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SOVEREIGN DEBT RESTRUCTURING: RULES VERSUS DISCRETION

Angelo Baglioni and Massimo Bordignon

(Catholic University of the Sacred Heart - Milan)

Introduction and summary¹

We discuss the proposal, recently circulated in the policy debate in the euro zone (EZ), related to the restructuring of the outstanding government securities of countries featuring a high level of the debt-to-GDP ratio. We believe that a clear distinction should be made between automatic restructuring rules and discretionary decisions on this matter. While the former are dangerous for their destabilizing potential, the latter can be seen with favor. We argue below (Section 1) that any restructuring solution should be left to the decision process related to the financial assistance of the ESM; the legal framework for imposing a restructuring as a condition to get the ESM aid is already in place and compelling reasons to revise it do not seem to exist. The design of Collective Action Clauses (CAC) can instead be improved by introducing the so-called “single limb aggregation” rule: one vote for all the bonds involved in a restructuring offer, rather than for every single issue.

The destabilizing potential of any automatic debt restructuring mechanism is particularly strong in the EZ, given the lack of a clear institutional framework enabling the Eurosystem to play the role of lender of last resort (LLR) for the public sector: this is an anomaly of the EZ architecture, in comparison with other countries. We expand on this issue in Section 2, arguing that this anomaly makes the market for government bonds in the EZ exposed to multiple equilibria and creditor runs. In addition, it has induced the banking sector to play the role of LLR during the sovereign debt crisis of 2011-2012, thus increasing substantially its exposure to the sovereign risk and

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contributing to the loop between bank and sovereign credit risks. Some “home bias” in the holding of national public debt by national banks may have positive effects on financial stability, but an excess surely increases risk. In principle, the direct way of addressing this issue is by removing the current prohibition to the Eurosystem of extending direct financing to the governments of the EZ, finding ways to minimize moral hazard and other risks. Since we understand that this reform is politically hard to accept, we also examine (in Section 3) other proposals, related to the introduction of some kinds of European “safe bonds”: they try to overcome possible political objections by minimizing the cross-subsidization implications of Eurobonds, and balancing any risk-sharing with more central control over national budgets. Under this view, the LLR role of the Eurosystem should be limited to these EZ-wide government securities. We also briefly discuss the related idea of issuing junior bonds for countries that violated the fiscal rules as a way to both provide incentives for the respect of the rules and make an eventual debt restructuring less disruptive.

Finally, we address the issue of risk concentration, due to the exposure of European banks to the domestic public sector. We argue that the introduction of concentration limits is preferable to assigning positive risk weights to government securities in the computation of bank capital requirements, since the former solution would be less distortive than the latter. However, the introduction of concentration limits should go in parallel with some institutional reforms addressing the above mentioned anomaly of the EZ institutional framework, namely the lack of a clear LLR role for the central bank in the market for government securities.

1. Sovereign debt restructuring

The idea of an automatic debt restructuring of government securities issued by high debt countries has been advocated, among others, by the “non-paper”² circulated by the German Ministry of Finance at the Euro-group meeting of October 2017, asking to change the ESM Treaty by incorporating the following elements: “(a) the automatic extension of the maturities of sovereign bonds in the event that an ESM programme is granted, (b) the obligation to carry out comprehensive debt restructuring if this is necessary to ensure debt sustainability” (page 2). A similar (softer?) view has been taken by the 14 French and German economists writing the CEPR Policy Insight no.91, when they state that “insolvent countries should not receive financial assistance from other countries unless they first restructure their debts” (page 12) and that the ESM should “require a maturity extension of privately held debts for the duration of the ESM-financed programme whenever debt sustainability is uncertain”, following the “exceptional access policy” recently introduced by the IMF (page 13)³.

Any rule introducing some automatic debt restructuring, to be triggered when a government asks for the financial assistance of the ESM (or even worse when the debt-to-GDP ratio reaches a pre-defined threshold), is likely to have *destabilizing consequences* for the market of government bonds. As we shall see in the next section, the EZ is presently affected by a financial fragility, due to the lack of a clear institutional framework enabling the central bank to play the role of lender of last resort (LLR) for the governments of the area. In this context, the market for government debt is severely affected by multiple equilibria, where a speculative attack on a country might lead to a

² “Non-paper for paving the way towards a Stability Union”.

³ See CEPR (2018).

self-fulfilling default event. Market participants' expectations are crucial in determining whether such an event actually occurs or not. An automatic restructuring rule would presumably work as a coordinating device with a perverse effect: whenever a government discloses its intention to ask for the financial assistance of the ESM (or the debt-to-GDP ratio of a country approaches some critical threshold level), investors would start betting on the restructuring event and selling the government securities of that country, possibly triggering a sovereign debt crisis. A similar point has been made by Wolff (2018) who argues for some "constructive ambiguity" concerning any debt restructuring decision. Removing such ambiguity would mean that market participants can more easily calculate when and how to speculate against a country. Earlier market panic would likely result. This argument is made stronger by considering that the EZ is affected by a doom-loop between the sovereign and the redenomination risk (i.e. the risk that a country might exit the EZ), as the sovereign debt crisis of 2011-2012 has made evident (as argued by Bini Smaghi 2018).

For these reasons, any restructuring solution should be left to the discretionary decisions related to the financial assistance granted by the ESM to a member country. In fact, these rules are already in place. The Treaty establishing the ESM states that, when a member State addresses the ESM for financial assistance, the EU Commission, in liaison with the ECB, should be entrusted with the task "to assess whether public debt is sustainable. Wherever appropriate and possible, such an assessment is expected to be conducted together with the IMF" (art. 13 - 1.b). To be eligible for financial support, a member State must also agree with the ESM a Memorandum of Understanding (MoU), detailing the conditionality attached to the financial assistance facility. The MoU has to be negotiated between the government and the EU Commission, again in liaison with the ECB and possibly with the IMF (art. 13 - 3). Finally, payment of the different tranches of ESM support to a country is conditional on the fulfillment of the conditions specified in the MoU. So the legal framework for negotiating a restructuring of the outstanding debt is already in place: whenever a debt rescheduling and/or a haircut on outstanding bonds is believed to be necessary, together with the official financial support, to put the debt of a country on a sustainable path, such measures can be imposed as a condition to obtain the requested financial assistance. Leaving debt restructuring to a case-by-case decision avoids creating "triggers" that would automatically start the restructuring process, producing a self-fulfilling run on the public debt of the country applying for the ESM financial facility.⁴

It is also not obvious which benefits would come from delegating the sustainability assessment to some other body, such as the ESM, as is proposed by some. One potential advantage would be to leave the decision, or at least the technical assessment, to some independent technical body, potentially less politically biased than the Commission (that however works together with the ECB and potentially the IMF). But in its present format the ESM has a governance which is even more political than the Commission (not to talk of the IMF or the ECB), so that its decisions are also

⁴ A similar view has been expressed by the Vice-President of the Ecb: "*The agreed and settled framework of asset purchase programmes stabilised the euro area and that would be disturbed by the introduction of a SDRM (Sovereign Debt Restructuring Mechanism), with thresholds and automatism, or by simply strengthening the presumption of a debt restructuring whenever a country has to ask for an ESM programme. Contagion and self-fulfilling crises would return. In my view, the fact that the ESM legislation already foresees that the ESM must ask the Commission for a debt sustainability analysis before starting a country programme and that euro countries sovereign bonds are mandatorily issued with Collective Action Clauses, should be enough to dispel the concerns of the proponents of a SDRM.*" See V. Costancio (2018), page 5.

likely to be influenced by political bias.⁵ This attribution of competence could only follow if the ESM were deeply transformed into a technical institution more similar to the IMF and with less direct influence from member countries in its governance⁶.

Another issue that has not been sufficiently discussed by the proponents of automatic or semi-automatic debt restructuring is the consequences of a major restructuring of the debt in a large country. This would be accompanied by severe losses of the holders of public debt, beginning with the banking sector of the country under consideration but also extending to other national and international holders. This would likely produce systemic effects on the economy of that country, and by contagion on other countries of the Eurozone, probably stretching to the limits the resources available to the ESM for financial assistance. For large debt restructuring in major country is even doubtful than an “orderly” restructuring could ever take place. Debt restructuring is then a last resort option that need be considered, but with great caution.

This does not mean that specific innovations could not be introduced to ease the transition process in the (hopefully unlikely) case that a debt restructuring becomes necessary. This is the case for example with the design of the Collective Action Clauses (CAC) inserted in public debt securities. The ESM Treaty (art.12.3) requires that, as of January 1st 2013, all euro area government securities, with maturity above one year, include CAC with identical legal impact across member countries. This provision is intended to facilitate the restructuring of securities, by a mechanism that should limit the “hold-out” problem: once a qualified majority of bond-holders accept a restructuring offer, this applies to all bond-holders. However, the application of CAC on a bond-by-bond basis can limit their effectiveness, since a few (or even one) professional investors can hold a share of a single issue large enough to block the restructuring process.

This is actually what happened for several Greek bonds, issued under the English law, when the Greek Government tried to restructure them in 2012: half of them were not restructured due to the hold-out strategy of some specialized investors. On the contrary, the Greek Government was able to implement a massive restructuring of its own debt issued under the domestic law, by introducing ex-post a sort of “retroactive CAC” on outstanding bonds (Greek Bondholder Act of February 23rd 2012): interestingly enough, the quorum (50%) and the consent threshold (76%) were applied across the totality of outstanding bonds, rather than bond-by-bond. The exchange offer turned out to be successful, as it was accepted by bondholders representing 82.5% of outstanding bonds issued under the Greek law.⁷

The Greek experience shows that CACs are more efficient if they are applied across all bondholders, rather than bond-by-bond. The reason is that it is much difficult, or even impossible, for a single investor to buy a blocking share of all the government bonds of a country, while it may be able to do so for a single issue. Therefore, we believe that the proposals of modifying the CACs

⁵ The political bias in the sustainability assessment became evident from the divergence between the European institutions (Commission and Ecb) and the IMF at the outset of the Greek crisis, when the latter called for a debt restructuring that was opposed by the former.

⁶ Another, perhaps better, alternative could be the European Fiscal Board (EFB), which is by mandate, and selection of members, independent by both member countries and the Commission. However, the EFB should be considerably strengthened to play this role. At the moment, it would not have enough financial and human resources to perform these new activities in addition to its statutory aims.

⁷ For a detailed description of the Greek debt restructuring, see Zettelmeyer *et al.* (2013).

accordingly (see the German “non-paper” and CEPR 2018) should be seen with favor. New government bonds should include a CAC with the so called “single limb aggregation”: one vote for all the bonds involved in a restructuring offer, rather than for every single issue.

2. The euro-zone anomaly

Let us expand here on the above mentioned fundamental flaw in the EZ institutional framework, deriving from the formal prohibition to the Eurosystem to be the LLR for the governments of the area. This is stated in article 123 of the EU Treaty: overdraft facilities and direct purchases of debt instruments, issued by central and local governments, by the Ecb and national central banks are prohibited.⁸ This prohibition makes the Eurosystem quite different from all the other central banks in Western countries, which are free to buy (domestic and foreign) government securities.

It should be noted that the prohibition refers to *direct* funding of governments by the Eurosystem. The latter is allowed to buy governments securities in secondary markets, as part of its activity of monetary policy implementation. This is stated in article 18 of its Statute: the ECB and the NCB may operate in the financial markets by buying and selling outright and under repos any marketable instruments, including government bonds. However, the prohibition introduced by article 123 provides a support to those arguing that programs like the Outright Monetary Transactions (OMT) and the Public Sector Purchase Program (PSPP) are *de facto* a violation of the EU Treaty, despite the fact that they have to be implemented in secondary markets for debt instruments: in particular, such programs could be seen as “monetary funding” of public deficits. As a consequence, even when the ECB started playing the role of LLR for governments in the Summer of 2012 (following the famous words “whatever it takes” by President Mario Draghi) and even more so since March 2015 by adopting the QE strategy, those actions have been questioned under legal and political grounds, raising several controversies among member countries and apparently within the ECB Governing Council.

In passing, it should also be noted that the prohibition introduced by article 123 (“no monetary funding of public deficits”) is different from that introduced by article 125 (“no bail-out clause”), stating that the Union and member States are not liable for the commitments taken by the government of another member State. Thus, revising art. 123 would not directly imply revising art. 125 too. Of course, the two limitations are linked to each other, since the ECB’s purchase of debt instruments, issued by a member State, could be seen as a way of circumventing the “no bail-out clause”: a default of the borrowing government would hit all the shareholders of the ECB, i.e. all the other member States. However, as we argue more in detail in section 3.1, a practical solution to this problem has been already found by the ECB with the recent PSPP, limiting the portion of the program under risk sharing to a small percentage of asset purchasing.

⁸ We report here the full Art. 123 of the EU Treaty: “Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as ‘national central banks’) in favor of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments”. The same prohibition is stated in Art. 21 of the Statute of the European System of Central Banks (Protocol no.4 of the EU Treaty).

The “no monetary funding of public deficits” clause has the following implication. When the governments of the EZ issue debt securities denominated in euro, it is *as if* they were issuing debt denominated in foreign currency, since the amount of currency that can be issued is outside of their jurisdiction, and they are prevented from making any pressure on the central bank to print money to finance their liabilities. To the contrary, governments of other countries (e.g. the UK, US, and Japan) can rely on the ultimate responsibility of the central banks to preserve the liquidity and solvency of the governments of their own countries. This essential difference is well known by financial markets’ participants and it is incorporated into the yields of public debt securities. The situation in the EZ has changed to some extent since the summer of 2012. However, even the adoption of the OMT and of the PSPP, which has made the Eurosystem playing *de facto* an LLR role, did not solve the underlying institutional problem: such a role remains controversial and it is played under a confused institutional framework, according to which a LLR role must be justified by the official target of price stability.

The lack of a central bank explicitly playing the role of LLR for governments has two negative consequences that are worth stressing. First, the market for government bonds lacks a fundamental stabilizing tool in the face of possible multiple equilibria. The academic literature is pretty clear on the possible consequences. Calvo (1988) has shown that the market for sovereign bonds is exposed to multiple equilibria: a good one (solvency) and a bad one (insolvency). The crucial variable driving the equilibrium is the interest rate, which in turn is driven by expectations: hence the self-fulfilling nature of a liquidity/insolvency crisis. The Calvo argument parallels the well-known Diamond-Dybvig (1983) model of bank runs. In both cases, government bonds and bank deposits, the central bank can play a crucial function by coordinating expectations on the good equilibrium. From this perspective, the fragility of the Eurozone has become evident during the sovereign debt crisis of 2010-2012: during that period, expectations of a possible break-up of the euro-area went together with doubts about the solvency of some high-debt countries, leading to extremely volatile levels of interest rates which in turn put the solvency of some member States at risk. The multiple equilibria approach has been used to explain the fragility of the EZ by (among others) De Grauwe (2011), De Grauwe – Ji (2013) and Gros (2012). On theoretical grounds, Corsetti and Dedola (2013) have extended the Calvo’s framework to the case where a default of the public sector can be due either to a fundamental fiscal stress or to a coordination failure among its creditors: they show the crucial role of the central bank in ruling out the latter possibility.

Second, lacking a specific LLR for the ECB, national banking systems of the EZ have been induced to play the role of LLR, possibly even under the moral suasion exerted by the national governments⁹. Since the outset of the sovereign debt crisis in 2010, the amount of domestic

⁹ Notice that reacting positively to such pressures during a financial crisis by a national bank is a rational strategy. Whatever the holdings of national debt in its portfolio, a resident bank would however be heavily negatively affected by a default of its sovereign and the resulting economic disruption; bending to these pressures might then be way to make the default less likely. In addition, if the country does not default, the bank can gain from the higher interest rates. Indeed, while some moral suasion might have taken place, there is no need to invoke it to explain the increased “home bias” during the recent sovereign crisis. See also Bofoldi et al. (2018) for recent empirical evidence showing that the heterogeneity in national debt holding by the different Italian banks did not affect their cost of funding during the 2011-12 crisis. This was instead affected by the country- specific shock, that is the increased perception by markets that Italy might be forced to default on its debt and leave the Euro. This suggests that the perceived cost of a national default on national banks would be approximately the same regardless of their holding of national debt, supporting the previous argument.

government bonds held in the portfolios of EZ banks has risen by more than 40%: from under 1.000 billion euro to nearly 1.400 billion (see Figure 1). This pattern has been particularly strong in Italy and Spain, where the banks' portfolios of government securities have doubled between 2010 and 2013. However, it is also evident in several other EZ countries (see Figures 2 and 3). Therefore, the exposure of the banking system to the sovereign risk has risen dramatically, fueling the so-called "diabolic loop" between the default risks of the bank and of the public sectors of the economy, due to the banks' holdings of domestic public bonds coupled with the bail-out of banks by governments. The risk concentration, measured by the share of domestic public bonds held to the total assets of banks, has risen from 2.7% to 4.5% between 2010 and 2014 for the EZ as a whole (see Fig.4). Again, this pattern has been particularly strong in Italy and Spain, where this measure of risk concentration has reached a level around 10% in 2013/2014, but it is present in all the EZ countries (with the exception of France).

The role played by the banking system as a substitute of the central bank, as far as the LLR function is concerned, is confirmed by the patterns emerging since the beginning of 2015, when the PSPP has been introduced. Since then, the Eurosystem has purchased about 1.800 billion euro of government securities, with country shares proportional to the capital keys of each country in the ECB. During the same period, the holdings of domestic government debt by EZ banks has declined by 300 billion (see again Fig. 1). This pattern is evident in all the four major European countries (see Fig. 2) and it is present in several other countries as well (Fig.3). However, the degree of risk concentration, due to the exposure to the domestic sovereign, has declined only by a small extent: in three countries (Italy, Portugal and Spain) this index is still between 8% and 9%; in the EZ as a whole it is still at 3.5% (Fig.4). This limited impact on risk concentration can be explained by the fact that, during the last three years, the reduction of the size of government bond portfolios has taken place together with a downsizing of bank total assets as well, as an effect of the economic crisis, of the credit crunch, and of the regulatory pressure to increase the capital ratios.

The liquidity provision made by domestic banks in the market for government bonds is documented in a recent work by Bank of Italy, with reference to a large set of countries (21) worldwide, for the time span 2004 – 2016. Compared to other domestic and foreign sectors of the economy, domestic banks turn out to be more stable investors in government bonds, making few large changes of their portfolios (while making frequent minor changes that allow some flexibility). Financial markets participants seem to be aware of the role played by banks: the larger the holdings of government bonds by banks, the lower the yields of bonds (after controlling for fundamental factors). The paper by Bank of Italy also documents the presence of a home bias in banks' portfolios of government bonds, confirming that – within the European countries – it is strongest in Italy and Spain.¹⁰

3. First and second best solutions

3.1 First best: remove the anomaly

The most direct way of overcoming the problems illustrated in the previous section is to remove the prohibition, which currently applies to the ESCB (European System of Central Banks), of

¹⁰ See Manna and Nobili (2018). There is a growing body of literature, surveyed in their paper, about the role played by banks in the market for government bonds.

purchasing debt instruments directly from governments and other public bodies. More precisely, the words “*as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments*” should be removed from art. 123 of the EU Treaty (as well as from art. 21 of the Statute of the ESCB). Such prohibition should be removed at least as far as central governments are concerned, possibly continuing to be in place for regional/local authorities and other public bodies. This solution would let the ESCB free to play the role of LLR of national governments, by purchasing public debt securities both in the primary and secondary markets. Thanks to this institutional reform, programs like OMT and PSPP would no longer be as controversial as they have been so far. The institutional framework of the EZ would be more in line with that of other major western countries. Therefore, this can be seen as the first best solution to the issue raised in the previous section. Notice that the ESCB would not have any obligation to buy government bonds: it would just be allowed to do so, in case the Governing Council of the ECB decides that such tool should be employed to fulfill its mandate. Notice also that, under this proposal, the prohibition to allow overdraft facilities to the public sector would remain, since this tool might be used by governments to raise debt with the central bank at their discretion, albeit within the limit given by the maximum (negative) balance allowed on the Treasury account with its NCB. Several objections can be raised against this proposal, that we discuss below.

First, one might object that the independence of the ECB would be at risk, because national governments might exert some pressure on the ECB or on NCB to induce them to buy their debt instruments. However, this objection can be dismissed by observing that all the rules, inserted in the Statute of the ESCB, aimed at preserving its independence, would remain in place. Among them, art.7 prevents any official of the ESCB to take instructions from public officials; the latter are in turn prohibited to influence the members of the decision-making bodies of the ESCB. Needless to say, this kind of objection might also be raised to the purchases of government securities in the secondary market, which is currently allowed.

Second, one might fear that the purchases of government bonds by the ECB would lead to an excessive monetary expansion, with possible inflationary pressures on the economy. Again, the Statute of the ESCB provides an answer, by stating (art. 2) that the primary objective of the ESCB is to maintain price stability. Therefore, any other goal can be pursued only if it is not in conflict with that objective. The judgement on whether the bond purchases would be in conflict with price stability or not would be left to the autonomous assessment of the Governing Council of the ECB. Of course, the decision should depend on the specific circumstances under which the bond purchases should take place.

The third objection is related to the risk undertaken by the Eurosystem when buying government (as well as other) securities. What happens if the market value of some bonds held by the Eurosystem drops, possibly because the issuer is perceived by market participants to be unreliable? What happens in the extreme case of a default by a member country, of which the Eurosystem has previously purchased some sovereign debt? Were the losses incurred by the ECB large enough, it would need to be recapitalized by the other governments of the EZ, in proportion to their capital keys. This can be seen as a sharing of the losses generated by the default of a single member country: a clear violation of art. 125 of the EU Treaty (“no bail-out clause”). However, a practical solution to this problem has been provided by the ECB itself, when it adopted the PSPP in

2015, by limiting the portion of the program under risk-sharing to 20% of the bond purchases, with the remaining share of risk been allocated to the NCB.¹¹

Last but not least, there is the moral hazard argument. Governments might be induced to take a lax stance on fiscal policy, by raising public expenditures and/or by reducing the tax burden, since they can rely on the stabilizing action of the Eurosystem in the primary market for government securities. Again, this objection might be raised to the bond purchases in the secondary market as well. More importantly, we can observe that the management of the public budget is limited by several constraints under the EU legislation, putting severe limits to the national discretion. Such constraints on national governments seem to be the right tool to take care of the moral hazard issue, without unduly constraining the policy options available to the ECB. A possible way to make such constraints more effective can be to link the possibility left to the ECB of buying government bonds to the strict application of the EU fiscal rules by national governments. As suggested by several authors (see section 3.2 for a discussion) the part of public debt issues beyond what allowed by fiscal rules should be excluded from the purchases of the Eurosystem, making them effectively riskier than the remaining public debt securities.

3.2 Second best: European safe bonds

We understand that the solution proposed above, although it is the most direct way of addressing the institutional anomaly of the EZ, might be seen as not realistic for political reasons. Another way of addressing this issue would be to limit the LLR role of the Eurosystem to some kind of European “safe bonds”, while leaving the situation as it is as far as national debt instruments are concerned. The original proposal of Eurobonds, jointly guaranteed by EZ member governments, has been opposed on the grounds of political considerations, namely for the fear that they might be a channel through which to introduce risk-sharing and fiscal transfers across the EZ countries. However, some recent proposals for introducing European safe bonds have been recently advanced, trying to minimize the possible cross-subsidization implications of Eurobonds, and to balance risk-sharing (if any) with more central control over national budgets.

Tabellini (2017 a) proposes what he calls “Stability bonds”, building on Ubide (2015) and CEPR (2015). In brief, their proposal goes as follows. All euro EZ countries would agree to transfer to a European Fiscal Authority (taking up the functions of the ESM) a given share of their tax revenues, in proportion to their GDP. These transfers would be capped by a limit, say 25% of GDP. These transfers would back the debt service (interest plus redemption) of the Stability bonds issued by the Fiscal Authority. The proceeds from those bonds would be returned to member States, which can use them to retire part of their national debt and for implementing stabilizing fiscal policies. Some risk-sharing might be included in the program, by distributing those proceeds according to projected or trend GDPs of member countries, to the benefit of weaker countries. The European Fiscal Authority could also lend money to those governments that have lost market access and

11 As a matter of fact, the ECB retains only 8% of the risk related to the purchases of bonds issued at the national level, since 12% of the program has been devoted to the purchase of debt issued by supranational institutions. See the ECB press release of January 22, 2015: “With regard to the sharing of hypothetical losses, the Governing Council decided that purchases of securities of European institutions (which will be 12% of the additional asset purchases, and which will be purchased by NCBs) will be subject to loss sharing. The rest of the NCBs’ additional asset purchases will not be subject to loss sharing. The ECB will hold 8% of the additional asset purchases. This implies that 20% of the additional asset purchases will be subject to a regime of risk sharing”.

provide financial assistance to troubled financial institutions. To make them safe, Stability bonds should be senior to national government bonds. Finally, to balance any element of risk-sharing, the European Fiscal Authority should be endowed with the power of enforcing fiscal discipline in member states, by imposing specific targets for public sector balances and possibly vetoing national budgets.

An alternative to the transfer of revenues, as a way to back-up the issues of Eurobonds, would be a joint guarantee provided by EZ governments, as proposed by Delpla and von Weizsacker (2010). In their view, member states would be enabled to issue “blue bonds”, up to a maximum amount equivalent to 60% of GDP, enjoying the joint guarantee and the senior status over national (red) bonds; the latter should be issued to cover any government funding needs beyond the 60% threshold. Thanks to those features (joint guarantee and seniority) and to their liquidity, blue bonds would be seen as safe assets and pay a low yield to investors, thus enabling governments to lower their funding cost. At the same time, the higher marginal cost of funding, paid on red bonds, would work as a discipline device on national governments.

A difficulty with the proposal by Delpla and von Weizsacker (2010) is that it faces significant problems in the transition period, due to the shock of creating in a short time two distinct national debt instruments. A possible solution has been advanced by Bini Smaghi and Marcussen (2018), who propose to introduce red bonds gradually, over a 20-year period, only for the portion of public debt exceeding the 1/20 rule of debt reduction for countries with debt above the 60% threshold detailed by the Fiscal Compact. The blue bonds (now redenominated “purple bonds”) and only the blue bonds, would be exempted from any restructuring in case the country would ask for ESM financial assistance. Along the same line, other authors have suggested to make “junior” the debt issued above the level prescribed by the fiscal rules, in the form of “accountability bonds” (Fuest and Heinemann, 2017). These bonds could not be bought by the ECB and would be the first to be restructured in case of a request of financial assistance to the ESM. Another proposal is to force a country to issue “GDP-linked bonds” in case of violation of fiscal rules: securities indexed to nominal GDP that would provide automatic debt and cash relief in the event of adverse shocks or during a crisis, being de facto junior (see Tabellini, 2017 b).

Building on Delpla and von Weizsacker (2010) proposal, Baglioni and Cherubini (2016) suggest to add to the joint guarantee a cash collateral, to be pledged by EZ countries, to back-up Eurobonds. Under their proposal, a European Debt Agency (EDA) would issue Eurobonds and use the proceeds to lend money to national governments, up to some threshold limit (as a percentage of GDP). The EDA’s claim should be senior over other government securities. Eurobonds would be backed by a joint guarantee of EZ countries and by a collateral pool, equal to the expected loss of the EDA on its overall exposure with the EZ governments. The collateral pool should be made up by national contributions, proportional to the riskiness of member countries, in order to minimize any cross-subsidization from fiscally stronger to weaker countries.¹² Actually, this scheme combines some elements of the above mentioned two proposals, Tabellini (2017 a) and Delpla – Weizsacker (2010), since Eurobonds would be backed by both a joint guarantee and cash transfers from the national governments. These two sources would support each other: so the revenue

¹² A formal model to compute the national contributions to the collateral pool can be found in Baglioni and Cherubini (2016).

transfer would be lower than under the Tabellini's proposal and the expected liability of each government, due to the guarantee provided, would be lower than under the Blue bonds scheme.

Brunnermeier *et al.* (2017) have recently proposed a synthetic version of Eurobonds, labelled as European Sovereign Bond-Backed Securities ("ESBies") or European Safe Bonds.¹³ In a nutshell, ESBies are supposed to be the senior tranche of a securitization backed by a portfolio of government bonds of the EZ countries. National governments would continue to issue their debt under current conditions, and ESBies would be issued by some (public or private) financial intermediaries: therefore, no risk-sharing would be present in this scheme. The securitization vehicle, issuing the ESBies, should hold government securities in proportion to the size of member countries (measured by their GDP or by their ECB capital key). Thanks to diversification and tranching, ESBies would create a risk-free asset. Actually, the main role of ESBies would be to provide a EZ-wide safe asset, allowing banks to diversify the sovereign risk in their balance sheets and to break up the doom loop between sovereign and bank sectors. This point raises the issue of why should banks prefer to invest (at similar yields) in ESBies rather than in other government securities perceived as risk-free and traded in a liquid market, like the German bunds. Most probably, the introduction of ESBies should be supported by some regulatory distortion, like the exemption from risk-weights or concentration limits to be applied to government securities (as discussed in Baglioni - Hamaui, 2017). Another possibility, as suggested by Costancio (2018) is to introduce a public guarantee, jointly provided by member states, on a small first loss tranche of the ESBies.

It is not our purpose here to assess which, among the above versions of safe bonds, is superior to the others. Our point is that, abstracting from their specific features, European safe bonds (blue or purple bonds or ESBies) might be those EZ-wide government securities for which the Eurosystem should be allowed to be the LLR, by providing liquidity in the primary and secondary markets, should it be necessary. As far as these securities are concerned, the anomaly of the EZ would be fixed up. By limiting the LLR function of the central bank to these bonds, the institutional framework of the EZ would preserve the individual responsibility of national governments to honor their national debts. In case they were not able to do so, the door for restructuring their liabilities would be open.

A similar view is taken by Corsetti *et al.* (2016), who propose that a "euro area fund" should issue Eurobonds and stand ready to purchase in the primary market national public debt of those countries satisfying common fiscal criteria (more flexible than the Stability and Growth Pact). The fund and the ECB would jointly be liable for the conversion of maturing Eurobonds into currency at par. Violation of the fiscal criteria by one country would lead to the prohibition to the fund from buying the government bonds of that country, possibly opening the way to the restructuring of its public debt (without prejudice to its participation to the EU and the EZ).

3.3 Limiting banks' holdings of government bonds

The concentration of risk, due to the strong exposure of banks to the domestic public sector, raises some concerns for the stability of the financial sector. As we argued above, the current situation is

¹³ The proposal has been endorsed by the European Systemic Risk Board and by the EU Commission. See ESRB (2018) and EU Commission (2018).

partly a side effect of the lack of a central bank playing the role of LLR for governments. In recent years (since the beginning of the PSPP in early 2015) the exposure of the European banks to the sovereign risk has decreased, but the level of risk concentration remains high in some countries, namely Italy, Spain and Portugal. As we argued above, it is true that banks are exposed to the macroeconomic shock, represented by a default of the domestic public sector, independently of their direct exposure through their holdings of government securities. However, the latter are an important channel able to amplify the negative impact of a sovereign default: indeed, in high debt countries the link between sovereign and bank default risks is stronger for banks with a larger exposure to the public sector, as documented by Altavilla *et al.* (2016) using CDS premia.

In principle, there are two ways to tackle this problem. One is to assign a positive weight to government securities in the computation of the Risk Weighted Assets (RWA) that are used to determine the capital requirements (CET1 ratio and Total Capital Ratio) imposed by bank regulators. The other way is to introduce some limits to the holdings of domestic government securities into the banking regulation.

The first solution seems to be unacceptable, since it would imply that the public debt of countries with high credit ratings (like Germany and France) would continue to enjoy a zero weight, while other (high debt) countries would be given a weight between 50% and 100%. The latter countries would be penalized, in terms of yields to be paid on government securities and in terms of capital requirements imposed on domestic banks. To the extent that some home bias would still remain, this would also imply more difficult access to credit for companies of high debt countries, particular small and medium firms that are more dependent on domestic credit, thus perpetuating a condition of competitive dis-advantage. The second solution seems to be much less distortive, by imposing a concentration limit to be applied uniformly to the government bonds of any country. Furthermore its impact, in terms of disposal of securities by banks and market price drop, might be limited through a gradual introduction of the regulatory constraint. This constraint might be introduced with some degree of flexibility, along the lines followed by the capital requirements, which have both a Pillar I and Pillar II components, and a macro-prudential dimension as well. This solution might give the supervisory authorities, endowed with the power of applying the concentration limits, the possibility of reacting to a shock, affecting the liquidity of a sovereign borrower, by softening the constraint.

For the reasons explained above, namely for the trade-off between the stabilizing functions of the banking sector and of the central bank in the market for government securities, we believe that the introduction of regulatory limits to the holdings of government bonds by banks should go in parallel with some institutional reforms able to remove the anomaly addressed in Section 2. Absent such reform, the concentration limit might have destabilizing consequences and should therefore be introduced with caution and a high degree of flexibility.

Fig. 1 - Banks' holdings of domestic Gov. bonds (millions euro)

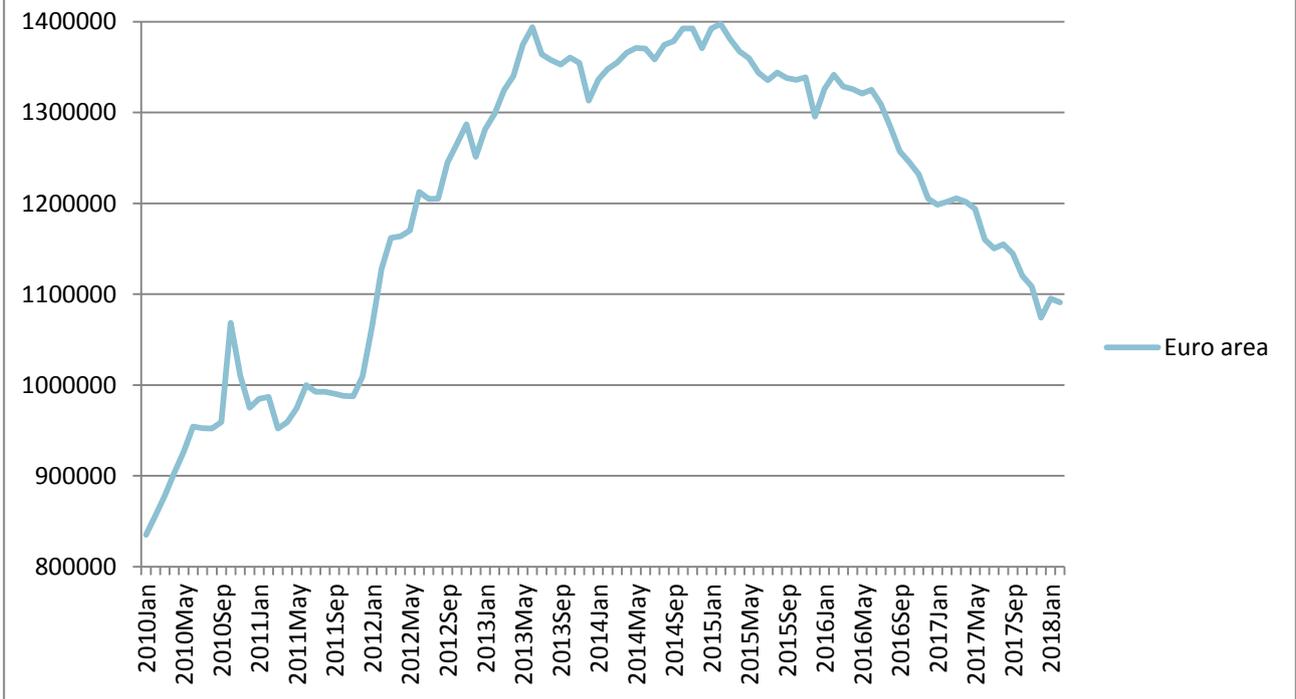
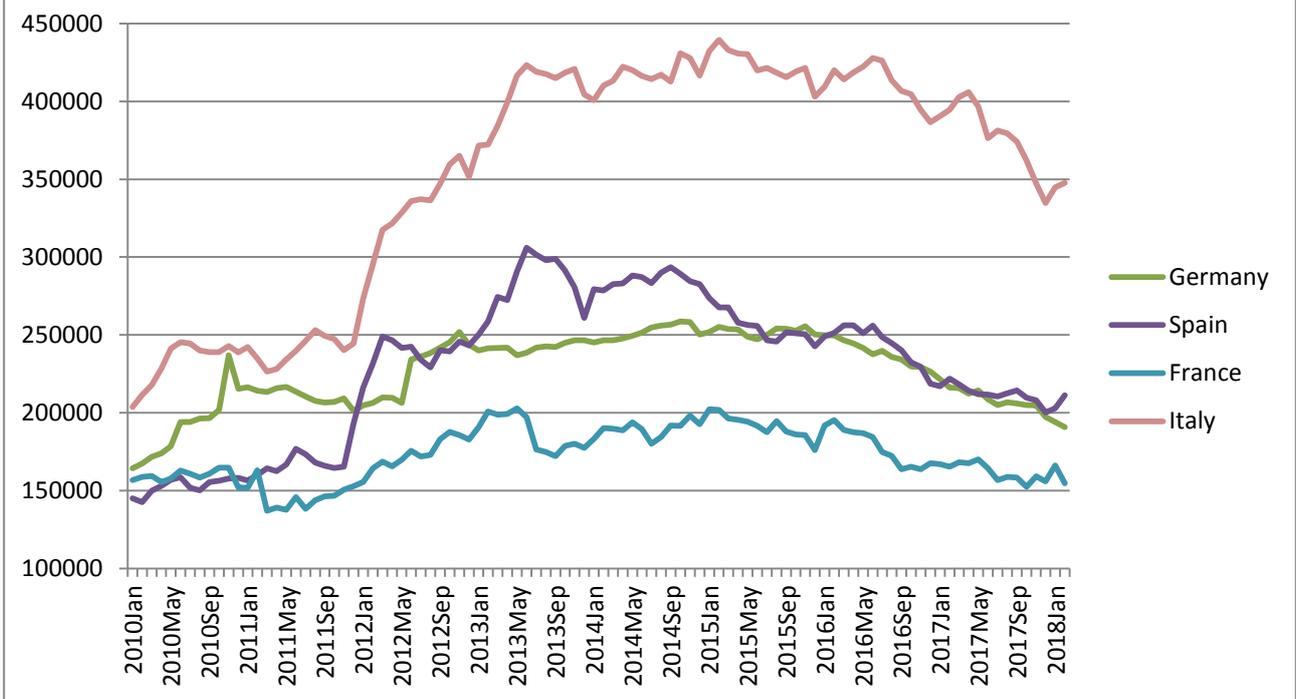


Fig. 2 - Banks' holdings of domestic Gov. bonds (millions euro)



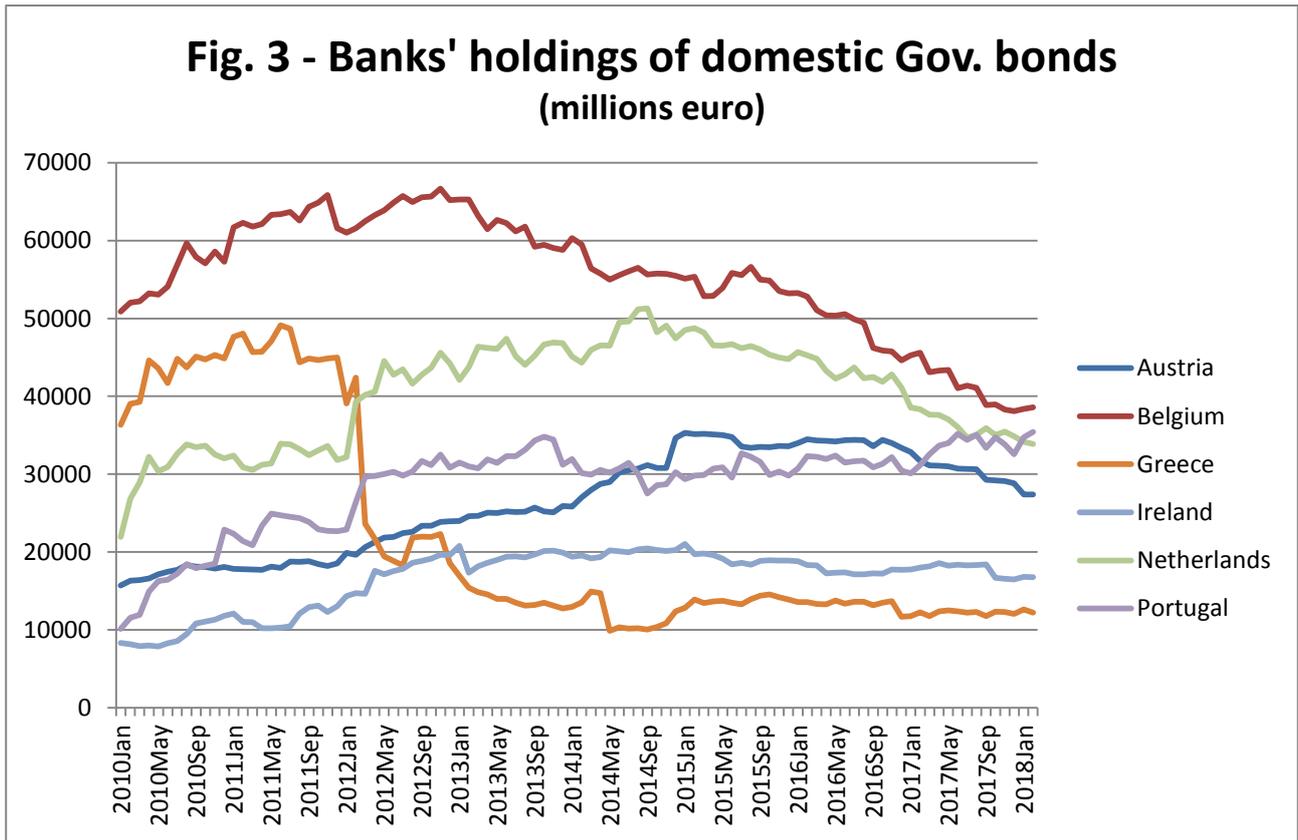
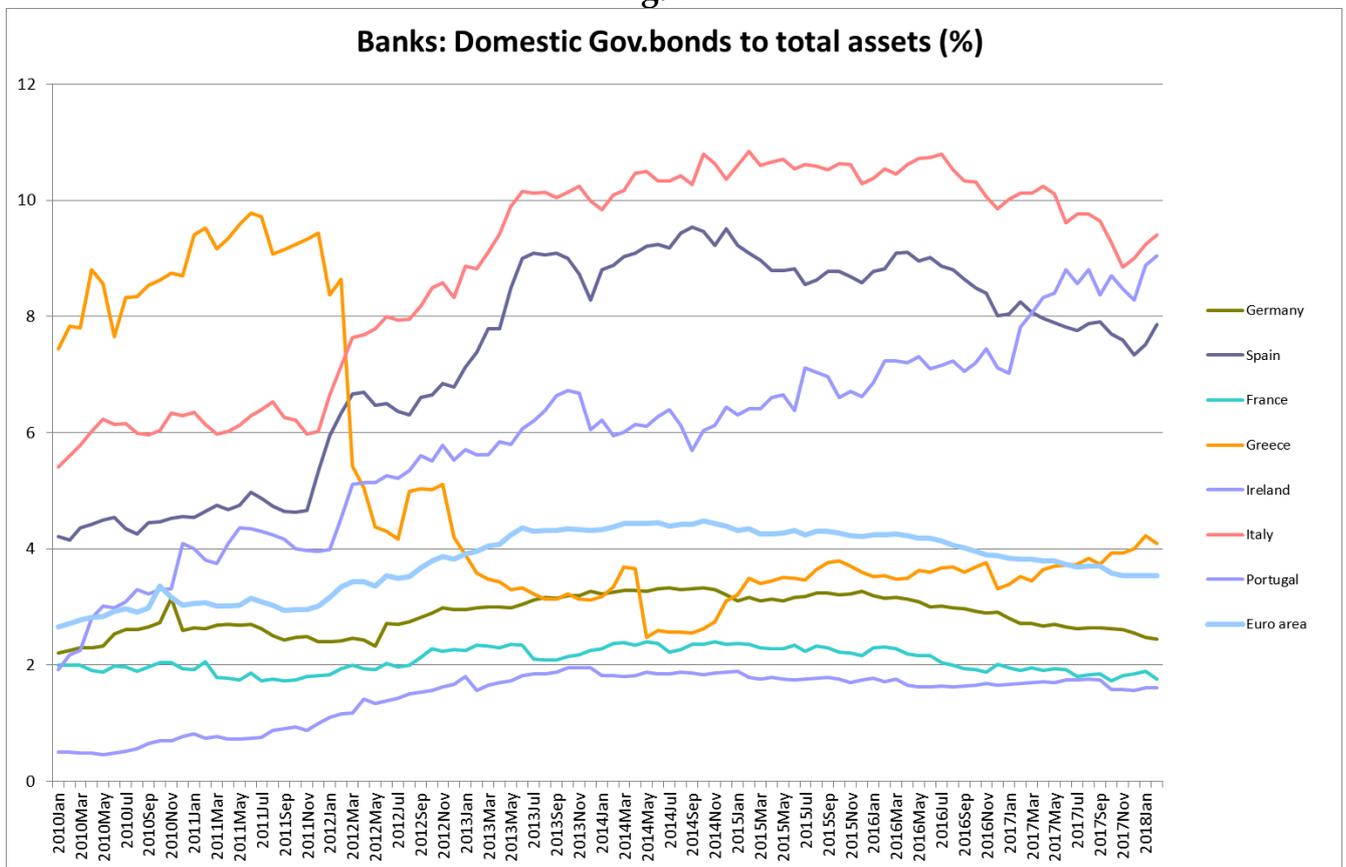


Fig. 4



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