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18/01

Freiburger **Diskussionspapiere** zur Ordnungsökonomik

Freiburg **Discussionpapers** on Constitutional Economics

ISSN 1437-1510

Institut für allgemeine Wirtschaftsforschung
Abteilung Wirtschaftspolitik und Ordnungsökonomik

Albert-Ludwigs-Universität Freiburg

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*) We would like to thank Ali Abbas, Lee Buchheit, Frederik Eidam, Aitor Erce, Mark Flanagan, Mitu Gulati, Julian Schumacher, Christoph Trebesch, Karsten Wendorff, and Jeromin Zettelmeyer as well as seminar participants at the 18th Banca d'Italia Workshop on Public Finance, Bruegel, the DebtCon2 in Geneva, the ESM, the European University Institute, the German Council of Economic Experts, the IIF, the IMF and the OECD for their thoughtful comments and helpful discussions. All errors remain our own.

A MECHANISM TO REGULATE SOVEREIGN DEBT RESTRUCTURING IN THE EURO AREA

To make the no-bailout clause credible and enhance the effectiveness of crisis assistance, a consistent institutional and legal framework is needed to ensure that private creditors contribute to crisis resolution. Getting activated as part of ESM crisis assistance, we propose a novel two-stage mechanism that allows for postponing the fateful distinction between liquidity and solvency crises: At the onset of a ESM program, the framework demands an immediate maturity extension if the debt burden is high, followed by deeper debt restructuring if post-crisis debt proves unsustainable. The mechanism can be easily implemented by amending ESM guidelines and compelling countries to issue debt with Creditor Participation Clauses (CPCs). As debt is rolled over, the mechanism gradually phases in, leaving countries time to reduce debt. Given that private sector involvement reduces financing needs, the ESM could provide longer programs and more time for reforms.

I. INTRODUCTION

1. The recent reforms of the euro area framework build on the premise that national governments remain responsible for fiscal policy. In order to shape member states indebtedness, the Stability and Growth Pact (SGP) was reformed and additional fiscal rules were introduced. The European Semester and national fiscal councils were established. Despite these improvements, public debt has barely declined in the euro area such that future sovereign debt crises cannot be excluded.

2. With the creation of the European Stability Mechanism (ESM), an important element of a crisis mechanism was added to the euro area architecture. To date, the crisis mechanism does not have a framework for debt restructuring to safeguard against moral hazard and handle cases of unsustainable public debt. Thus, ESM lending runs into danger of violating the no-bailout clause in the Treaty on the Functioning of the European Union (TFEU) which guards taxpayers of EU member states from assuming liability for the excessive debt of a fellow member. It is also important to prevent the ESM from incurring default risk by lending to already overindebted countries. The lack of a debt restructuring mechanism sets the ESM apart from the IMF which adopted a new lending framework in 2015.

3. Moreover, given the ESM's limited lending capacity, amortizations of maturing public debts draw heavily on its available resources. If public debt in a member state hit by crisis is high or its rollover needs are substantial, a maturity extension of debt held by private creditors can significantly reduce financing needs. In turn, this could enable the ESM to finance macroeconomic adjustment programs with longer durations, leaving more times for reforms.

4. A restructuring framework which credibly stipulates a creditor bail-in would not only help with respect to burden sharing (similar to the bail-in rules for the banking sector), but also bolster crisis prevention. A mechanism to regulate sovereign debt restructuring provides creditors incentives to assess crisis risks as accurately as possible and factor them in using risk premiums for government bonds and loans. This should result in ex ante disciplining of government budgetary policy. It is unlikely that creating a way to bail in creditors creates incentives for policymakers to amass excessive debt. In any case, a restructuring would only take place in context of an ESM program under which policymakers need to adhere to strict macroeconomic conditionality.

5. Besides strengthening market discipline, a clear framework for sovereign debt restructuring may also contribute to prevent excessive market movements. Compared to the current ad hoc approach, a framework for debt restructuring helps to anchor the expectations of market participants and thus reduces the risk of destablizing market volatility caused by uncertainty. It also ensures that the restructuring process runs more orderly and rule-based. This in turn reduces the risk of contagion and thus strengthens the no-bailout clause. The mechanism would therefore be an improvement over past instances of ad hoc sovereign debt restructuring in Cyprus and Greece, which pursued very different objectives and used very different approaches (Trebesch, 2015).

6. This paper contributes to this literature by outlining a feasible reform to establish a novel approach to sovereign debt restructuring in the euro area. Given that the current ESM Treaty already mentions private creditor participation, the mechanism proposed could be implemented through limited amendments to the ESM's legal foundation coupled with the issuance of enhanced collective action clauses (CACs) in government bond contracts.

7. The unique feature of the proposal presented herein is the two-stage approach to debt restructuring. In a first stage, highly indebted countries would initiate a maturity extension at the beginning of an ESM program. In a second stage, this could be followed by deeper restructuring if needed during the course of the program. The two-stage approach resolves the difficulty of distinguishing between a pure liquidity crisis and a solvency problem at the onset of a crisis. While the latter requires a reduction of the debt burden to sustainable levels, the former can likely be overcome through maturity extensions and interim funding, such as that provided by the ESM.

8. Our proposal stipulates that ESM funding is made available under the condition that creditors agree to a maturity extension for the duration of the ESM program if public debt is high. This assessment is based on conservative thresholds for three simple criteria: (i) debt qualifying under this mechanism exceeds a range of 60 to 90 % of GDP, or (ii) its refinancing volume exceeds a range of 15 to 20 % of GDP during the ESM program, or (iii) two to three or more violations of fiscal rules took place in the past five years. While the first two criteria are simple metrics for the debt burden, the third criterion serves to gauge past policy performance and reinforces ex ante market discipline. The need and extent of deeper

debt restructuring in a second stage is subsequently determined based on a comprehensive debt sustainability analysis (DSA) over the course of the ESM program.

9. In close resemblance to the IMF's (2014b, 2015) new lending framework, such a mechanism would provide for maturity extensions, appropriate for both funding and solvency crises, as well as deeper restructuring to overcome solvency crises. In contrast to the IMF, our proposal explicitly puts these two possible debt operations in sequence, as the liquidity need is eminent at the onset of the crisis while the solvency cannot be reliably assessed until later. In our view, however, such sequencing remains compatible with the IMF's new lending framework (see Section III).

10. Another contribution of this paper is its detailed analysis of a transition path into the new regime. While sovereign debt restructuring will play an increasing role in future crises, transitioning into a new regime of a rules-based system for orderly sovereign debt restructuring is tricky given high public debt ratios in many member states. To credibly establish a path towards the new regime, the proposal postulates the gradual issuance of bonds with so-called Creditor Participation Clauses (CPCs), akin to CACs with single limb voting. As the new regime and its thresholds only apply to these bonds, the regime gradually phases in. Our calculations suggest the earliest point in time a country exceeds the lower threshold for the debt ratio of 60 % would be about four years after starting the issuance of bonds with CPCs. Based on different assumptions and the extent of debt being funded by bonds with CPCs, the new regime could be phased in much more gradually, leaving more time for countries to reduce debt.

11. The paper gives careful thought to the drawbacks of introducing regulations for sovereign debt restructuring in the euro area. We argue that the two-stage sequencing of (i) less harmful maturity extensions triggered by clear-cut thresholds and (ii) deeper restructuring based on a more holistic debt sustainability assessment including a stronger judgemental component minimizes deadweight losses. While the phasing out of regulatory privileges for sovereign debt is an important complement to the reform, we argue that maturity extensions imply very limited losses in the medium term. Existing reforms, most notably the Banking Union, have already made the euro area more robust to shocks. However, we acknowledge that spillovers from sovereign debt restructuring may occur and need to be factored in. The proposed mechanism presents a balance between ensuring ongoing stability and enforcing creditor involvement to contain moral hazard and bolster the ESM crisis backstop.

12. The remainder of the paper is structured as follows. Section II provides a brief literature review, focusing on the comparison of existing proposals. Section III lays out the proposed mechanism in full detail. Section IV describes a number of trade-offs and concerns associated with sovereign debt restructuring in the euro area. Section V concludes.

II. LITERATURE REVIEW

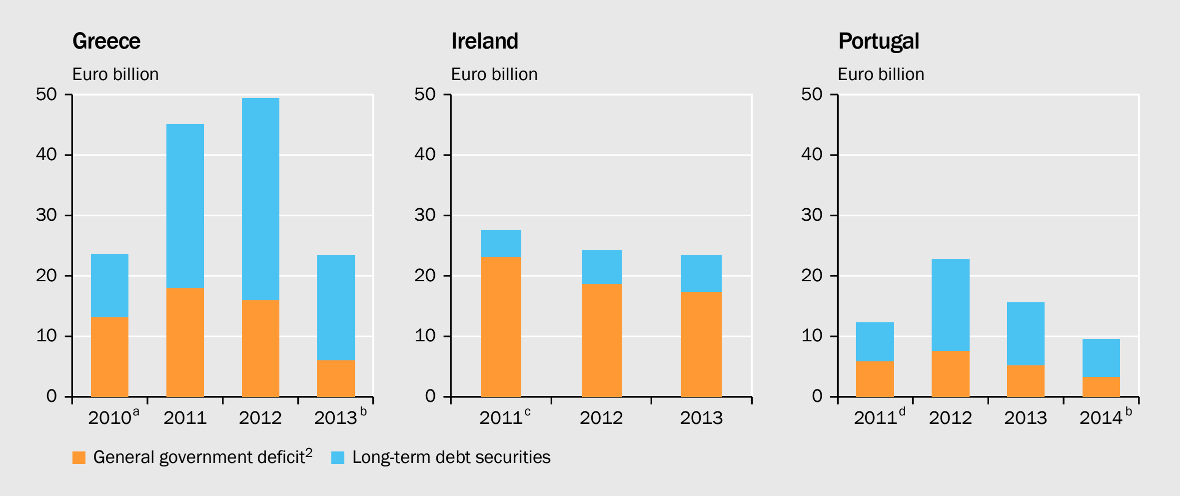
13. The framework developed herein rests on insights from the extensive literature on crisis lending and sovereign debt restructuring. Scheubel and Stracca (2016) and Weder and Zettelmeyer (2017) provide reviews of the global financial safety net to deal with crises. Das et al. (2012) and Reinhart et al. (2016) offer comprehensive overviews of the history of sovereign defaults and restructurings.

14. In context of the euro area, sovereign debt restructuring is a necessary complement to ESM crisis lending which was put in place in 2012. Sovereign debt restructuring serves two main purposes. First, it addresses moral hazard concerns in presence of ESM crisis lending (Jeanne, Ostry and Zettelmeyer, 2008). Second, it ensures that the ESM only provides liquidity support and does not incur losses from lending to member states with solvency problems (Fischer, 1999).

15. Two types of sovereign debt restructuring can be distinguished, serving very different objectives (Andritzky, 2006; Das et al., 2012). First, maturity extension, sometimes also referred to as "soft" restructuring, reprofiling or standstill. Implemented at the onset of a crisis, this reduces the liquidity need for principal repayments, in turn reducing the draw on the backstop facility. In the recent crises of Greece, Ireland, and Portugal, maturing long-term debt securities accounted for 62, 21, and 64 % of the total funding needs, respectively, based on the European Commission's initial projections (see Figure 1).

↘ FIGURE 1

Financing needs[1] during the crises in Greece, Ireland and Portugal



1 – Sum of general government deficit and amortization of long-term debt securities. 2 – Greece: including PE borrowing need.
a – May - December. b – January - June. c – Including December 2010. d – June - December.

Sources: European Commission and own calculations

Furthermore, maturity extension reduces subordination (given the preferred creditor status of official crisis assistance) and maintains creditors' exposure, which can later become subject to deeper debt restructuring. Wider burden sharing does not only ensure a more equal treatment of creditors, but also of other stakeholders to the extent that it facilitates a more gradual fiscal adjustment. Private Sector Involvement (PSI) – another term for burden sharing – has lately become more common and is now explicitly part of the IMF's approach to crisis lending (IMF, 2015).

16. Maturity extensions are viewed as less disruptive than debt reduction, therefore reducing the risk of contagion (IMF, 2014b). Creditors are given more time to create buffers before an eventual debt reduction is implemented. Second, deeper restructuring – often also referred to as "hard" restructuring including coupon reductions and principal haircuts – are the ultimate measure to restore a countries' solvency and prevent public debt overhang (Krugman, 1988; Sachs, 1989).

17. A large part of the literature tends to the question how to minimize negative side effects, such as deadweight losses from restructuring or international contagion. Numerous proposals have been made for an insolvency mechanism for sovereigns in the euro area (see Annex). Zettelmeyer (2016) provides an overview and discussion. The following discussion focuses on the different challenges that the proposals strive to tackle.

18. A key concern is the avoidance of holdouts undermining the restructuring and free riding on the debt relief granted by other creditors. Initially, an ad hoc approach to restructuring sovereign bonds traded among a dispersed group of investors was deemed suitable to reflect different bondholder and legal characteristics (Rieffel, 2003). Following the debt crises of the late 1990s, a statutory approach to sovereign debt restructuring – the so-called Sovereign Debt Restructuring Mechanism (SDRM) – was proposed by the IMF (Krueger, 2002) but failed to garner support. However, Gianviti et al. (2010) revived the idea in its proposal for a European Crisis Resolution Mechanism (ECRM). The statutory imposition of a stay on litigation by creditors would require a change of the Treaty and remains politically contentious. Other proposals seek to establish a court, such as an International Debt Restructuring Court (IDRC) proposed by UN experts (United Nations, 2009), to avoid holdout litigation from undermining effective restructuring. This would require such court to assume exclusive jurisdiction on debt-related issues under principles that prevent holdout problems.

19. Related, some proposals foresee an immunity clause to prevent litigation by holdout investors. Buchheit et al. (2013) and Fuest et al. (2014) propose to amend the ESM Treaty to introduce an enforcement moratorium. A similar approach was successfully used to facilitate Iraq's debt restructuring of 2006 through a UN Security Council resolution.

20. Another approach to sovereign debt restructuring relies on contractual clauses in bond contracts to facilitate a workout. These clauses allow for renegotiations of the terms between the debtor and a majority of creditors without prescribing their terms. At the heart of this approach are collective action clauses (CACs) allowing for a qualified majority of bondholders to impose the renegotiated terms even on dissenting creditors.

21. CACs generally have a positive track record. CACs are traditionally included in bonds issued under English law and, since about 2003, New York law, two very common jurisdictions for international bond issuances. In response to the introduction of CACs, spreads for high-rated debtors have been found to decline while the evidence for lower-rated debtors is not clear (Eichengreen et al., 2003; Bardozzetti and Dottori, 2014; Bradley and Gulati, 2014). Carletti et al. (2016) find that the introduction of CACs in the euro area was associated with a reduction in yields which was more pronounced in countries with better legal systems. This suggests that market participants weigh the benefits of efficiency gains through an orderly restructuring process higher than the risk that CACs help debtors to repudiate debt, unless an imminent debt restructuring seems likely.

22. Following the Deauville agreement in 2010, a model CAC has been included in all newly issued euro-area bonds with maturity above one year since 2013. However, under these so called “euro-CACs”, holdout creditors can still block the full restructuring of individual bonds as the euro-CACs rely on both aggregate and bond-by-bond voting (Gelpern and Gulati, 2013). While euro-CACs include an “aggregation feature" which is superior to the traditional series-by-series CACs (IMF, 2014a), it is weaker than the mechanism which was applied in Greece (Buchheit et al., 2013). Große Steffen and Schumacher (2014) argue that current euro-CACs are insufficient to prevent holdouts.

23. Contractual approaches need to be complemented by a mechanism that guides the process, including when to initiate debt renegotiations and how to invoke creditor votes. A common trigger for any sovereign restructuring could be a government’s request for official assistance. Along this line, the IMF has reformed its lending framework (IMF, 2013a, 2014b, 2015). Basically all proposals for the euro area consider a country’s request for ESM support as trigger point for a debt restructuring mechanism. This dovetails with the above mentioned objective to prevent moral hazard in presence of an international lender of last resort.

24. A critical element of a restructuring mechanism is the setting of thresholds at which debt restructuring is required. Restructurings should take place only when necessary. On the one hand, they should not be protracted or avoided, e.g., by policymakers “gambling for resurrection” (type I error). On the other hand, they should not take place unnecessarily (type II error).

25. Some proposals prefer simple yet tamper-proof thresholds. For instance, Buchheit et al. (2013) proposes three thresholds: For countries complying with the Maastricht criterion of debt below 60 % of GDP, no restructuring occurs. Above this threshold, countries would receive assistance based on standard fiscal conditionality. For countries above a second debt-to-GDP threshold, support would only be granted conditionally, leading to a debt restructuring process quasi-automatically. Corsetti et al. (2015) propose pre-determined thresholds of 95 % for the debt ratio and 20 % for the gross financing requirement. Weder and Zettelmeyer (2010) also argue in favor of using one simple criterion.

26. In contrast, other proposals allow for a larger judgemental element based on a comprehensive DSA. Based on such an analysis, the IMF’s new lending framework establishes three ranges (IMF, 2015): debt sustainability with a high probability,

sustainable debt but not with high probability, and unsustainable debt. In the proposal by Gianviti et al. (2010), the European Court of Justice (ECJ) would take a stance on debt sustainability.

27. Another judgemental approach centers on a country's prospects to regain durable market access. In the proposals of Corsetti et al. (2011) and Fuest et al. (2014), deeper debt restructuring is triggered after an initial period of liquidity support if deemed necessary to regain market access. While Corsetti et al. (2011) does not mention a maturity extension during an initial two-year period of ESM liquidity support, Fuest et al. (2014) imply a maturity extension during the initial three-year "shelter period" of ESM crisis assistance.

28. Some concepts favor the hardwiring of restructuring rules into bond contracts. Weber et al. (2011) propose the inclusion of trigger clauses in bond contracts which automatically extend the maturity by three years when a country's request for ESM assistance is granted. In view of the authors, such a maturity extension would not be considered default. Fuest and Heinemann (2017) propose "accountability bonds" which countries are obliged to use for funding excess debt when their structural deficit is larger than 0.5 % of GDP. Their maturity is automatically extended when the debt ratio exceeds 120 % of GDP. They also cease to pay coupons. If an ESM program is initiated, the bonds are canceled. Brooke et al. (2013) propose a combination of two different types of state-contingent bonds, sovereign cocos and GDP-linked bonds.

29. The introduction of a new class of restructurable bonds effectively tranches the outstanding stock of public debt, whereby a restructuring mechanism only applies to the junior tranche. On one hand, tranching in senior and junior portions could limit expected drawbacks and make introducing sovereign debt restructuring politically more palatable. On the other hand, tranching would fragment bond markets and limit the advantages of introducing restructuring mechanisms.

30. In addition of specifying at what threshold a debt restructuring is required, the extent of necessary or desired debt relief needs to be determined. Only a few proposals are specific on the calibration of debt relief. In case of accountability bonds (Fuest and Heinemann, 2017), a full write down is foreseen. However, accountability bonds likely constitute only a small fraction of total public debt. Corsetti et al. (2011) propose to use market prices as benchmark for the debt level deemed sustainable by market participants. Gros and Mayer (2010, 2017) propose a Brady-type exchange of bonds into instruments with a partial guarantee at a haircut equivalent to bring the debt ratio down to 60 % of GDP.

31. In this context, it is important to consider the difference between domestic and external debt (Reinhart and Rogoff, 2011) and who is holding the debt affected by restructuring. In the euro area, domestic holding of sovereign debt is particularly strong in some countries (Andritzky, 2012; Arslanalp and Tsuda, 2012). Large government bond holdings by financial institutions give rise to the joint occurrence of public debt and banking crises (Archarya et al, 2014). The large domestic holding distinguishes restructuring of debt in the euro area from the experience in emerging markets in the 1990s and early 2000s which mostly involved bonds issued abroad to foreign creditors. This difference has two ramifications. First,

debt restructuring need to consider the implications on the domestic economy, particularly with regard to destabilizing the domestic financial system. This is further discussed in Section IV. Second, the larger share of debt issued under domestic legislation allows for restructuring through legislative change, a venue used in the Greek case (Buchheit and Gulati, 2010).

Some proposals provide clues as to how to transit from the current regime of ad hoc restructuring to a new, comprehensive framework. Given current high levels of debt, the introduction of a mechanism needs to address the concern that the regime shift itself could trigger a crisis. Empirical evidence for such concern, however, is scarce (Trebesch, 2015). Some proposals, such as Fuest et al. (2014) propose legislating today the rules of debt restructuring but delaying them becoming effective until much later. Buchheit et al. (2013) and Corsetti et al. (2015) propose a one-time transition mechanism, such as a debt redemption fund or debt buyback. In proposals foreseeing a change in contract clauses, such as Weber et al. (2011) or Fuest and Heinemann (2017) as well as in Gianviti et al. (2010), the above discussed tranching can help to ease the transition.

III. PROPOSED MECHANISM

32. The following describes in detail our proposal for the design of mechanism to regulate sovereign debt restructuring. It draws on existing proposals described above and is closely related to the IMF's new lending framework which has garnered the support of the Fund's membership.

Principles for sovereign debt restructuring in the euro area

33. The proposed mechanism can exclusively be applied as part of ESM assistance. As already the case today, access to ESM credit facilities requires an assessment of public debt sustainability (ESM Treaty Article 13 1.(b)). Negotiations about a debt restructuring should be required when the assessment indicates that public debt may not be sustainable (see below).

34. If a debt restructuring is deemed appropriate, the disbursements of any ESM funds will become conditional on creditors and debtors reaching agreement on a standstill. In practice this means that a qualified majority of creditors consent to extend eligible debt maturities for the duration of the ESM program.

35. The standstill does not preclude further debt relief through debt reductions in further course. Given the difficulty to assess debt sustainability at the outset of an ESM program and the likely time needed to negotiate a deeper restructuring, face-value reductions and other types of more severe debt operations should not be attempted at the start of an ESM program. However, restoring debt sustainability

is important to ensure durable market access and the repayment of ESM assistance. If necessary, this type of debt operation should be implemented during the recovery phase or when the country prepares for re-entry into bond markets.

Thresholds to trigger debt restructuring

36. The debt sustainability analysis (DSA) lays the base for the decision as to whether debt restructuring will be required. The analysis includes multiple indicators, combining both forward looking indicators (such as projected debt ratios and financing needs) with backward looking indicators (such as historic fiscal performance). In addition, the analysis includes stress tests for a range of shocks.

37. A realistic view of a country's sustainable debt should prominently take into account its past economic performance. Comparing projections with past performance, for example for growth or fiscal balances, can help to identify over-confidence. Moreover, the debt sustainability analysis should also include an evaluation of a country's track record under fiscal rules which could be viewed as proxy for the economic and political capacity to deliver fiscal adjustment. Including past compliance reinforces the ex-ante discipline in adhering to fiscal rules: a lack of compliance would increase the chances that a restructuring is stipulated in case of crisis; in turn, investors would demand a higher risk premium and increase borrowing cost of countries that violate fiscal rules.

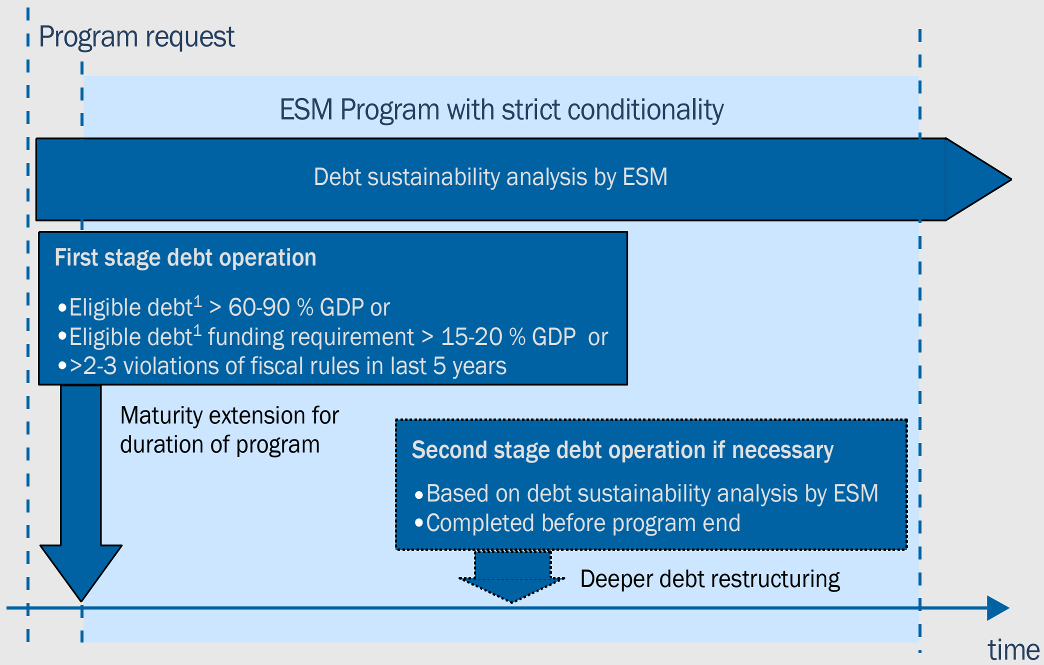
38. As it is in the ESM's own interest to ensure repayment, the task of independently assessing a country's debt sustainability should rest with the ESM. In contrast to the European Commission, the ESM incurs credit risk vis-à-vis the indebted country. As a rated entity, it has a vivid interest to preserve its capital base. Through the DSA, the ESM would be enabled to express its own view on the likelihood that the agreed fiscal and debt trajectories under the ESM program can be adhered to. The evaluation of a country's fiscal track record could rest on either the ESM's own assessment or the assessment of the independent European Fiscal Board, ideally based on a set of simplified rules as laid out by the GCEE (2017). For this evaluation, it should not matter whether the country has been put under the corrective arm of the SGP.

Any decision should be taken by the ESM's decision making body, currently the Board of Governors, based on analysis prepared by ESM staff. The separation into an analysis provided by staff serving the interest of the ESM's institution and a (currently unanimous) decision by democratically accountable country representatives helps to safeguard the assessment's independence. A similar procedure is in place at the IMF which is highly regarded for its analysis. Publishing both the analysis and the considerations leading to the Board of Governor's decision adds another lever to discourage political interference.

39. We propose a novel two-stage decision system based on the DSA (see Figure 2). In a first stage, a fast and simple decision rule determines whether the ESM requires creditors to agree to a standstill at the start of an ESM program. In a second stage during the program, a more comprehensive set of considerations will determine whether negotiations for a deeper restructuring should start and what debt

relief should be targeted. While there is no need for a timeline of the second stage, the deeper restructuring would necessarily take place while the standstill is still effective. Such a two-stage approach allows for applying two different sets of decision criteria without undermining the ex ante disciplinary effect. The sequencing of maturity extension and deeper debt restructuring as part of a rules-based two-stage system must not be compared to disorderly or protracted debt restructuring, like in Argentina in 2001-05. A successful conclusion of a first-stage maturity extension results in sovereign bonds being serviced normally.

↘ FIGURE 2



1 – Newly issued debt including Creditor Participation Clauses.

Source: Authors

40. For the first-stage decision, our proposal requires a maturity extension if debt qualifying under this mechanism exceeds a particular debt ratio in the range of 60 to 90 % of GDP, or its refinancing volume exceeds a particular level in the range of 15 to 20 % of GDP during the ESM program. These ranges of thresholds – albeit on a narrower definition of eligible debt – roughly follow the proposal in Corsetti et al. (2015). Choosing an exact threshold is left to politics as there is limited economic evidence for a certain threshold rendering public debt unsustainable. In addition, two to three or more violations of fiscal rules in the past five years trigger a maturity extension. These choices reflect the following considerations:

- To resolve the issue of legacy debt which currently exceeds any conservative threshold in many member states, only debt including new CPCs as described below – not all government debt – counts towards the thresholds.
- While empirical evidence is ambiguous in pinpointing thresholds of debt sustainability, a common anchor for sound fiscal policy is to maintain a debt ratio below 60 % as used in the Stability and Growth Pact (IMF, 2011). In addition,

a second threshold for gross financing needs of 15 to 20 % of GDP or less is used, which is the benchmark used for advanced countries in the IMF's new debt sustainability framework (IMF, 2013b). To ensure creditor involvement despite elevated uncertainty during crises, choosing the lower end of the range provides for a margin of safety.

– Despite the benefit of ambiguity possibly delaying creditor runs, the objective of generating an ex ante disciplinary effect requires that investors can form clear expectations. To reduce threshold effects, a narrow range for the debt ratio and the gross financing need could be provided that leaves minimal discretion to policy-makers.

– Using simple and hard-to-manipulate criteria prevents judgements from being distorted too heavily by political considerations. Assessing compliance with fiscal rules requires an unambiguous evaluation, e.g., under simplified rules by the ESM or the European Fiscal Board, as proposed by the GCEE (2017). In any case, our proposal stops short of hardwiring the criteria triggering a maturity extension in bond contracts, as proposed by Weber et al. (2011), as we believe the drawback of contractual rigidities outweighs the gain in credibility of the no-bailout principle.

41. At the start of a ESM program, a comprehensive DSA is initially being prepared. In cases in which this initial DSA already indicates that debt is unsustainable and a deeper debt restructuring is unavoidable at the second stage, the first-stage decision could also include an accrual, rather than pay-out, of coupons. While this decision introduces a stronger judgemental element in first-stage decisions, its occurrence is limited to extreme cases where the expected haircut needs to be extraordinarily deep and continued coupon payouts would permanently affect burden sharing to the detriment of taxpayers and official creditors.

42. For the second-stage decision, the debtor country decides, based on the ESM's revised DSA, whether negotiations about a deeper debt restructuring are initiated. This decision needs to be taken prior to the end of the ESM program, yet to guide expectations, the underlying DSA and its considerations should be provided as early as at program start. The ensuing negotiations should aim at achieving a sustainable debt burden which is consistent with ESM program assumptions and conservative enough to ensure durable re-entry to bond markets while minimising disruptions to the ongoing recovery.

Implementation of the mechanism

43. Implementing the mechanism requires a legal foundation that safeguards the principles established and prevents holdouts. We propose three key changes. First, the introduction of single limb voting procedures for collective action clauses and amendments to pari passu clauses that are binding for all new bond issues. Second, the introduction of a complementary enforcement moratorium anchored in the ESM Treaty. And third, the phase-out of privileges for sovereign debt in banking regulations. The following elaborates on these changes.

44. Key to relying on CACs for orderly restructurings in the euro area is to consolidate voting procedures into a single limb to avoid holdouts. Under the current convention, euro-CACs are designed to require a qualified majority of 75 % of bondholders for each single bond issue. Given the multitude of bond issues and the chances that a vulture investor acquires a blocking minority in certain (small) bond issues are likely to render CACs less effective.

45. The IMF (2014a) proposed an enhanced CAC including more robust aggregation features with the possibility to differentiate among different groups of bondholders. In particular, a menu of voting procedures including "single-limb" voting should facilitate restructuring by enabling a single vote across all affected instruments. Additionally, as a consequence of the Argentina case, the pari passu clause in international sovereign bonds could be modified to enhance legal certainty by excluding the obligation to affect ratable payments.

46. Hence the proposal is to establish a new class of bonds with improved terms which could be included in a master agreement. These terms include:

- A single limb voting procedure which allows for the aggregation of votes across all bond issues eligible in a restructuring with a 75 % majority threshold; its design could follow the model clause of the International Capital Market Association (ICMA).
- A provision to ensure inter-creditor equity – a potential pitfall under a single limb vote given creditors of small bond issues could be disadvantaged but may be unable to block the deal. For instance, a provision could be introduced that acknowledges the ESM's competency to evaluate and approve restructuring terms, which would also need to be anchored in the ESM Treaty.
- A modified pari passu clause, if needed, that protects the restructuring deal under these new terms against lawsuits from other claimants, in particular in the case that old bonds or other types of debt are restructured by different means and at different terms.

47. An optional, complementing element to protect a concluded debt restructuring from litigation by holdout investors is to introduce an enforcement moratorium to the ESM Treaty as proposed by Buchheit et al. (2013) or Fuest et al. (2014). The immunity clause would protect the assets of a member state from attachment during and after an ESM program as long as it has loans drawn from the ESM. In the case of Greece this period could stretch until 2054. Such a treaty amendment would make enforcing court judgements by litigious investors more difficult.

48. The final element is to phase out privileges afforded to sovereign exposures in European banking regulation. Large exposures of banks to sovereigns, in particular to sovereign debt of their home country, may partly be a result of these regulatory privileges. The resulting sovereign bias in banks' assets presents a direct channel of contagion from sovereign debt crises and may distort the pricing of sovereign risk. For instance, Andritzky et al. (2016) propose large exposure limits for banks' holdings of sovereign debt of between 25 and 100 % of own funds, depending on the debtor's credit worthiness. Also, capital requirements for sovereign exposures should be increased by activating the Basel risk weights for sovereigns. The new

rules could be phased in over time. Related rules to limit the sovereign nexus should be applied to other regulated entities, such as insurance and pension funds.

49. However, at the same time sovereign bonds should be enabled to function as collateral, even if undergoing first-stage maturity extensions. In particular, it should be ensured that sovereign bonds can continue to serve their role as collateral for ECB's liquidity window which can help to avert contagion to banks. However, adequate collateral haircuts need to apply. Market conventions with regard to a first-stage maturity extension, such as its classification as default by rating agencies or as credit event with regard to credit default swaps, are likely to adapt if the proposed rule-based restructuring framework takes effect. Therefore, there is no reason to believe a market-based mechanism such as developed herein is more disruptive than a mechanism based on an automatism anchored in bond contracts as proposed by Weber et al. (2011).

Phase-in of the new regime

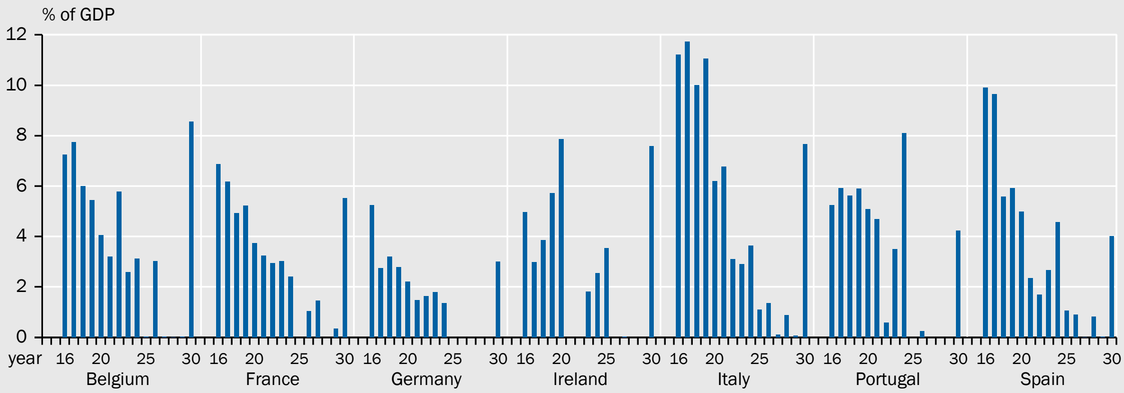
50. Given currently high debt levels, the mechanism needs to provide a transition phase to the new regime. Implementing a transition phase offers countries time and incentives to put public debt on a downward path and helps investors to adjust to a new regime. In our proposal, the phase-in occurs as current debt matures and is gradually replaced with the new class of bonds with CPCs. Regulation, similar to the one following the Deauville agreement in 2010, could set a starting date. Since the phase-in proceeds automatically, no negotiation over phase-in periods or ex post alteration of the transition are possible.

51. In the following, simulations illustrate how such a phasing-in could evolve regarding the debt criterion. Data is based on Eidam (2016), who collects all government bonds issued by central governments available on Bloomberg. For our purpose, we focus on Belgium, France, Germany, Ireland, Italy, Portugal, and Spain. Data coverage is high in general, although some countries – such as Germany – have a large portion of public debt issued by entities other than the central government. This data is complemented by projections for GDP and public debt, which are taken from Commission forecasts (European Commission 2015) and are intra- or extrapolated.

52. The current payoff profile of long-term bonds indicates refinancing needs for existing debt that range between 5 and 11 % of GDP in the near term and reduce across time (see Figure 3). The vast majority of the bonds are under domestic legislation. A notable proportion already includes 2013 CACs. The share of bonds under foreign legislation is small.

↘ FIGURE 3

Maturing long term sovereign bonds[1]



1 – Sample of long term sovereign bonds issued by central governments since 1999 as of end-2014. Figure for year 2030 includes all amounts maturing in 2030 or later in % of 2030 GDP.

Source: Eidam (2016)

53. To demonstrate this phase-in regarding our debt criterion, we consider the possibility that regulation postulating the use of CPCs became effective in 2017. Figure 4 shows the amount of government bonds including the CPCs over time in relation to GDP. These estimations assume a maturity structure for newly issued bonds in the future that is identical to 2014. It also assumes that public debt other than central government bonds remains constant as share of GDP.

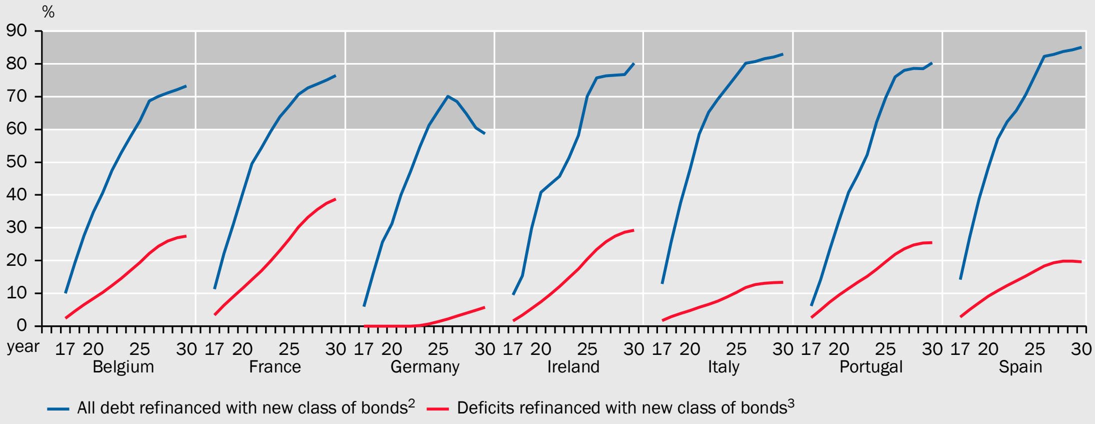
54. For Germany, this implies a stark decline in federal debt, which explains the low portion of bonds with CPCs in the long run. For Ireland and Portugal, the significant share of ultra long term debt owed to the EFSF/ESM delays the penetration of the debt stock with new bonds. Given that debt is projected to decline in all countries except France, the share of bonds with CPCs increases as debt ratios fall, facilitating a smooth transition into the new framework: While not excluding the restructuring of debt in the transition period, the bonds subject to the new rule for access to ESM financing increase gradually.

55. Alternatively, we calculate the transition if only new deficits were funded through debt including CPCs and only this debt continued to become subject to the new restructuring regulations. Existing debt always remains unaffected by the new rules. The estimation relies on Commission forecasts until 2026 and subsequently assumes a convergence to a deficit of 0.5 % of GDP at a speed of 0.5 percentage points annually. Figure 4 shows that the resulting stock of debt with CPCs remains below 30 % of GDP for all countries by 2030, and below 60 % of GDP even in the long run.

56. In either case, an economic shock causing higher deficits would accordingly accelerate the trajectory of the penetration. However, higher deficits do not affect the refinancing needs from rollovers which determine the largest portion of overall financing needs.

↘ FIGURE 4

Penetration of debt stock with bonds including Creditor Participation Clauses (CPCs) issued from 2017[1]



1 – Assumes bonds are issued with new clauses starting in 2017 based on maturity profile for bonds as of end-2014, with (i) maturity of newly issued bonds similar to 2014 and (ii) nominal debt following European Commission (2015) and extrapolated from 2027. 2 – Assumes that shares of other debt relative to GDP remains constant. 3 – Deficits until 2026 based on European Commission (2015), and converging towards 0.5% of GDP at a speed of 0.5 percentage points afterwards. Bonds with CPCs falling due are rolled into similar bonds.

Source: Eidam (2016)

57. Next, we analyze the sensitivity of the phase-in to different assumptions by calculating the year in which the new class of bonds exceeds the lower threshold for the debt ratio of 60 % if introduced for all debt financing from 2017, 2020, or 2025. (In none of the countries, bonds with CPCs would reach the upper threshold of 90 %.) Table 1 shows these variations for the three starting years for issuing new bonds.

58. The first variation pertains the treatment of non-marketable, short term, or non-central government debt that is not included in the dataset. The first set of columns assume that the share (in % of GDP) remains constant (as in Figure 4), while the second set assumes that all debt has a maturity structure that is similar to the one in the dataset. For the former program countries Ireland and Portugal as well as Spain, the resulting penetration with new debt is likely too fast given the ultra long maturities of official debt. The same would apply to Greece.

59. The second variation pertains the assumed maturity structure of newly issued debt. As in Figure 4, the standard assumption is that new debt is issued every year at the same original maturity as in 2014. Alternatively, it is assumed that all newly issued debt is issued as 10-year bond.

60. These simulations demonstrate how a longer maturity structure delays reaching the lower threshold for the debt ratio of 60 % of eligible debt relative to GDP. For example, Belgium reaches the lower threshold much later than Spain although having only a slightly higher debt ratio (106 versus 101 % of GDP in 2015) because it features a longer average maturity (7.8 versus 5.4 years in the sample in 2014). Furthermore, the results suggest that delaying the start of the phase-in helps to delay countries from reaching the 60 % threshold, mostly by a proportional span of time. However, debt exceeding the threshold is likely smaller for those countries achieving a faster reduction of their debt. Debt ratios range at an introduction in 2017, 2020, and 2025 between [97; 121], [86; 115], and [76; 105] % of GDP,

respectively, based on static projections by the European Commission (see column (5) in Table 1). The coverage of debt makes a great difference for Belgium, where a large share of public debt is issued by other entities. For debt restructuring to be effective, a broader base is desirable.

↘ TABLE 1

Sensitivity analysis

Country	Start year	Conversion of marketable central gov. debt[1]		Conversion of all public debt over time[2]		Ad memorandum: debt ratio
		Maturity profile of new issuance				year of column (3)
		as in 2014	10 year	as in 2014	10 year	
		(1)	(2)	(3)	(4)	(5)
Belgium	2017	2028	2025	2025	2025	100
	2020	2038	2027	2029	2026	97
	2025	2047	2032	2038	2030	92
France	2017	2030	2025	2024	2024	100
	2020	2032	2027	2027	2026	101
	2025	2036	2031	2032	2029	104
Germany	2017	a				
	2020					
	2025					
Ireland	2017	b		2025	2025	86
	2020			2032	2029	76
	2025			N/A	2033	
Italy	2017	2021	2025	2021	2023	121
	2020	2025	2027	2024	2026	115
	2025	2032	2030	2029	2029	105
Portugal	2017	b		2023	2023	116
	2020			2026	2025	112
	2025			2032	2029	104
Spain	2017	2024	2025	2022	2025	97
	2020	2026	2027	2026	2026	92
	2025	2031	2030	2030	2029	89

1 – The nominal amount of non-marketable or non-central government debt as of 2014 remains constant. 2 – All public debt is assumed to have a maturity structure as marketable central government debt and is replaced with debt including CPCs. a – Threshold is never reached. b – Not meaningful as IMF/EFSF/ESM official debt will have to be replaced.

Source: Eidam (2016)

61. Phasing in the mechanism through the issuance of new bonds, this proposal lends more credibility to the introduction of an effective no-bailout regime in contrast to proposals that set an introduction date far in the future, such as Fuest et al. (2014). Alternative solutions to the transition problem that cope with legacy debt would immediately obviate the need for a phase-in period altogether.

Comparison with the IMF's new lending framework

62. The IMF is striving to facilitate systematic collaboration with regional financial arrangements such as the ESM (IMF, 2013c). Current ESM guidelines postulate that collaboration with the IMF on assessing debt sustainability, and program monitoring should be pursued wherever appropriate and possible. However, at the same time it is widely expected that the IMF will not participate in future ESM programs in the euro area.

63. From a European point of view, cooperation with the IMF may become less relevant as an anchor for the ESM as it develops and adheres to its own strong institutional framework (Weder and Zettelmeyer, 2017). This emerging institutional framework is closely intertwined with other European institutions. Within this framework, the ESM offers loans at longer maturities and lower cost than the IMF, effectively offering solvency support (Wyplosz, 2017). Generally, it is hard to envision a member state seeking IMF but not ESM assistance.

64. On the surface, it appears as if a key difference between our approach and the IMF is how uncertainty about debt sustainability at the outset of a program is handled. In contrast to its 2002 framework, the IMF's new lending framework provides additional flexibility through a "more graduated response tailored to the severity of the initial debt situation" (IMF, 2015). It distinguishes three categories: (i) debt sustainability with a high probability, (ii) sustainable debt but not with high probability, (iii) and unsustainable debt. In the latter case, a country may receive exceptional access to Fund resources only when other financing – such as from an intended debt restructuring or concessional financing from the ESM – is being provided to restore debt sustainability with a high probability.

65. When a country's debt is sustainable but not with high probability, exceptional access to Fund resources can be granted if (i) financing provided from an intended debt restructuring or (ii) the ESM improves debt sustainability and sufficiently enhances the safeguards for IMF resources. Crucially, in this category of "uncertain cases", restoring debt sustainability with high probability is not necessary at the outset.[1] IMF (2015) explicitly states that a maturity extension would typically be sufficient to satisfy conditions for exceptional access to Fund resources. However, a restructuring may not be required at all, for instance if the country's maturity profile is such that, even in the absence of a maturity extension, existing creditors largely maintain their exposure during the period of the program.

66. The IMF and our approaches are therefore aligned if the assessment that debt is sustainable but not with high probability coincides with the thresholds triggering a first stage maturity extension. If the threshold for the gross financing requirement is not reached, it may be the case that the countries' maturity profile satisfies the IMF's condition that existing creditors largely maintain their exposure. Given the low thresholds for first stage maturity extensions proposed above, it is most likely that these thresholds and not the IMF's DSA-based assessment are binding.

[1] There is of course an expectation at the outset that if the economy and policies play out as programmed, the country would be assessed as sustainable with high probability by the end of the program/projection horizon.

To our knowledge, the IMF would not object to a maturity extension even if it assumes debt to be sustainable with high probability.

67. One consideration of the IMF for maturity extension in uncertain cases is that deeper debt restructuring may ultimately be needed. Hence, the IMF explicitly mentions the possibility of sequential restructuring similar to the two-stage approach proposed above. Only in cases where debt is assessed to be unsustainable, the IMF provides exceptional access only "where the financing being provided from sources other than the Fund restores debt sustainability with a high probability" (IMF, 2015). In this case, the IMF prefers a single debt operation. Given such an operation is difficult to undertake quickly, the IMF would be able to provide lending as long as a credible process towards debt restructuring has been initiated in accordance to the IMF's arrears policies.

68. Another perceived difference to the IMF's new lending framework is the role of the DSA. However, both frameworks of the ESM and the IMF require a comprehensive DSA at program inception. In case of the IMF, this DSA serves as analytical basis to inquire whether debt is sustainable with high probability. In case of the proposed framework, an initial DSA is required to gauge the need for a second stage deeper restructuring, notwithstanding the fact that the decision for first stage maturity extension is based on fairly simple criteria (debt ratio, gross financing need, fiscal rule compliance) contained in the initial DSA. To determine the debt relief through second stage deeper restructuring under our proposed framework, the initial DSA will be revised during the course of the program, similar to revisions of the IMF's DSA at each review. This being said, there remain important differences with regard to the methodological approach to debt sustainability analysis between the ESM and the IMF.

IV. DEALING WITH THE FLIPSIDE

69. The introduction of a framework for restructuring sovereign debt is intended to lend credibility to the no-bailout clause and strengthen the role of market discipline. On the flipside, creditors could incur losses on their investment, possibly deepening the crisis. The following addresses some of the concerns.

Delays in requesting crisis assistance

70. The introduction of the mechanism could deter governments from requesting ESM assistance, for instance if debt sustainability thresholds have been exceeded and policymakers fear that debt restructuring entails severe spillovers. Instead, policymakers may choose to delay the request, foregoing the benefit of a timely crisis intervention and "gamble for resurrection".

71. As argued above, ESM programs generally include strict conditionality on structural reforms and fiscal adjustment. In other words, ESM programs have several

strings attached, with debt restructuring being only one among others. It is certainly important that the program considers any spillovers from debt restructuring. For instance, if debt restructuring instills losses on pension funds, conditionality on pension reform should take these into account.

72. Key to this proposal is that a first-stage decision on maturity extension at the onset of a program is triggered based on the range of simple, pre-determined thresholds. This avoids excessive ambiguity, strengthens markets' ex-ante disciplinary effect, and keeps creditors in the game. However, the second-stage decision on deeper debt restructuring is based on a more comprehensive assessment, including a stronger judgemental component, more akin to the case-by-case assessment favored in the IMF's new lending framework (IMF 2015). No decision on a deeper restructuring needs to be made at the onset of a ESM program.

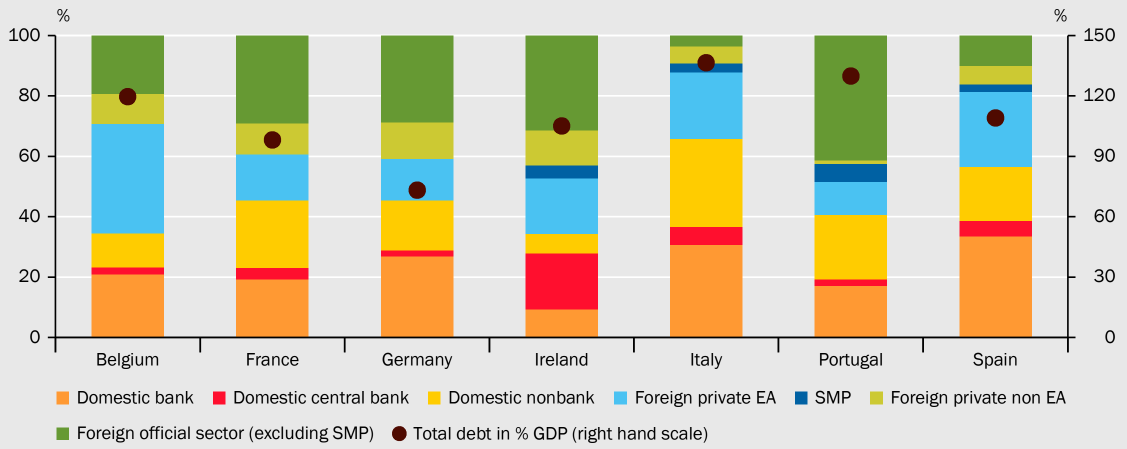
Risk of spillovers

73. Two main channels for spillovers should be distinguished. First, direct spillovers affect those holding claims on the sovereign that undergo restructuring – they share directly the burden of a debt crisis. Second, indirect spillovers affect entities through second-round effects, such as bank failures, or confidence effects ("non-fundamental contagion", Dornbusch et al., 2000).

74. An estimation of the bondholder composition can help to analyze direct spillovers. Overall, the composition reveals a significant home bias of investors (see Figure 5). Domestic investors hold between 35 % (Belgium, Ireland) and 65 % (Italy) of debt issued by their respective government. Domestic banks hold around 30 % of domestic public debt in Germany, Italy, and Spain. In the case of the former program countries Ireland and Portugal, a large share of debt is owed to foreign official creditors which do not fall under the restructuring mechanism. For France and Germany, the large share of about 30 % of debt held by foreign official creditors consists of foreign central banks holding euro reserves.

↘ FIGURE 5

Holders of advanced economy government debts, 2015Q2[1]



1 – Fractions of EA-holdings from last available year, most countries end-2014; Belgium, Italy, Portugal, Spain: from end-2013. SMP-holdings are calculated using the total reported values at 3 July 2015 and the breakdown by issuer of the outstanding amounts of the Eurosystem's SMP-holdings as of end-2014. EA-euro area, SMP-Securities Markets Programme.

Sources: Arslanalp und Tsuda (2012), ECB, CPIS Database, and own calculations

75. The analysis suggests that euro area investors themselves will hold the bulk of public debt subject to the restructuring mechanism, ranging between 60 % for France and Germany to close to 90 % for Italy. For most countries, a debt restructuring is hence an internal redistribution within the monetary union. The large home bias also within the euro area suggests that the largest direct burden of a restructuring would fall on bondholders in the respective country. The situation differs from that of early emerging market restructurings where the largest creditors were foreign.

76. This is one of the key arguments of opponents to sovereign insolvency rules. Yet, we believe additional aspects need to be taken into account:

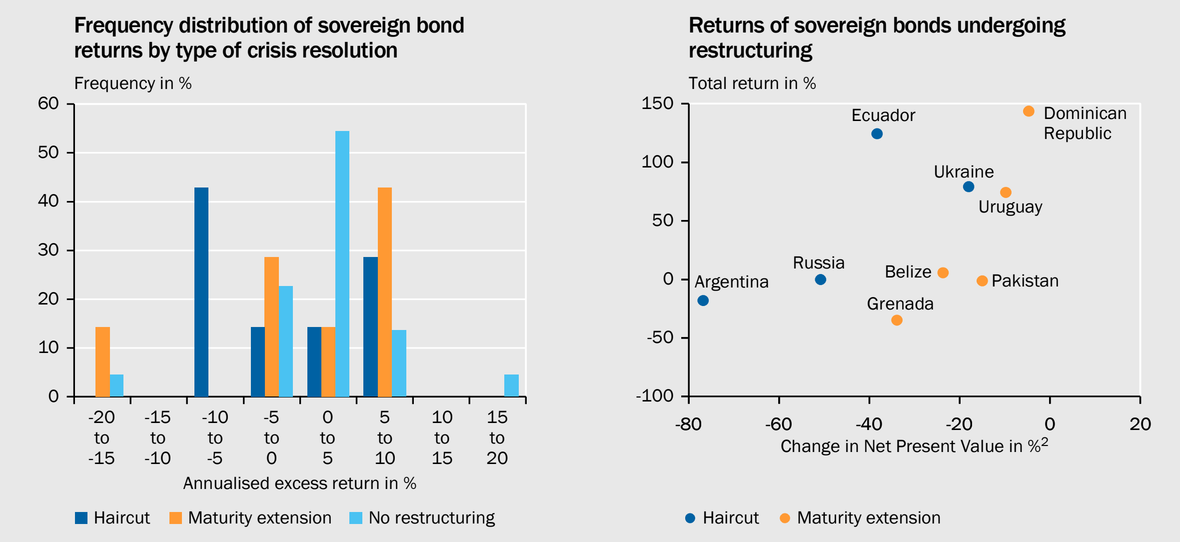
- First, improvements to the euro area architecture, most notably the Banking Union with single supervision and a single resolution mechanism, have already been implemented to make its financial system more robust to crises. A completion of the missing elements of the Banking Union could further bolster financial stability. As mentioned, it remains important to remove privileges for sovereign debt in regulations of banks and other financial institutions to reduce their nexus to sovereigns and diversify government bond holdings.
- Second, large advanced economies such as Italy are likely "too big to be saved" anyway. Despite the OMT rhethoric, it is hard to imagine that a bail-out package of sufficient size could be mobilized if a sizable shock was to hit Italy's economy. Safeguarding against indirect spillovers within the euro area, and in particular in the country entering a sovereign debt restructuring, remains therefore crucial.
- Third, the mechanism serves to promote conservative debt levels and, in cases where debt levels remain high or large shocks occur, reduces uncertainty. Clarity with regard to the applicable policy framework in debt crises contain indirect spillovers and dampen volatility (IMF 2015).

77. Furthermore, the analysis of the bondholder composition should not be overinterpreted with regard to the severity of direct spillovers. It is important to take into account valuation effects and how they affect investors.

- An empirical analysis of long term bond returns by Andritzky and Schumacher (forthcoming) shows that maturity extensions imply moderate losses on bondholders during an event window starting about six months prior to crisis start and lasting to six months after crisis end, as defined by ratings or spreads (Figure 6, left panel). Traded bonds suffer severe price declines in the run-up to crises, both in cases with and without debt restructuring. In both cases, they are followed by notable recoveries. Losses are not found to be significantly associated with the maturity of the original bonds.
- Long term bond returns suffer significantly less than the obtained net present value relief usually suggests (Figure 6, right panel). This may indicate that restructuring helps to overcome a public debt overhang which is detrimental to economic growth prospects and ultimately also hurts investors.
- Furthermore, the impact and its possible higher-round effects depend on the type of investment portfolio and relevant accounting conventions. Portfolios which are marked-to-market, such as in case of some investment funds and parts of banks' holdings, are affected by fluctuations in market prices which could be severe even in the absence of a restructuring regime. The recent euro area crisis has witnessed these gyrations (Figure 7). Long-term investors, such as pension funds, are likely to absorb maturity extensions more easily. However, haircuts will require the recognition of losses. For banks, maturity extensions have also been found to be much less damaging than principal reductions (IMF 2014b).

↘ FIGRUE 6

Long term returns of sovereign bonds during debt crises[1]



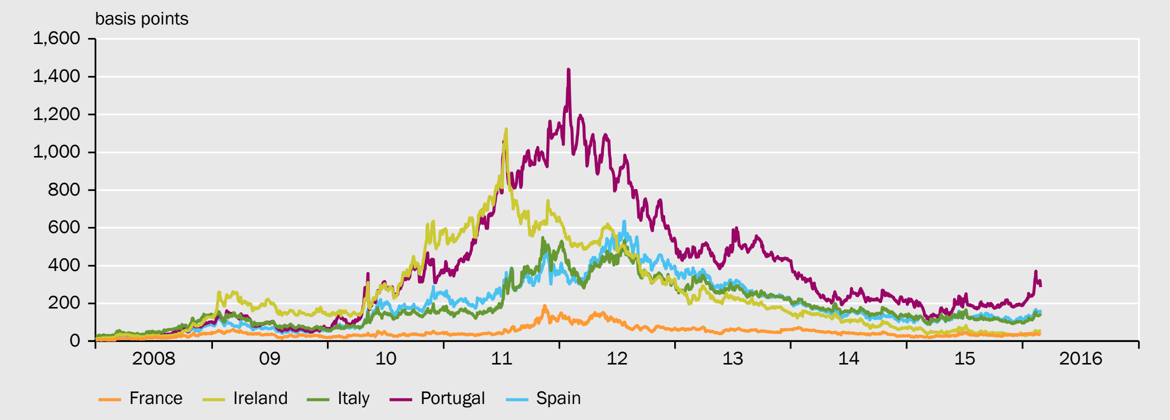
1 – Returns during a time window starting 200 trading days prior to crisis and ending 200 days after crisis end. Sample countries include Argentina (1998, 2001–2005, 2008), Belize (2006, 2008, 2011), Brazil (1998, 2002), Bulgaria (1998), Colombia (1998, 2002), Dominican Republic (2003–2005), Ecuador (1998), Gabon (2008), Ghana (2008), Grenada (2004), Iraq (2008), Jamaica (2008), Lebanon (2001), Nigeria (1998), Pakistan (1998, 2008), Russia (1998–2000), Serbia (2008), Seychelles (2008), Sri Lanka (2008), Turkey (2001), Ukraine (1998, 2008), Uruguay (2002), Venezuela (1998), and Vietnam (2008). 2 – According to Trebesch and Cruces (2013).

Source: Andritzky and Schumacher (forthcoming)

78. An important channel through which sovereign restructuring can contain both direct but in particular indirect spillovers is the confidence channel. Certainly, sovereign debt restructuring will play a substantial role in future crises. By setting clear rules that govern the resolution of debt crises in the euro area and by providing a solid legal foundation to implement bond restructurings, this proposal reduces uncertainty in crisis resolution. Since the mechanism helps to anchor investor expectations, both ex ante as well as during an unfolding crisis, indirect spillovers may become less common and less severe than in the current framework of ad hoc solutions (IMF 2014b).

↘ FIGURE 7

Interest rate spreads on government bonds compared to Germany[1]



1 – Differences between the yield on 10-year government bonds of each country relative to German government bonds.

Source: Thomson Financial Datastream

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79. Nevertheless, the introduction of a sovereign restructuring mechanism needs to be complemented by other measures to limit spillovers. This includes strengthening precautionary measures and adapting financial safety nets:

– Foster risk diversification and promote the creation of buffers: Not only banks, also insurance and pension funds or other large investors may hold sizable sovereign exposures. To the extent that these institutions are systemic, it should be ensured that appropriate regulatory measures are in place to contain excessive concentration risks. In the insurance sector, consideration should also be given to large exposure limits and capital requirements for sovereign exposures.

– Stress tests and crisis simulations: Scenarios including sovereign restructuring following this framework should become standard in stress tests, such as for banks, and crisis simulations, such as for the ESM. These should also evaluate whether the ESM lending capacity should be enhanced to provide a backstop to all member countries.

80. Other contributions suggest that rules for sovereign debt restructuring could be complemented with other instruments to prevent contagion. For instance, Zettelmeyer (2017) considers a euro area safe asset which could replace sovereign debt on banks' balance sheets. However, creating a senior tranche from pooling

sovereign bonds of member states, as proposed by Brunnermeier et al. (2017), may fail to prevent destabilizing capital flows during crises. For example, the demand for junior tranches in times of crisis could decline abruptly and induce contagion (GCEE, 2017). All approaches to safe assets need to consider the effect of subordinating (junior tranches of) national sovereign bonds risking bond market fragmentation and limiting the benefits of debt restructuring.

81. Buchheit et al. (2013) propose that countries either restructure ahead of introducing their European Sovereign Debt Restructuring Mechanism, or commit to a debt reduction path supported by guarantees or a Debt Redemption Fund (GCEE, 2011). Given the extensive asset purchase program of the ECB, a large portion of public debt is already owned by European institutions. A debt redemption fund is thus not feasible and useful anymore.

82. Overall, the mechanism proposed here would lead to overall safer levels of public debt given reduced moral hazard and enhanced market discipline. By reducing financing needs in crises, it bolsters the firepower of the ESM. As a result, the ESM is better positioned to backstop countries affected by crisis spillovers. Together with a completed Banking Union, the removal of regulatory privileges for sovereign debt, and other precautionary measures, a framework for sovereign debt restructuring can be expected to increase, not reduce, financial stability in the euro area compared to today's ad hoc regime.

Fiscal discretion, crises risk, and funding cost

83. Proposals regulating the restructuring of sovereign debt are furthermore criticized as Trojan horses that restrain fiscal policy. Yet, infusing a sensible dose of fiscal discipline may improve the stability of the euro area. If fiscal policy preserves sufficient fiscal space, including a sustainable level of public debt, there is no contradiction between fiscal discretion and a sovereign restructuring mechanism. On the contrary, in normal times all countries can benefit from a euro area architecture that includes a structured mechanism for dealing with sovereign insolvency (Panizza, 2013).

84. Embedding the sovereign restructuring mechanism in a well calibrated framework of backstops, such as through the ESM, should mitigate liquidity crises and facilitate a smooth adjustment through "loans for reforms" (GCEE 2015). Hence, it is up to the responsibility of national policymakers to run fiscal policy in ways that maintain conservative debt levels and minimize the risk of a crisis. Given that it is ex ante difficult to gauge policymakers' reactions to the introduction of a framework to regulate sovereign debt restructuring, it cannot be concluded that crises would become more frequent or more severe.

85. In the special case of a large country such as Italy, it is doubtful anyway whether existing rescue packages would be able to protect it from a serious crisis and restructuring in the event of a major shock ("too big to save"). Concerns that the explicit introduction of rules for sovereign debt restructuring would provoke a sovereign debt crisis in Italy are thus exaggerated.

86. Empirical evidence for increased funding cost or higher market volatility is scarce (Trebesch, 2015). Studies comparing bonds with and without CACs suggest that there is no significant effect on interest rates after controlling for creditworthiness, except maybe for the most risky countries. The observation that restructuring announcements, such as the Deauville announcement in the euro area in 2010, are followed by a widening of spreads for crisis countries does not yet allow for a conclusion on interest rates in a new long run equilibrium. Market participants attest that at normal times credit is priced based on fundamentals rather than design features of the bond contract (IMF 2014b)

V. CONCLUSION

87. The crisis in the euro area has revealed shortcomings of the architecture of the European Monetary Union, in particular regarding the credibility of the no-bailout clause. The European Stability Mechanism and the European Banking Union have only partly resolved this credibility problem. Still, the restructuring of government debt as a consequence of a credible no-bailout regime has not been successfully coped with so far. An explicit framework for sovereign debt restructuring has many advantages compared to the current ad hoc approach. Above all, it anchors expectations of market participants by providing a rule-based framework and serves as disciplining device for national fiscal policy.

88. In this paper, we have outlined how such a framework could look like. It resembles similar proposals like, e.g., IMF's new lending framework by distinguishing between maturity extensions, appropriate for both funding and solvency crises, and deeper restructuring to overcome solvency crises. Our proposal puts these two possible debt operations in explicitly sequence, as the liquidity need is eminent at the start of the crisis while the solvency cannot be reliably assessed until later. Restructuring would be facilitated by introducing Creditor Participation Clauses (CPCs) in debt contracts, which allow for single-limb voting on restructuring proposals and increase legal certainty for agreed restructuring deals.

89. In contrast to other proposals for sovereign debt restructuring mechanisms, we show how a transition phase could look like, in which the bonds including CPCs and thus subject to the new rule for access to ESM financing increase gradually. Our simulations indicate that the legacy debt of EMU member states can be reduced while the new regime slowly phases in. Assuming both deficits and rollover needs are refinanced with debt including CPCs, Italy reaches the lower threshold for eligible debt exceeding 60 % of GDP between 2021 and 2032, when its total debt is projected at 121 and 100 % of GDP, respectively. Given the projected decline in German public debt, bonds with CPCs would not reach the threshold of 60 % of GDP. No country would exceed the upper threshold of 90 % of GDP. Overall this exercise illustrates that a mechanism for sovereign debt restructuring could be implemented even for a country with high legacy debt in a not so distant future.

ONLINE APPENDIX: OVERVIEW OF EXISTING PROPOSALS

Proposal	Year	Authors	Mechanism	Key differences
European Debt Restructuring Mechanism (EDRM)	2010	Weder di Mauro, Zettelmeyer	ESM conditional support above a lower threshold, and conditional on invoking the ESDRM above an upper threshold. Threshold tied to minimum standard of fiscal discipline, e.g., using a debt or deficit ceiling.	Debt restructuring triggered by simple critierion. No distinction of maturity extension and deeper restructuring.
European Crisis Resolution Mechanism (ECRM)	2010	Gianviti, Krueger, Pisany-Ferry, Sapir, von Hagen	Financial assistance conditional on sustainable debt, Court of Justice of the European Union to enforce restructuring. Treaty to establish rules, only applicable to newly issued debt.	Statutory approach based on court decision instead of contractual approach. No precondition for crisis lending.
European Monetary Fund (EMF)	2010, 2017	Gros, Mayer	The EMF facilitates an exchange of defaulted debt against new debt with a guarantee not exceeding 60 % of GDP.	Brady-type debt exchange with haircut to bring debt to 60 % of GDP instead of contractual approach.
European Stability Mechanism	2011	Corsetti, Devereux, Hassler, Saint-Paul, Sinn, Sturm, Vives	1st stage: 2 years ESM support if liquidity crisis; 2nd stage: bond-by-bond CACs to convert maturing bonds into "replacement bonds" at haircut of 20-50 % determined by market prices, plus a partial ESM guarantee; 3rd stage: full fledged default and restructuring of all bonds.	1st stage does not foresee maturity extension. 2nd stage restructuring to contain only limited haircut. Deeper restructuring only at 3rd stage with predefined range of haircuts, rather than based on DSA.
Trigger clauses	2011	Weber, Ulbrich, Wendorff	Introduction of bond clauses that trigger an automatic 3-year extension in case of a ESM assistance request.	Automatic maturity extension hard-wired in bond contracts instead of creditor vote. Similar second-stage discretionary restructuring based on CACs.
European Sovereign Debt Restructuring Mechanism (ESDRM)	2013	Buchheit, Gelpern, Gulati, Panizza, Weder di Mauro, Zettelmeyer	Change in ESM Treaty to foster restructuring at a pre-set threshold, proposed to be 90 % of GDP, in connection with an ESM program. Holdouts are prevented by introducing an immunity clause to protect assets.Transition phase during which countries with high debt are required to either restructure upfront or agree to debt reduction path in exchange for support, e.g., guarantees or a redemption fund.	As opposed to a 2-stage process, a pre-determined threshold (or under certain circumstances DSA) triggers restructuring, whereby the full extent of debt relief is defined at the outset. Transition support rather than phase-in.

Proposal	Year	Authors	Mechanism	Key differences
Viable Insolvency Procedure for Sovereigns (VIPS)	2014	Fuest, Heinemann, Schroeder	In a 3-year shelter period, ESM provides non-senior loans. If no market access is achieved, a 1-year negotiation period follows to achieve debt restructuring using CACs and an immunity clause introduced to the ESM Treaty. To become effective once debt is reduced to certain debt thresholds, but latest in 2030.	Shelter period is linked to ESM program and not subject to thresholds. Framework is not phased in but takes effect in 2030 or when debt falls below a certain threshold. ESM liquidity loans included in restructuring negotiations.
MEZ proposal	2015	Corsetti, Feld, Lane, Reichlin, Rey, Vayanos, Weder di Mauro	ESM lending framework to demand maturity extension if current, projected, or stressed debt ratio > 95 % or financing requirement >20 %. Debt buy-back through stabilisation fund, paid down using earmarked revenue, e.g. ECB seignorage.	Maturity extension as a first step followed by debt buy-back against earmarking revenues instead of deeper 2nd stage restructuring.
Accountability bonds	2017	Fuest, Heinemann	Excess deficits funded by “accountability bonds” with automatic maturity extension and coupon cuts above a 120 % debt ratio and complete write-down in case of an ESM program.	Only a small part of debt is issued as junior “accountability bonds”, automatic restructuring.

Source: Authors

REFERENCES

Andritzky, J. (2006), Sovereign Default Risk Valuation, Springer, Berlin et al.

Andritzky, J. (2012), Government Bonds and Their Investors: What Are the Facts and Do They Matter? IMF Working Paper No. 12/158, Washington, D.C.

Andritzky, J. and J. Schumacher (forthcoming), Long-Term Returns in Distressed Sovereign Bond Markets: How Did Investors Fare? Working Paper, German Council of Economic Experts, Wiesbaden.

Andritzky, J., N. Gadatsch, T. Körner, A. Schäfer and I. Schnabel (2016), A Proposal for Ending the Privileges for Sovereign Exposures in Banking Regulation, VoxEU, March, https://voxeu.org/article/ending-privileges-sovereign-exposures-banking-regulation.

Archarya, V., I. Drechsler and P. Schnabl (2014). A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk. Journal of Finance 69, 2689–2739.

Arslanalp, S. and T. Tsuda (2012), Tracking Global Demand for Advanced Economy Sovereign Debt, IMF Working Paper No. 12/284, Washington, D.C.

Bardozzetti, A. and D. Dottori (2014), Collective Action Clauses: How Do They Affect Sovereign Bond Yields? Journal of International Econonmics 92, 286-303.

Bradley, M. and G.M. Gulati (2014), Collective Action Clauses for the Eurozone, Review of Finance 18, 2045-2102.

Brooke, M., A. Pienkowski, R. Mendes and E. Santor (2013), Sovereign Default and State-Contingent Debt, Bank of England Working Paper No. 27 and Bank of Canada Discussion Paper 2013-3, London.

Brunnermeier, M.K., S. Langfield, M. Pagano, R. Reis, S. Van Nieuwerburgh and D. Vayanos (2017), ESBies: Safety in the Tranches, Economic Policy 32, 175–219.

Buchheit, L.C. and G.M. Gulati (2010), How to Restructure Greek Debt, Duke Law Working Papers 47, Durham.

Buchheit, L.C., G.M. Gulati and I. Tirado (2013), The Problem of Holdout Creditors in Eurozone Sovereign Debt Restructurings, Duke Law School, Durham.

Buchheit, L.C., A. Gelpern, G.M. Gulati, U. Panizza, B. Weder di Mauro and J. Zettelmeyer (2013), Revisiting Sovereign Bankruptcy, CIEPR, Brookings, Washington D.C.

Carletti, E., P. Colla, G.M. Gulati, and S. Ongena (2016): No Mere Walk on the Beach. Are Collective Action Clauses Introduced in European Sovereign Bonds Actually Priced?, Duke Law School Working Paper, Durham.

Corsetti, G., M. P. Devereux, J. Hassler, G. Saint-Paul, H.-W. Sinn, J.-E. Sturm, and X. Vives (2011), EEAG Report on the European Economy 2011, CESifo Group, Munich.

Corsetti, G., L.P. Feld, P.R. Lane, L., Reichlin, H. Rey, D. Vayanos, and B. Weder die Mauro (2015), A New Start for the Eurozone: Dealing with Debt, CEPR, London.

Das, U., M. Papaioannou, and C. Trebesch (2012), Sovereign Debt Restructurings 1950–2010: Literature Survey, Data, and Stylized Facts, IMF Working Paper WP12/203, Washington, D.C.

Dornbusch, R,, Y.C. Park and S. Claessens (2000), Contagion: Understanding How It Spreads, World Bank Research Observer 15, 177-197.

Eichengreen, B., K. Kletzer and A. Mody (2003), Crisis Resolution: Next Steps, IMF Working Paper 03/196, Washington, D.C.

Eidam, F., (2016), An Analysis of Euro Area Bond Maturities and Simulation of the Introduction of New CACs, Working Paper, German Council of Economic Experts, Wiesbaden.

European Commission (2015), Fiscal Sustainability Report, Brussels.

Fischer, S. (1999), On the Need for an International Lender of Last Resort, Journal of Economic Perspectives 13 (4), 85-104.

Fuest, C., and F. Heinemann (2017), Accountability Bonds – Reconciling Fiscal Policy Based on Market Discipline with Financial Stability, EconPol Policy Brief 3., ZEW, Mannheim

Fuest, C., F. Heinemann and C. Schröder (2014), A Viable Insolvency Procedure for Sovereigns (VIPS) in the Euro Area, ZEW Discussion Paper No. 14-053, Mannheim.

GCEE (2011), Annual Report 2011, German Council of Economic Experts, Wiesbaden.

GCEE (2012), A Redemption Pact for Europe: Time to Act Now, VoxEU. November, http://voxeu.org/index.php?q=node/7253.

GCEE (2015), Special Report 2015, German Council of Economic Experts, Wiesbaden.

GCEE (2017), Annual Report 2017, German Council of Economic Experts, Wiesbaden.

Gelpern, A. and G.M. Gulati (2013), The Wonder-Clause, Georgetown Law Faculty Publications 1281, Washington, D.C.

Gianviti, F., A. Krueger, J. Pisany-Ferry, A. Sapir and J. von Hagen (2010), A European Mechanism for Sovereign Debt Crisis Resolution: A Proposal, Bruegel Blueprint, Brussels.

Gros, D. and T. Mayer (2010), How to Deal with Sovereign Default in Europe: Towards a Euro(pean) Montary Fund, VoxEU, March, https://voxeu.org/article/towards-european-monetary-fund.

Gros, D. and T. Mayer (2017), A European Monetary Fund: Why and How?, CEPS Working Document No. 2017/11, December, Brussels.

Große Steffen, C. and J. Schumacher (2014), Debt Restructuring in the Euro Area: How Can Sovereign Debt be Restructured More Effectively?, DIW Economic Bulletin 10/2014, 19-27.

IMF (2011), Modernizing the Framework for Fiscal Policy and Debt Sustainability Analysis, August 2011, Washington, D.C.

IMF (2013a), Sovereign Debt Restructuring – Recent Developments and Implications for the Fund's Legal and Policy Framework, April 2013, Washington, D.C.

IMF (2013b), Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries, May 2013, Washington, D.C.

IMF (2013c), Stocktaking the Fund's Engagement with Regional Financing Arrangements, April 2013, Washington, D.C.

IMF (2014a) Strengthening the Contractual Framework to Address Collective Action Problems in Sovereign Debt Restructurings, October 2014, Washington, D.C.

IMF (2014b) The Fund's Lending Framework and Sovereign Debt – Preliminary Considerations, June 2014, Washington, D.C.

IMF (2015) The Fund's Lending Framework and Sovereign Debt – Further Considerations, April 2015, Washington, D.C.

Jeanne, O., J. Ostry, and J. Zettelmeyer (2008), A Theory of International Crisis Lending and IMF Conditionality, IMF Working Paper 08/236, Washington, D.C.

Krueger, A.O. (2002), A New Approach to Sovereign Debt Restructuring, IMF, Washington, D.C.

Krugman, P. (1988), Financing vs. Forgiving a Debt Overhang, Journal of Development Economics 29, 253-268.

Panizza, U. (2013), Do We Need a Mechanism for Solving Sovereign Debt Crises? A Rule-Based Discussion, Graduate Institute of International and Development Studies Working Paper, No. 3, Geneva.

Reinhart, C.M. and K.S. Rogoff (2011), The Forgotten History of Domestic Debt, Economic Journal 121, 319–350.

Reinhart, C., V. Reinhart, and C. Trebesch (2016), Global Cycles: Capital Flows, Commodities, and Sovereign Defaults, 1815-2015, American Economic Review, Papers & Proceedings 106(5), 574–580.

Rieffel, A. (2003), Restructuring Sovereign Debt: The Case for Ad Hoc Machinery, The Brookings Institution, Washington, DC.

Scheubel, B. and L. Stracca (2016), What Do We Know about the Global Financial Safety Net? Rationale, Data and Possible Evolution, ECB Occasional Paper Series 177, Frankfurt a.M.

Sachs, J. (1989), The Debt Overhang of Developing Countries, in G. Calvo, R. Findlay, P. Kouri and J. Braga de Macedo (eds.), Debt Stabilization and Development: Essays in Memory of Carlos Diaz Alejandro, Basil Blackwell, Oxford, 80–102.

Trebesch, C. (2015), Kurzgutachten zu Staatsschuldenkrisen, Working Paper 06/2015, German Council of Economic Experts, Wiesbaden.

United Nations (2009), Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System, September 21, New York.

Weber, A., J. Ulbrich and K. Wendorff (2011), Safeguarding Financial Market Stability, Strenthening Investor Responsibility, Protecting Taxpayers: A Proposal to Reinforce the European Stability Mechanism through Supplementary Bond Issuance Terms, Deutsche Bundesbank, Frankfurt a.M.

Weder di Mauro, B. and J. Zettelmeyer (2010), European Debt Restructuring Mechanism as a Tool for Crisis Prevention, VoxEU, November, https://voxeu.org/article/european-debt-restructuring-mechanism-tool-crisis-prevention.

Weder, B. and J. Zettelmeyer (2017), The New Global Financial Safety Net: Struggling for Coherent Governance in a Multipolar System, CIGI Essays on International Finance 4, Waterloo, Ontario.

Wyplosz, C. (2017), A European Monetary Fund?, Scrutiny paper provided in the context of Economic Dialogues with the President of the Eurogroup in the Economic and Monetary Affairs Committee, May.

Zettelmeyer, J. (2016), A Sovereign Debt Restructuring Mechanism for the Euro Area?, mimeo, Peterson Institute for International Economics, Washington, D.C.

Zettelmeyer, J. (2017), Managing Deep Debt Crises in the Euro Area: Towards a Feasible Regime, mimeo, Peterson Institute for International Economics, Washington, D.C.

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