jointly written with Tito Boeri, and which allows to promote growth and reform without generating the risk of moral hazard. This strategy includes creating a pan-European unemployment benefit scheme, complementary to the national ones, in exchange for the implementation of labour market reforms. This approach can solve the problem of moral hazard and can be used both during a boom and during a bust.

Sony Kapoor suggested the possibility of introducing “living wills” for sovereigns, an idea taken from the banking world. ESM access and restructuring could then be linked to pre-approved “living wills”, which would outline for example which taxes would increase during a sovereign restructuring. This approach would allow to differentiate between countries, taking into account specificities. Politicians may seek for cross-party consensus when drawing up these documents. Linking these “living wills” to the pre-approved thresholds outlined in the paper could be useful. This would be particularly relevant for pre-approved lines of credit from the ESM.

Philippe Legrain said that although he liked the idea of a sovereign debt-restructuring mechanism, he thought pre-established thresholds could be destabilising. As a country approaches one of these limits, the market will react selling off government bonds, creating a self-fulfilling crisis.

Stefano Micossi agreed that the framework described in the proposal would lead to a sustainable and stable system in equilibrium, but was concerned about the transition. He insisted one had to create some form of debt mutualisation and common shock-absorbing capacity in exchange for joint oversight, otherwise the system would be unstable. However, it is unclear whether politicians can agree on such a deal. He cited, as an example, the introduction of the new “bail in” regime in Italy. The agreement in 2013 implied changing the rules on existing bonds, so that they could be written down to zero even though investors thought they were safe. When four small banks were resolved at the end of 2015, this brought instability to the system. The risk is that the new mechanism outlined in the paper would introduce a similar kind of instability in the sovereign debt market, as it is impossible to introduce it only for newly-issued bonds.

Jonathan Portes said that introducing an exact threshold could create two types of perverse incentives for governments. The first is to use all the fiscal headroom and increase spending all the way to 90%. The second is to use accounting tricks to stay on the right side of the threshold, something which has happened in Greece, but also in the UK. Portes added he has doubts over the excessive reliance on hard fiscal rules. Instead, he prefers fiscal councils, such as those operating in Sweden or Belgium. If credible, these councils can impose discipline on politicians, while allowing countries to take ownership of their tax-and-spend decisions.

Shahin Vallée said he was sceptical of modelling this mechanism on a framework which has been rewritten three times. One risk is that when the new mechanism needs to bite, the rules are rewritten. Another risk is that the framework is written in such a way that no-one understands it, so that each government can apply it as he likes it. He added that there were two motivations behind the proposed mechanism: one is dealing with excessive debt stocks and the other is to restore the power of price signals. He said that it is not clear how the market discipline would work, so the new mechanism may not achieve what the authors hope for.

Edouard Vidon said that one should be careful when drawing lessons for Europe from the IMF's exceptional access framework (EAF). This framework has not changed in several respects. For example, a country has to face large balance of payments needs, although it is less clear how that translates within the eurozone (given Eurosystem refinancing). Secondly, the IMF framework demands that a country must have the prospect of regaining market access, so we may want to discuss how to assess (and support) that in the context of an ESM program. Finally, one important criterion in the EAF is to have the institutional and political capacity to implement reforms and there is a question mark over whether and how Europe can do that. Vidon recommends having proper institutions with mandates and instruments instead of rules without institutions. The instruments must combine the need for policy coordination with the incentive to reform. Meanwhile, the mandate would have to incorporate several objectives of fiscal policy, including both sustainability and stabilisation. Besides, the eurozone needs to design a framework that works both in the steady state and when there are large shocks.

Jeromin Zettelmeyer said that although frameworks are regularly violated, this does not mean they are ineffective. Rather, one should think of a rules-based framework as indicating a standard course of action, albeit with some sort of escape clause. One question is whether it would be better to change the frameworks that makes the escape clause more explicit. But while this latter strategy is theoretically more appealing, economists recognise that contracts are always incomplete. Hence, the fact that a rules-based framework is often violated does not necessarily invalidate it.

The vulnerable part of the author's proposal is not the framework per se but rather the 90% threshold. The report rationalises this using the 60% threshold from the Maastricht Treaty, adding a large safety zone for big shocks and banking crises, which may not be entirely implausible. However, it is unclear how one reaches this exact number. It is positive that markets respond when a country approaches the 90% threshold. The fact that highly indebted countries may be cut off from market borrowing earlier may be intended. However, one should ensure self-fulfilling runs are avoided.

Zettelmeyer added that debt restructuring is a net positive so long as it does not produce deadweight losses which are higher than those from continuous over-borrowing. However, restructuring can cause large-scale problems, for example if the banking system holds a large portion of sovereign debt. In that case, reprofiling can be a less unsettling option than outright restructuring.

George Alogoskoufis asked whether applying this framework to the Greek crisis would have made things different. The Greek programme failed in the implementation phase, so the question one should ask is how to ensure that the adjustment programme is sufficient to regain market access.

Tito Boeri suggested one should re-consider the definition of debt, including social security entitlements, i.e. implicit debt. By including this other pile, overall debt would be higher. However, the variability of government debt across the eurozone would be reduced, since implicit debt is less widely dispersed than explicit debt. Furthermore, including implicit debt would give governments new instruments to deal with their public accounts. At the moment, politicians can only choose between fiscal restraint and debt restructuring. Implicit debt allows for intertemporal reductions of debt, giving policy makers more options. Boeri also agreed with Jimeno that the existing type of conditionality creates a problem of incentives, while “positive” conditionality takes care of this problem.

Luca Onorante said that the abolition of the systemic clause may imply a much smaller role of the IMF in the eurozone for a while. There is an opportunity and the need to increase the role of the ESM. He added that while he liked the idea of having a framework based on thresholds, these figures are subject to plenty of discretion, as one needs to collect data and run models subject to hypotheses. Most importantly, the very governments that are likely to breach these thresholds have a greater incentive to massage data. Thresholds must therefore be combined with fiscal councils, and fiscal councils should be ideally independent and even located outside the country they monitor, which is possible provided they only have the technical role to collect data and run models.

An additional problem is that there is a limit to what one can do in democracies, as electorates tend to vote out governments when they implement too strong adjustment measures. Hence, it is better to have a system of early warnings than to wait for markets to wake up when it is too late.

Hélène Rey responded by saying that the main purpose of the proposed structure is to create an end-game for politicians, so that they do not have an incentive to postpone adjustments indefinitely. This means that the framework can be complemented with other measures, including fiscal councils and cyclically-adjusted rules.

Ricardo Reis responded that the 90% threshold is not based on market interest rates. This allows to avoid the risk of self-fulfilling crises. One advantage of having a fixed threshold is that market rates will go up when debt levels approach the 90% limit, putting more pressure on governments to adjust. Furthermore, the existence of precise rules on restructuring allows bondholders to calculate their expected loses. This will be incorporated in the increase in interest rates. Finally, restructuring still comes with conditionality. This allows to preserve democracy while providing the right incentives to governments.

Beatrice Weder Di Mauro responded that it is clear that the exact threshold is not merely country-specific, but unobservable, time-variant and dependent on the existing political constellation and perhaps even the personality of politicians. If one included all these variables, it would be impossible to have a framework encompassing the whole of the eurozone. The adjustment for concessionary interest rates is the only kind of adjustment which is easy to incorporate. The alternative is to abandon frameworks and keep discretion. However, this implies having the kind of problems one has now, i.e. "kicking the can down the road" restructuring to little, too late and at too high a cost to the European and national tax-payer. Even more importantly, without a transparent restructuring regime markets will not price sovereign risk adequately in in tranquil times and instead run for the exit when debt levels are already excessively high.

Weder Di Mauro also said that transforming the ESM into the IMF of the eurozone would require more discussion. One option would be to have flexible credit lines, which should be available only to countries with a debt-to-GDP ratio below 60%.If the EMS was to continue lending at 30 years maturities it is creating the danger of keeping countries in long term debt dependence. Possibly the ESM should incorporate more automatic buffers into its lending, akin to GDP-linked bonds.

In response to Tito Boeri she noted that while implicit debt matters for sustainability, there is little evidence it matters for the pricing of explicit debt and therefore contributes to possible bank runs.

Session 2: Governance of the Euro Area: Financial Regulation

Alexander Schulz said that the proposal dangerously gives up on tried and tested instruments such as risk weights. These have the advantage of requiring that banks hold sufficient capital, while giving the right incentives to governments. Banks have internal models that can be used to calculate additional capital requirements. Concentration limits are also a useful instrument, though one can obviously discuss their calibration: the eurozone has the advantage of having different government debt instruments all in the same currency, making it easier to diversify. Schulz added that giving a regulatory privilege to sovereigns can lead to undesirable crowding out effects on corporate lending, so these rules could also have an additional positive effect for the real economy.

Schulz was also sceptical of having one debt agency that creates a safe asset by combining and tranching individual bonds, as this destroys the principle of market pricing. In order to have common financing capacity, countries must be willing to give up at least some of their sovereignty in good times as well as bad times. Finally, it should not be the supervisors who are in charge of changing the risk weights, but these need to be laid down in regulation.

Evi Pappa said one should focus on the problems associated with transitioning from one steady state to the next. In general, she agreed that there is not enough portfolio diversification in the Eurozone. Furthermore, the fact that the banks are so connected to the sovereigns ends up linking banking and fiscal crises. The solution is not just creating basket of bonds, but transforming banks in institutions that are less tied to a single country, for example by making it easier for them to enter different markets. More diversification will necessarily lead to more integration.

Luca Onorante said that the framework established in the paper creates one big safe and liquid asset. The risk is when the ECB buys this safe asset, it mostly favours countries that do need help. Onorante was also concerned that the demand for the safe asset may limit the liquidity for other bonds, exacerbating the risks for countries in difficulty.

Christian Odendahl said that while the mechanism presented is characterised by strong market discipline, this tends to come too late, that is when a country is dangerously close to the 90% threshold. One would need a mechanism where market discipline kicks in earlier.

Ramon Marimon said that there is a valuable disciplinary effect deriving from having substantial amounts of government debt in the hands of domestic banks and investors. The politicians will be more careful about defaulting on their debt as it would impact their voters disproportionally. As a result, the impact of free riding and moral hazard is smaller.

Sony Kapoor said he has changed his mind about the desirability and feasibility of braking the sovereign-bank loop. There is a disproportionate link between a country's banks and the sovereign. Firstly, banks' profits are affected by a country's economic conditions, as these determine the rate of default as well as the demand for new loans. Secondly, the ultimate backstop for a country's deposit guarantee scheme is the government, as it takes plenty of time to build a fund using resources from the banking sector. Furthermore, breaking the loop may not be desirable, as it can put countries in a difficult transition. For this reason, it is important to rethink the banking union and its principles.

Kapoor also said that it is positive to have a banking union during the bad times, as this allows losses to be shared across the eurozone. However, it is less clear that it is desirable to have a banking union during the good times, as savers stop looking at risks and tend to pour their money into the same speculative assets, such as Spanish housing.

Edouard Vidon said that any proposal on these matters needs to be consistent with monetary policy objectives and operations, as well as with liquidity requirements. This particular proposal has the advantage of meeting such criteria. However, the framework as presented so far is mainly about risk reduction, while the policy discussion now is about how to combine risk reduction and risk sharing. There are three main ideas on the table to enhance risk-sharing: introducing a European deposit insurance scheme; making it easier for the ESM to recapitalise banks directly; and having a common fiscal backstop. The proposals of the workshop link the banking sector to the fiscal framework in a neat way, but they should include plans to enhance risk-sharing in the steady state.

Jean-Pierre Vidal said that the link between the banks and the governments is indeed problematic and needs breaking. One way of doing this is via regulatory changes. The end-result must be to stop having banks that are, for example, German or French. While the eurozone has moved to a regime of common supervision, it has not yet changed the nature of its banks. The reforms needed go beyond limiting the exposure to sovereign debt and must include the harmonisation of national rules, for example, on repossessions.

Richard Portes said that the proposal must take into account the fact that the ECB is now buying bonds. He also said that there are huge disadvantages to risk weights. Basing risk-weights on so-called fundamental measures would be a mistake as these measures are unreliable since there is little correlation between them and default risk. Market measures, such as credit default swaps, are even more unreliable and volatile. In principle, the regulators should determine risk weights, but they face unsustainable political pressures.

Portes added that even in the case of a default some debt would still be serviced, so one should not demand that banks limit their exposure to sovereign debt assuming they would lose everything. Furthermore, although home bias rose substantially 2011-2014, it has fallen, and there are now only a few problematic cases. It would be a mistake to design a law that is overly influenced by a few hard cases.

Jeromin Zettelmeyer said it is important to understand the legal implication of the tranching mechanism. For example one needs to evaluate whether some of the tranching has to occur at the national level, or if international investors can do everything.

Lucrezia Reichlin clarified that the proposal does not assume that there is a single debt agency issuing the safe asset. Rather, the safe asset is a synthetic bond which market players have an incentive to create once the rules are changed. In fact, so long as all debt is risk free, market players have no reason to create a synthetic safe asset.

She said that even if we are back-to the pre-crisis level in terms of home bias, there is plenty of evidence that during a "flight to safety" this tendency reappears. This is why the proposal prefers promoting risk diversification to imposing limits to exposure, as it goes in the direction of creating a safe asset.

Reichlin also added that imposing risk weights is bound to produce large portfolio shifts, which have an effect both on capital requirements and profitability. The key plank of this proposal is that as long as a bank diversifies its portfolio, this can enjoy a risk-free treatment on its sovereign bond holdings.

Lastly, she said that domestic debt at the moment does not act as a discipline device in the eurozone, since there is no credible threat of restructuring. She agreed that more work had to be done to understand the exact infrastructure of tranching.

Hélène Rey responded that the incentives in place in the euro area are to restructure sovereign debt far too late. She added that the sovereign-bank loop is still very powerful and dangerous. It is right that sovereign debt is not the only issue when one thinks of breaking links between national risk and banks. One important channel is the exposure of banks to national corporate debt and national real estate markets. Hence, one should think of ways to attenuate the link between bank balance sheets and national risk via securitisation. Harmonising bankruptcy rules for example would be an important step to help doing just that and this should be on the agenda for the capital market union, But all that does not mean that the sovereign-bank loop is not important and this is what we focus on in the report.

Rey added that it is true that it is hard for the regulator to create adequate risk weights and for the supervisor to implement them. Linking risk weights to the fiscal rules, as it is done in the proposal, is transparent and goes around a lot of usual criticisms.

Ricardo Reis responded noting that the basic principle of the proposal is that having a diversified portfolio must be a good thing. The creation of a safe asset is just an acknowledgement of this principle. He added that while the home bias may be beneficial from a social point of view, as it decreases the incentive to default, there is a tendency to have too much home bias because there are significant externalities to holding on to domestic sovereign bonds: this is evident from the rapid rise in domestic sovereign bond holdings by banks during the crisis. He added that it is not true that only banks from crisis-hit countries such as Italy hold too much domestic debt. US banks often have zero Treasuries as these offer extremely low returns at the moment. Hence, by comparison, even German banks seem to have a portfolio which is excessively skewed in favour of domestic sovereign paper.

Reis also said that the 60% threshold is clearly a reference point. However, it would be wrong to say that the optimal point is for governments to have zero debt, as there is a minimum amount of bonds a sovereign has to supply to ensure, for example, the insurance system remains healthy. The question is what is the optimal level to ensure the government does not act as the marginal buyer.

Session 3: Debt Overhang and Fiscal Stance

Stefano Micossi said that the framework presented in the session fully resolves the problem of the stability of the system. However, the reduction of public debts creates new fiscal space, which reckless governments will be tempted to use. The framework must ensure politicians do not exploit this opportunity. Finally, he asked where debt servicing costs go.

George Alogoskoufis asked whether governments would withdraw short-term or long-term debt.

Sony Kapoor asked whether the authors are thinking of joint liability for the whole stock.

Jean-Pierre Vidal wanted to know what is the exact difference between the authors' proposal and the one from the German Council of Economic Advisers. He said that while the German plan was politically sellable, this looks completely unrealistic, since there are large-scale transfers, as well as a significant mutualisation of debt. Finally, it is not clear why countries such as France or Germany would like to constrain their fiscal capacity in the future. They may prefer to use public money to fund bailouts instead of employing resources to back this fund.

Jeromin Zettelmeyer said that he would prefer a structure with zero transfers and where the only benefits come from risk sharing. The proposed structure is also going to involve significant buybacks, creating huge windfalls for some investors. As a result, the only way around this problem has to be a negotiated buyback, but this will be extremely complex to organise. One possible alternative is to ask the European fund to buy debt at maturity, avoiding the buyback problem. However, the transition would necessarily take longer.

Lars Feld said that the original debt-redemption scheme worked well because interest rates were much higher. Now, the deal would not work any more, since countries such as Italy have little reason to accept conditionality in exchange for a small reduction in interest rates. The problem with this proposal is that governments would have an incentive to use the extra fiscal space to spend more.

Jonathan Portes said that securitising future tax revenues should not be treated as a form of debt reduction. Any country could easily cut its debt by arguing that a given portion of its debt is equivalent to a certain proportion of its future tax revenues. The proposed framework should include a role for economically significant transfers and risk-sharing.

Philippe Legrain said that a better alternative would be to make the European Central Bank's quantitative easing programme permanent. The ECB would keep debt forever, a solution which would be less politically painful and more effective. Were this move to generate inflation, this would be a plus in a world of very low price pressures and high debts.

Luca Onorante said that the proposed scheme can be ideally decomposed in three parts. The first one - mutualisation of risks - would be a clear advantage. The second one – the securitisation of debt - is probably not important for the debtor country. The third one - the potential monetisation of debt if the ECB participates with an implicit guarantee – can also be an advantage and would be easier to obtain with one synthetic bond. He added that the main problem with this proposal is that it creates moral hazard for countries to spend recklessly. This can be solved by opting for gradual purchases of sovereign bonds, which could stop if a country fails to adopt sensible policies.

Christian Odendahl said that even buybacks at maturity do not remove, but simply reduce windfalls, as they eliminate the risk coming from the rollover of debt. He added that the framework may open up new options which are currently unfeasible: for example wealth taxes may be easier to sell to the public if their revenue is targeted at accumulating the 0.5% of GDP needed to bring down debt levels.

Hélène Rey responded that countries would not choose which bonds to withdraw: the Stability Fund is in charge of the purchases. She said the stability fund will pay interest to holders of the Stability Fund bonds. There is a form of joint liability, but only of a temporary nature.

Rey also said that the proposal does not give governments the incentive to spend recklessly. For a start, countries still have to pay 0.5% of their GDP into the Stability Fund, while having to service whatever stays on their balance sheet. Secondly, one should remember that the proposal needs to be combined with the restructuring framework. Countries with debt approaching the 90% threshold will face market pressure to reduce it, as interest rates will go up. Finally, the scheme is a better alternative to infinite bond-buying by the ECB as it is not right that one relies on Central Bank purchases to address a problem of debt-sustainability.

Beatrice Weder Di Mauro said that the proposal is different from the one designed by the German Council of Economic Advisers as the latter was not retiring debt, but facilitating its payment over 25 years. The problem with the German plan is that this transition takes 25 years, which does not allow for an immediate stabilisation of the eurozone and does not avoid debt runs.

She added that this proposal is more ambitious than the one from the CEA as it takes less time. If there is the political will, it can be implemented in just six months. Conversely, it is less ambitious as each country pays for its own debt, while transfers are minimal. For example, Germany would only pay the equivalent of €20 per citizen per year over half a century.

She also said that the scheme leads to stronger fiscal discipline. Governments will be committed to keep their fiscal houses in order as they transition to the new restructuring regime. The stability fund will be jointly backed by governments, with the ECB backing its liquidity.

Finally, she added that it is inevitable that there will be some windfalls from the buybacks. Furthermore, it is possible to reduce the needs of the scheme to, say €1tn, if one only aimed to reduce all debt stocks to just below 95%. However, the distribution of this scheme would be unequal. For example, Italy would enjoy a very large portion of these resources.

Session 4: Risk and Opportunities: Refugees and Security. Frontex and More

Klaus Zimmermann said that this is more a crisis of policymaking than a refugee crisis. The current inflow into Germany is not the largest in recent history. In fact, the wave in the 1990s following the war in the ex-Yugoslavia was bigger. He added that since the inflow is not large, the costs and benefits of this episode are bound to be limited. Furthermore, immigration triggered by episodes of widespread violence tends to be temporary. Many Bosnians who came to Germany during the war returned once the conflict ended. Immigrants this time are also unlikely to be very educated. This means that while there may be short-term costs from this wave of refugees, the long-run benefits are more dubious.

Zimmermann also said that refugee bonds are a good idea to pay for the crisis, probably better than raising taxes. However, he had doubts over who would buy these securities. Europe should better think about how to distribute the burden of this inflow, since this is the main problem associated with this crisis. He argued that it is vital for the EU to preserve Schengen, but one should think of alternatives to the Dublin agreement, which states that refugees should remain in the country where they have entered the EU.

Daniel Gros said that while the Dublin agreement is now part of the EU regulations, an ECJ ruling has *de facto* suspended its application to Greece. The judges decided that refugees cannot be sent back to Greece as the treatment there does not comply with European standards. This ruling was confirmed by the decision from the German government to grant asylum to refugees from countries such as Syria who cross its borders, regardless of the fact they crossed the Schengen border in Greece

Gros added that one should be careful about comparing the current crisis with what happened during the Balkan war. In the 1990s, the number of potential refugees was contained and they had a very low birth rate. Conversely, at the moment we are talking about hundreds of millions of people who could potentially come to Europe, with very a very high birth rate. Another important difference regards the business cycle: at the moment unemployment in the EU is very high, making it much harder for voters to accept large-scale inflows.

Brigid Laffan said that while the numbers involved may be small so far, the situation in the Middle East is unstable and the EU should expect further inflows. Furthermore, unlike during the Balkan war, the issue of refugees has now become politicised. In the past, politicians could deal with this kind of crisis in a technical way, pretending it was not happening. However, this cannot happen now because of the rise of challenger parties, who have often moved to the right as a consequence of the refugee crisis.

Jean-Pierre Vidal said that the refugee crisis is a foreign policy issue, not just an economic problem. This is why the EU is pushing the G20 to treat it as a global issue.

Vidal was also against the idea of inventing a new financial instrument. The EU should instead coordinate its policies and use existing instruments such as the EU budget. Furthermore, the EIB was already providing finance for refugee-related projects. More generally, it is wrong to mix up Eurozone- and EU-wide problems.

Shahin Vallée said the premise of this paper should be that the framework initially adopted by the EU has failed. The EU intended to share refugees, but this never happened. The EU is now discussing sharing the costs of the crisis. He added these costs are real, but there are also meaningful benefits. While the EU is discussing how to share the costs of the crisis, it is not talking about how to share the long-term benefits. It is not clear why refugees should stay in the country that hosts them, while everyone contributes to paying for the costs. This is an unfair bargain.

Finally Vallée said that if governments are unwilling to borrow and share resources to pay for the refugee crisis, it is not clear why they should be willing to do so via the EIB. Asking the EIB to lend money to a country such as Turkey means changing the remit of an institution meant to fund investment in Europe and forcing it to take losses. An alternative approach would be to have an additional levy on gasoline, as suggested by Wolfgang Schauble, Germany's finance minister.

Jonathan Portes discussed the possibility of a grand bargain between Greece and the rest of the eurozone. This would involve writing off Greek debt in exchange for demanding more alacrity from Athens in dealing with the refugee crisis. He added that the best way of stopping refugees from walking into countries where they have a better chance of obtaining refugee status is to process them in Greece. This would allow the EU to send back those people who do not have a well-founded reason to be treated as asylum seekers. The best way of obtaining these positive results is to give the Greeks those fiscal transfers which make sense from an economic point of view in a way which is politically feasible in Germany. Setting up proper refugee camps in Greece paid for by Germany, while deporting those who do not have a right to seek asylum, would allow to have something which is both economically sensible and politically feasible. The UK would probably be willing to help for this provided the money came from the EU budget. However, it would be hard for the government to raise petrol taxes to pay for it.

Evi Pappa was sceptical that bribing a country to take refugees would work. For a start, she believed the Greek government would simply take the European money, without doing its part of the deal. She added that the refugees too would be unlikely to stay in Greece and would in fact continue to go to Germany or to any other country they want to go to. She also said that there will be very few long-run benefits from the refugee crisis.

As a result, Pappa thinks that the only pragmatic answer to the crisis is to form a EU-wide committee to register the incoming refugees and collect data on who they are and what qualifications they have. She added asylum seekers should be redistributed across countries in a symmetric way, rather than having all the high-skilled individuals going to the same country.

Christian Odendahl said that the paper presented some rather large savings arising from coordinating the European response rather than acting at a national level, and wondered where these savings would come from. He also agreed that bonds allowed for greater flexibility than any scheme employing the EU budget. For example, this framework allows to have only a limited number of countries participating in the scheme.

Sony Kapoor said the refugee crisis offers a great opportunity for Germany, the European country with the single biggest demographic problem. The framework presented should not try to address the problem in a symmetric way. Countries will have different needs, in terms of both what they can afford to contribute now and how beneficial the inflow is for their demographic problems. The proposal needs to recognize the fact that costs and benefits are going to be asymmetric in the long run.

Philippe Legrain said this proposal was trying to solve a false problem. On the economic side, Germany can find the resources needed to address the crisis from its existing fiscal resources, so there is no need for large-scale European funding. Instead, the issue is political, but the small sums of money mentioned in the paper are unlikely to solve it. Also, the proposal does not address the humanitarian aspect of the crisis. This requires setting up a proper scheme whereby refugees can apply for jobs from their own countries, so that they do not have to start long and dangerous journey via sea.

Juan Francisco Jimeno said that the proposal should be more interventionist and link incentives to quotas. Quotas have failed to take off, but they may be easier to enforce if they are linked to funding, though one would still need to solve the problem of labour mobility. A better solution would be to assign tradeable quotas and establish an incentive structure. This could be funded via the EU budget.

Jeromin Zettelmeyer said that the European debate has now shifted from distributing asylum seekers among countries to stopping the overall inflow, which is something politicians are now willing to pay for. This will be done in several ways: by stabilising the EU's borders, giving money to Turkey and funding registration centres in peripheral countries such as Greece. While most of the money will be used to stop the inflow, there is a role for a project-bond type of arrangement, especially if there is some flexibility in terms of which countries are able to participate.

Klaus Zimmermann said that one needs to look at the issue more strategically. In the short-run, refugees come in because they need immediate help, which they could get anywhere if the EU organizes it well. In the long-run, it is impossible to know where refugees are needed most. Therefore, it is best to allow for free labor mobility across the EU to let the labor market do the efficient allocation.

He added that it is impossible to finally protect the borders in the South of Europe. There are just too many entry routes, and one would need too many ships. This means that the Australian model of interjecting ships and sending them back cannot be replicated. Instead, one needs to look at providing alternative avenues for immigrants to come legally into Europe, especially to those who are not real asylum seekers. The circular migration contracts offered by the Spanish government to immigrants coming from Northern Africa are one option. But there should be also direct asylum recruitment in refugee camps and better help for those staying there.

Beatrice Weder Di Mauro was concerned that the refugee crisis is seen by other European countries almost with some “Schadenfreude”, or alternatively as an asymmetric shock, which forces Berlin to spend more. There is also a tendency to argue that Germany will benefit most from the immigration However, many of the refugees are not easy to integrate in the labour market. So far, Germany has been extremely welcoming, but one should remember that Germany has not always had a positive experience with immigrants, as they have often lacked the necessary skills to enter the labour market. It is essential for Germans to keep a positive attitude towards this inflow, but this requires that the crisis should be treated as a Europe-wide problem.

Weder Di Mauro added That one option is to combine the refugee crisis with other problems facing the EU and achieve a grand bargain. One reason to do this is that the financial cost of the refugee crisis in Germany is far from trivial. The government has already allocated €15bn, which is hardly a small amount. Furthermore, it is unlikely that the problem will disappear, meaning that the sums involved are likely to grow.

Hélène Rey said that it is extremely important to be able to tell voters that Europe is coming up with solutions to their demands for greater security. She added she was not sure whether this possible so-called “grand bargain” would be between the EU and Greece alone or among all countries. Finally, she said governments should think hard about ways to tie refugees to a location, temporarily, in exchange for money and training, in order for the logistics to be manageable

Lars Feld responded saying that the report has tried to take into account the existing political constraints. Of course, if it were easy to allow the EU to issue bonds on a large-scale or to allocate more powers over defence and security to the EU, these would be the most favourable solutions. However, these discussions have never taken off at European level, which is why one needs to look for an alternative, such as using the EIB.

He clarified that many institutions would be willing to buy these bonds, including the ECB. He also agreed that the sums involved are currently small, but he said the primary purpose of this scheme is to lower a country’s reluctance to accept refugees.

Feld also said that the scheme proposed does not intend to be the solution to the refugee crisis. This is a much harder problem to solve, as it involves what to do in Syria, relationships with Turkey, or large-scale financial interventions such as a so-called Marshall Plan for the region. Furthermore, even bringing peace to Syria would not eliminate the problem, as there would still be refugees coming from Africa. Other plans, such as setting up refugee camps in countries such as Greece and giving more money to refugee camps in the Middle East, as the UK is currently doing, are necessary steps that should complement his proposal.

He added that while there may be some long-term demographic and economic benefits from the inflow of refugees, these are likely to be small. A study on a non-representative sample of asylum seekers conducted by Germany's Labour Office showed that 70% of refugees are unskilled and a further 10% illiterate. It also said that the labour participation rate after 5 years will still be below 50 per cent. This means that the long-run economic and demographic benefits are unlikely to be large.

Feld also said that a European solution is needed as countries do not know which route the refugees will choose to come from. Furthermore, as the attacks in Paris have shown, security and the refugee crisis are interlinked: some of the attackers entered the EU without being properly checked at the Schengen border. From an administrative point of view, the solution is to ensure that Frontex and Europol can act directly, without member states asking for help, an innovation that requires treaty change.

He added that he prefers a targeted solution to a grand bargain, as there is too much uncertainty over the costs and effectiveness of measures aimed at securing the Schengen border in Greece. The refugee bonds are more flexible as they do not need to be deployed in Greece but can be used to tackle a problem wherever it emerges.

Finally, Feld said that it is impossible to block people in one part of the EU. Asylum seekers can only face residence obligations when their request is being processed. Once this is accepted, the EU's freedom of movement principle gives them the right to move wherever they want.