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EUROPEAN SOVEREIGN BOND-BACKED SECURITIES: AN ASSESSMENT AND AN ALTERNATIVE PROPOSAL

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Preface

In response to a proposal put forward by the European Commission for the regulation of sovereign bond-backed securities (SBBSs), Mario Tonveronachi provides his analysis of the SBBS scheme and attendant regulatory proposal, and elaborates on an alternative approach to addressing the problems that have motivated this high-level consideration of an SBBS framework.

The SBBS scheme is designed to address two problems afflicting the euro area's financial system (or, to the point, systems). First, the absence of a common yield curve means that the euro area does not truly have a single financial market. The SBBSs would serve as the common asset required to create such a yield curve. Second, the SBBS proposal is supposed to break the link between bank crises and sovereign debt crises in the eurozone (the so-called "doom loop") by shielding banks from sovereign crises and preventing banking crises from turning into sovereign debt crises.

As this policy brief explains, it is doubtful the proposal would produce its intended results. The SBBSs would be created through a securitization process similar to that of a credit default option structure. However, given the limited number of systemically correlated assets involved, the pool would not be sufficiently diversified. Moreover, Tonveronachi argues that, unlike the traditional corpus of a securitized asset, there is no established procedure to estimate the expected yields of the SBBSs. Further, a range of underestimated costs—along with the need to maintain sufficiently enticing profit margins for the private financial institutions originating and distributing them—would significantly complicate the plan to make certain tranches of SBBSs equivalent, in terms of safety and yield, to the highest-rated national sovereign bonds. The proposed European Commission regulation—which aims at subjecting SBBSs to the same financial regulatory requirements as their underlying national sovereign bonds—does not appear to surmount these difficulties. Attempts to add flexibility to address complications with the SBBS scheme would undermine the ability of the scheme to establish a common yield curve for the euro area—one of the two central purposes of the plan. Worst of all, the scheme may undermine rather than bolster financial stability. In a stark assessment, Tonveronachi suggests that, if adopted, it would be preferable to abandon the proposal in order to forestall the build-up of dangerous financial instability dynamics.

There are, Tonveronachi points out, better options. His alternative—discussed in evolving forms in Levy Institute Public Policy Briefs Nos. 137 and 140—would involve the European Central Bank (ECB) issuing debt certificates (DCs) along the maturity spectrum to create a common yield curve. Through corresponding operations, the ECB would absorb a share of each eurozone country's national debts (according to ECB capital keys). Alongside these financial operations, new fiscal rules incorporating more ambitious targets for sovereign debt ratios would be imposed—with more drastic consequences for noncompliance, but a more favorable influence on euro area economic growth (as compared to the futile, deflationary fiscal dynamics built into present arrangements). This alternative proposal not only better addresses the two problems targeted by the SBBS scheme, but also a third, critical defect of the current euro system: that is, it fosters national sovereign debt sustainability.

As always, I welcome your comments.

Jan Kregel, *Director of Research*
June 2018

Introduction

The governor of the Bank of Italy, Ignazio Visco, devoted part of his speech at the 29th Assiom Forex Congress to issues related to the public debt of euro area countries. According to Visco,

> A faster reduction of public debts in euro-area countries than that guaranteed by prudent budget policies could be achieved by issuing European debt securities to remove a portion of those issued by member states from the market, with clearly defined procedures and without transferring resources from one country to another, giving form to a fiscal union to be accompanied by binding rules and powers of control and intervention. As I have recalled on other occasions, various concrete proposals have been made in this direction. The new common debt instrument could serve as the kind of safe asset typically found in advanced countries with a national currency; the reduction of member states' national debts would eliminate potential sources of financial instability; the greater scrutiny of public accounts that would accompany this measure would shelter the euro area from the risk of new increases in public debt at the national level. (Visco 2018, 10)

Since the sustainability of public debt depends on the ability to service it, to be counted as a reduction of public debt the creation of European debt securities should significantly decrease the net interest paid on that debt; hence, the share of debt removed from the market must be serviced under terms that are more favorable than the nominal ones. How this could be done without "transferring resources from one country to another" is a tricky question.

Several plans have presented the creation of European debt securities as the solution to one or more of the following three problems:

1. The lack of a truly common yield curve for the common currency area, which renders its financial markets fragmented.
2. The excess of public debt beyond the Maastricht ceiling, which is taken as an indicator of unsustainable debt and requires strong fiscal convergence conditions.
3. The vicious spiral between bank and sovereign crises, with the new bank resolution regime intended to impede bank crises from impinging on public debt and the possession of safe European debt securities by banks shielding them from sovereign crises.

The proposals to which Visco refers should also adhere to two European Union (EU) constraints: that is, there should be no transfer of resources between member countries and the incentives for prudent fiscal policies should be maintained or increased.

Recently, the European Systemic Risk Board (ESRB) promoted a feasibility study on the issuance of sovereign bond-backed securities (SBBSs),[1] whose objectives are limited to solving problems 1 and 3, listed above. Given the sponsoring authority and the members of the high-level task force (HLTF) that produced the report—representing the European Central Bank (ECB), the ESRB, the European Commission (EC), the Economic and Financial Committee, the European Banking Authority, the European Stability Mechanism, and many European central banks—and given that the EC has just produced a regulatory proposal on the SBBSs (EC 2018a), a discussion of the scheme and of the regulation is in order. Sections 1–3 of this policy brief assess the critical aspects of the HLTF's SBBS scheme and the EC's related regulatory proposal.[2] Section 4 briefly summarizes an alternative proposal that the present writer has previously offered, whose goal is to solve all three of the aforementioned problems within the boundaries of EU constraints while at the same time giving more consistency to the euro area's institutional setup. Section 5 concludes by discussing some political and technical implications of the two alternative schemes.

Sovereign Bond-Backed Securities (SBBS)

The SBBS scheme is explicitly a refinement of a proposal initially put forward by Brunnermeier et al. (2011) on the issuance of European Safe Bonds (ESBies).[3] What follows is confined to the presentation and discussion of the main features of the SBBS scheme that I consider necessary to evaluate its pros and cons.

The SBBS would be the product of a securitization process of the well-known credit default option (CDO) type, according to which a pool of euro area sovereign bonds, with a composition akin to the ECB capital key,[4] would be sliced into senior,

mezzanine, and junior securities, each with maturities of 2, 5, and 10 years. According to the calculations of the HLTF report, the total pool would be comprised of 70 percent senior, 20 percent mezzanine, and 10 percent junior securities and would be designed to give the senior tranche the status of safe assets, with at least the same rating and return as German bonds.[5]

Some members of the HLTF rightly point out that to reach that level of safe rating a wide-ranging reform would be necessary, in order to attribute to the senior SBBS the same privileges as those accorded by financial regulation to national sovereign bonds. The regulation proposed by the EC is devoted to producing just such a regulatory equivalence. However, the latter would be a necessary but not sufficient condition for obtaining comparable returns, due to the favored tax treatment generally granted to sovereign bonds. Each participating country would have to include the senior tranche of the SBBS in the "white list" of recognized sovereign debt. The introduction of securitized products into the white list might not be easy to arrange, establishing a potentially dangerous precedent. Neither the report nor the regulation takes notice of this further requirement and its attendant difficulties.

The institutional setup would require the creation of one or more dedicated arrangers and issuers. The first would be in charge of creating the pool according to orders received from SBBS investors, tapping the secondary and primary markets, then passing the pool of sovereign bonds to the issuers, and finally distributing the slices of SBBS according to the initial demand. Since arrangers would have to fund a warehouse of bonds while assembling the pool, they would be subject to warehouse risks. The issuers would produce the slices and pass interest and capital payments to investors, according to the seniorities included in the slicing contracts. Given that these contractual obligations should cover all states of the world, the issuers would be default-free. However, public supervision is necessary for avoiding operational failure or fraud. No public guarantee would cover investors' SBBS risks.

The HLTF report seems to leave it up to a political decision as to whether the arrangers and issuers will be private or public. Both solutions would have merits and demerits. If private, a chunk of gross interest should be left to arrangers to cover their return and warehouse risks. In addition, the higher their number, the lower the economies of scale on operational costs, although such economies are considered quite immaterial by the HLTF report. If public, these risks should be hedged by a common fund, which would involve the mutualization of eventual losses, thus introducing a sensitive political issue. The public solution could benefit from economies of scale coming from the existence of only one arranger and one issuer. Although not clearly stated, the report seems to favor the private solution to dispel any hint of the existence of some form of implicit public guarantee. The EC's proposed regulation is only devoted to the private solution.

The amount of the SBBS issued would be demand-led, up to a foreseen €1.5 trillion or more. Starting from zero, adopting a gradual prudential approach, and maintaining the stock over time would imply different vintages of sovereign bonds' pools, with possible significant variations in the quality and country composition of the pools, which would fragment the overall SBBS market. The report discusses this issue but plays down the possible effects of eventual changes on the liquidity of older vintages.

This cursory summary of the HLTF document has not included a vast amount of technical economic and legal detail that, intended to make the scheme "bulletproof," add to its already significant complexity.

Comments on the SBBS Proposal

First, we must clarify that the HLTF document is not intended to deal with the problem of sovereign debt sustainability. National debt would continue to be issued at market conditions, which would not be affected by the SBBS scheme because this would not in any way decrease sovereign funding costs. There is no need to emphasize how significant this issue is for the current and prospective conditions of several euro area countries and the social-political future of the union.

However, if we assume that the SBBS scheme is meant to become a structural feature of the EU financial market, and hence must function and endure in different scenarios, it is necessary to ascertain how resilient it would be. Volume 2, section 3 of the HLTF report includes critical comments on the proposal provided by a series of private stakeholders. These comments are instructive for understanding the difficulties and perplexities raised by the report. In what follows, I share some of these criticisms and propose new ones.

Lacking any public guarantee, we may doubt that a securitization mechanism (although counting on expert valuations) could produce a "safe" asset that, offering the same return,

would be preferred to well-tested national triple-A bonds. The unavoidable uncertainties (margins of error) linked to securitization processes should require an additional risk margin. We may recall that the triple-A bonds coming from the securitization of subprime mortgages were in demand due to their offering a significantly higher return than other securities with similar ratings. And the composition of the SBBS pool would include a large amount of sovereign debt with a non-negligible probability of becoming subprime.

Illuminating in this regard is a Standard & Poor's document entitled "How S&P Global Ratings Would Assess European 'Safe' Bonds" (S&P 2017). Although referring to Brunnermeier et al. (2016), this document's critiques concern features that the ESBies proposal shares with the SBBS scheme.[6] The starting point is that the pool of sovereign bonds proposed in the HLTF's report would not be differentiated according to the risk profile of its components. This means that some countries (Italy is explicitly referred to) would be overrepresented with respect to a risk-based portfolio. The S&P document overemphasizes this distortion by assuming that the pool would reflect the proportions of the eurozone's sovereign bond market, while the SBBS proposal would substantially rely on the ECB capital keys. However, the difference between the two methods is not large. Summing up the shares of the low-rated debt of Cyprus, Greece, Italy, and Portugal considered in the S&P document, we obtain 29.56 percent, while the sum of the weights in the SBBS portfolio for the same countries would be 22.28 percent. Given that the regulatory equivalence with sovereign bonds could only be politically obtained following ECB capital keys, the pool would end up being structurally risk inefficient either way. Moreover, the pool would be poorly differentiated with respect to a typical CDO structure, counting only 19 distinct assets that experience shows are systemically correlated. The result is that, according to S&P, "standard quantitative tools to analyze CDOs cannot meaningfully process calculations on the undiversified ESBie asset pool" (S&P 2017, 4). The alternative proposed by the S&P document is what it calls the "weak-link approach," ranking the underlying sovereign bond assets from the lowest rated to the highest: "If the junior tranche is 30 percent of the issuance, our rating of the senior tranche (ESBies) would be equivalent to the next highest sovereign bond rating directly above the 30 percent mark" (4).[7] The S&P calculations produce a BBB– rating for the senior tranche, adopting a 30–70 percent partition, and a BBB+ level for a 40–60 percent partition. Surely, using the ECB capital keys we would not obtain the triple-A rating for the top 70 percent of the pool.[8] The percentage of triple-A assets is crucial for calculating the amount of safe assets that would be produced in relation to the safe assets that the pool absorbs. Let us remember that the goal of the scheme is to offer to the eurozone a multiple of the amount of safe assets currently available. According to the S&P calculations, only 20.7 percent of total assets produced would be safe, while absorbing 21.7 percent of them, leaving a negative gap with liquidity multiplier effects in the wrong direction. Using ECB capital keys, the negative gap could perhaps disappear, but without producing the large multiplier required for justifying the entire construction. A large safe-assets multiplier would in fact be required for the scheme to offer enough liquidity for the entire eurozone along the maturities required to produce a common yield curve.

Obviously, the sophisticated calibration contained in section 1 of the second volume produced by the HLTF (ESRB 2018) leads to different results. It is my opinion that the methods employed do not overcome S&P's methodological critiques of the undiversified and correlated assets included in the pool. It should be noted that the HLTF document does not innovate on the methodology used by Brunnermeier et al. (2016), which is the target of the S&P assessment. Remembering past experiences with CDO structures and value-at-risk methodologies, we should have serious reservations regarding this crucial part of the HLTF proposal.

Another critical point concerns the returns accruing to investors for the different slices and maturities of the SBBS, considering the costs related to the entire structure. Section 1.4 of volume 2 of the HLTF report is devoted to estimating gross yields on SBBS, while section 4.1.2 estimates upfront and running costs in order to obtain net yields.

Gross yields are estimated via a multivariate Monte Carlo simulation using historical market data. As the report affirms, the results are sensitive to model uncertainty, to which we should add the limitations stemming from: the reduced number of countries considered (11 out of 19); necessarily having to adopt a series of simplifying hypotheses, among which the maturity composition of the pool; and data availability constraints. My limited expertise on these matters does not permit me to judge the robustness of the results. However, since a few basis points make a difference for the investors' election between national bonds and synthetic SBBS, upon which the success of the

proposal rests, I doubt that the calculation of the yields found in the report are free from any residual uncertainty.

In that context, the reader of the HLTF report will note that the calculated yields of the senior tranche of the SBBS for the planned 2-, 5-, and 10-year maturities fit perfectly with the corresponding yields of German bonds, thus seeming to fulfill the initial promise of the proposal (ESRB 2018, Volume 2, Figure 4.2). However, this result further depends on assuming a positively sloped yield curve and adjusting the relative maturities of the pool and of the SBBS through a maturity mismatch between the two: "The recurring costs . . . amount to 0.054 percent of the volume issued. This must be deducted from cash flows accruing to sovereign bonds held by the issuer if it is to break even. This implies that the weighted average yield-to-maturity of all SBBS maturities and tranches must be 0.054 percent lower than that of the pool" (ESRB 2018, Volume 2, 122).[9] Here I find myself a bit lost. Apart from assuming linearity between yields and maturity, the limited degree of maturity adjustment necessary to obtain the "German result" is obtained by forgetting other subtractions from the gross interest of the pool that the report rightly considers, such as upfront costs, warehouse costs, the profits necessary to attract private arrangers and issuers, and the cost of covering the interest rate risk coming from each maturity of SBBS corresponding to the average maturity of a subset of the pool. Adding to this the uncertainty of the computed yields, the consequent maturity transformation necessary to break even would be much more sizable than the one assumed, and any serious private financial operator would not enter the business without a proper capital endowment, which leads to a further remuneration fee. In any case, because private arrangers and issuers would benefit from ad hoc regulatory changes to gain crucial market access for the SBBSs, they should not escape regulatory capital and liquidity requirements, having to manage significant operational risks and maturity mismatch. This would add to the other forms of supervision already envisioned by the report. Then the further question arises as to who pays for it. If, as for the banking sector, the costs of supervision were to fall on supervisees, the necessary maturity mismatch and management complexity would further increase. I am far from certain that there are sufficiently enticing profit margins to induce private actors to enter this business, at least on a large scale.

The operational feasibility of the SBBS scheme would perhaps improve if a political agreement could be reached to create one public arranger and one public issuer. Some operational cost savings would result; however, due to having to resort to rating agencies and external advisers, both upfront and recurring costs would not decrease much. Furthermore, these public agencies would have to be capitalized, implying public costs and some degree of risk mutualization. The concern expressed by the HLTF report—that the public-agencies option could be considered as implying some form of guarantee for investors—has been acknowledged by the EC, whose regulation only pertains to the use of private issuers and arrangers.

A final point relates to the report's assertion that the SBBS scheme would improve the stability of the euro area financial system. De Grauwe and Ji (2018) offer a further objection to the plan, based on its potential destabilizing effect during a crisis. First, "since the markets of sovereign bonds will have shrunk, the yields are likely to be more volatile during crisis periods. Second, we observe that during crises, the correlation pattern of yields changes dramatically. . . . The implication is that during crises it is very unlikely that the senior tranche in the SBBSs can maintain its status of safe asset . . . The perception that this senior tranche is equally safe as the safe-haven sovereign bonds (e.g. German bonds) is very unlikely when markets are in panic mode." Third, "during normal times, the safe asset will have been used in the pricing of derivatives and other financial instruments and it will be an important part of the repo market providing liquidity in that market. . . . When, during crisis periods, the safety of that construction is put into doubt . . ., liquidity will tend to disappear and the whole financial sector of the euro area will be at risk. In the end we may have more rather than less financial [in]stability in the Eurozone" (De Grauwe and Ji 2018).

To be clear, the relevance of the criticisms discussed so far and those included in volume 2 of the report should not be considered in isolation. Taken together, they suggest enough uncertainty regarding the feasibility and results of the scheme to advise against adopting this complex institutional innovation.

A Brief Assessment of the Proposed Regulation

As mentioned, the EC's aim is to submit the SBBSs to the same regulations—capital, liquidity, and concentration requirements—that are currently applied to their underlying sovereign bonds. Granted regulatory neutrality, the EC affirms that "whether or not SBBSs are viable can ultimately only be

ascertained by putting them to a market test. This proposal paves the way for such a market test" (EC 2018a, 2). The implication is that, if the market test fails, no problems would ensue.

The test might fail in three ways, with different implications. First, significant demand for SBBSs may not materialize, because, for instance, operators in high-grade countries prefer their own sovereign debt to equally profitable synthetic ones, thus also severely limiting the quantity of safe assets necessary for building the pool. Furthermore, no mention is made in the proposed regulation of the fiscal treatment of the interest coming from SBBSs, which, rebus sic stantibus, would be more onerous than the one accorded to their underlying sovereign bonds. An unfavorable tax treatment would further depress the demand for SBBSs. It should be noted that the purpose of the entire project is to greatly expand the quantity of safe assets of the euro area (which are currently limited to the sovereign debt of Germany, the Netherlands, and Luxembourg). Little damage would result from this insufficient demand for SBBSs, except the damage to the reputation of EU authorities.

Second, private operators may not be available to assume the role of originating and managing a large issue of SBBSs along the maturity spectrum necessary to produce a risk-free yield curve. As we have seen, to cover their costs and profits, and at the same time to remunerate the various tranches of senior and junior SBBSs as required by the market, the operators must produce a maturity transformation between the acquired pool of sovereign bonds and the SBBSs. Private arrangers and issuers should be able to count on a significant mark-up that can only be derived from the positive slope of the yield curve. The fact is that they have neither the freedom to adjust the composition of the pool, which must substantially adhere to the ECB capital keys, nor command over the maturity of the available sovereign bonds, nor substantial influence on the positive slope of the yield curve, which should remain in the domain of the market and the ECB. Dynamic stability is the necessary requirement of the scheme because the liquidity for the euro area would come to depend on it. How this can be obtained is not clear, given that the amount of safe assets for the entire area would depend on changing conditions affecting the profitability of private operators. In other words, it is very doubtful that the private operators could produce a *large* and *stable* multiplication of safe assets with the initial maturities required to build a yield curve, which is the essential purpose of the scheme. Stability could be derived by a much-reduced amount of SBBSs, but in this way we would be back to the previous point. Perhaps alerted to this problem, the regulation does not mandate that the SBBS issues should have the stable initial maturities of 2, 5, and 10 years on which the HLTF document was built. By leaving private operators free to adjust the maturity of each issue to the maturity of the underlying sovereign bonds, one of the critical goals of the initial scheme—the production of a single yield curve for the euro area—would not be met. In these conditions, the issuers of SBBSs would always try to exploit the steeper portion of the yield curve, thus potentially shifting in time the offer of SBBSs to different maturities. Since no obligation exists as to the quantity of SBBSs to issue, their production would in reality be supply-led, not demand-led as intended, and the supply of liquidity would fluctuate irrespective of its demand. In any case, the result would be financial instability. One might conclude that if the only effect of the regulation would be to induce banks to abandon the sovereign bonds of their low-graded jurisdiction, other, less contorted ways exist.

Third, we can question the robustness of the mathematical and statistical exercises in the HLTF document on which the regulation is based. The period over which the simulations of the HLTF were made included turbulence, but, thanks to ECB action, no exit from the area was experienced and only quantitatively minor players in sovereign bond markets saw their rating downgraded below investment grade, which is the stated condition for entering the pool. Since we cannot exclude the possibility that extreme events will happen in the future, it would have been wiser to stress test the simulations against these events. The merit of the SBBS scheme is supposed to be that it distributes them all over the area (integration); hence, any loss coming from issued SBBSs would entail their mutualization, affecting the private sector directly and public finance indirectly. What would then happen if a country of the weight of Italy saw its debt shift below investment grade, and/or Italy decided not to submit itself to the Greek odyssey and left the area? As De Grauwe and Ji (2018) have stressed, a mountain of derivatives would be created on the safe tranches of the SBBSs, so that a run from the latter (possible also in less extreme circumstances) would produce a liquidity crisis all over the euro area.

We must hope either that the EC, the European Council, and the European Parliament will pay due attention to the doubts and criticism that have been expressed, or that the immediate failure of the scheme will prevent a dynamic path of financial instability.

A Proposal Satisfying Visco's Goals and EU Constraints

Elsewhere, I have presented my solution to the three problems stated in the introduction (Tonveronachi 2014, 2015, 2016). Let me briefly recall its main features.

The solution is based on the ECB absorbing a share of national debts according to the ECB capital keys and issuing its own safe assets along the maturity spectrum needed to produce a euro area yield curve (solution to problem 1). In practical terms, the ECB would render stable the sovereign debt acquisition made with the ongoing Asset Purchase Programme (APP) and transform the liquidity thus created into its own debt certificates (DCs), which by statute it can issue without limits on volume and maturities.[10]

The DCs would entirely replace national sovereign bonds as collateral for the operations of financial institutions with the ECB. Practically, the current excess of liquidity created by the APP would be transformed into DCs of different maturities. Sovereign bonds retained by banks would be subject to regulatory requirements according to their merit of credit and with concentration limits; compared to current practice, this more unfavorable treatment—which is strongly opposed by several member countries—would end banks' current excessive exposure to national debt (solution to problem 3). The latter, not having to be used for liquidity management and being freed from banks' balance sheets, would continue to benefit from the same liquidity in secondary markets as at present.

Since the liabilities of the ECB would be the safest available assets, a new form of seigniorage would be created due to the difference between the yield of the national debt the ECB holds and the yield of the corresponding DCs it issues. The seigniorage earned by the ECB would be paid back to national governments according to this difference in yields—thus without entailing transfer of resources between countries. As a result, all euro area governments would pay the same safe interest rate on the share of their debt held by the ECB. We can also expect that in these conditions the share of sovereign debt of member countries held by the market, which would become the only reference point for debt sustainability, would command lower returns, with limited spreads among themselves. In contrast with the SBBS scheme, taking a share of sovereign bonds out of the market increases the sustainability of sovereign debt (solution to problem 2).

The availability of common risk-free assets along the entire maturity spectrum of the yield curve would end the structural fragmentation of the euro area banking system and would constitute the necessary condition for the unification of the area's entire financial system. Apart from other idiosyncratic national features, every euro area debtor would operate on a level financial playing field, adding a crucial brick to the singleness of the product and service markets.

Dynamically, the ECB would issue new DCs, and hence acquire new sovereign bonds on the secondary market, only as required by the increase in the demand for liquidity coming from the financial system (which is a function of the euro area nominal GDP growth) and as dictated by its autonomous monetary policy stance. Apart from annual deficits, sovereign indebtedness toward the market would decrease, due to the correlated decrease of its numerator and increase of the denominator, thus further improving sovereign debt sustainability.

Given its fiscal implications, the scheme should be accompanied by a new set of fiscal rules. The proposal aims at establishing two debt ceilings: the current one, at 60 percent of GDP, and a new one, to which all countries would finally converge, at 30 percent. A country with a stock of sovereign debt held by the market exceeding 60 percent of GDP, net of ECB acquisitions, would be obliged to a zero-deficit rule, thus allowing its indebtedness to decrease with nominal GDP (NGDP) growth and the related acquisition by the ECB. A country below the 60 percent threshold but over the 30 percent threshold could produce a deficit calculated to produce a constant amount of debt held by the market, thus leaving the decrease of its indebtedness to the growth of NGDP. Once that country reached the new 30 percent constraint, its indebtedness could be held constant by increasing its deficit above the previous level. In comparison to the current rules, these deficits would increase the euro area's growth rate, and some simulations show that this would accelerate the convergence toward the 60 percent and 30 percent ceilings for all countries, but especially for the more indebted ones. The new fiscal conditions, considered in terms of debt sustainability (as they should be), would be much easier to comply with than the present ones, given the substantial benefits resulting from the scheme.

The scheme should also contain much stronger incentives to comply with its rules. Countries out of compliance would be expelled from the scheme, obliged to pay for the difference

between the purchasing and selling price of the debt held by the ECB, and returned to the current arrangement.

The first version of the proposal (Tonveronachi 2014) has been criticized for introducing sovereign debt mutualization through the back door (van Riet 2017). Given its relevance, it is necessary to briefly expand on this issue. Since my initial proposal lacked the analysis of the fiscal and debt dynamics of the scheme, this criticism is understandable; however, the later, complete version has been available since 2016. As explained above, a country not complying with the rules, which require following a path toward debt sustainability, would be expelled from the scheme and, due to a contract stipulated as a condition of entry, would reimburse any difference between the purchasing and selling price of the debt held by the ECB. This mechanism eliminates any form of mutualization. One might object that dangers of noncompliance with this initial contract on the part of the expelled country still exist, despite possible safeguards and retaliation measures, thus retaining a degree of counterparty mutualization risk. To judge how probable an exit from the scheme (obviously not from the euro) would be, let us consider that the initial debt acquisition by the ECB, its effect on cutting the present value of debt by reducing interest payments, its dynamic impact on growth and debt, and the strong incentive to comply with the rules would send clear signals of debt sustainability to the markets, thus progressively reducing interest payments on the entire stock of debt—a virtuous dynamic path. Much more powerful positive signals would be sent than the ones produced by the ECB's ongoing APP, which de facto mutualizes the sub-share of debt held by the ECB in more severe conditions than the ones deriving from the DC proposal—and the APP, moreover, has passed the test of legal legitimacy. As for all relevant EU decisions, a minimum political consensus is required, albeit lower than the one reached with the mutualization operated through the fund of the European Stability Mechanism. Incidentally, the latter could explicitly serve as a backstop for freeing the ECB from any possible losses.

The DC proposal would provide all the benefits Visco attributes to European debt securities and solve all three problems their creation is meant to address.

Conclusions

The two proposals discussed in the preceding pages—the SBBS scheme and my DC proposal—represent different ways to look at the euro area's problems and their solutions.

A widespread agreement exists regarding the institutional and policy deficiencies affecting the euro area. However, opinions diverge as to the analysis of these deficiencies and their necessary remedies. Without going into historical debates, but taking the situation as it currently stands, the more relevant inconsistency comes from having a monetary policy operated as if serving a federal state while fiscal sovereignty remains at the national level. Three main defects follow from this inconsistency: the absence of a common yield curve, hence the structural fragmentation of the area-wide financial system; limits to the transmission of monetary policy, especially in periods of crisis; and different legacy and prospective problems related to national sovereign debt and their influence on banking resilience.

The SBBS proposal and the proposed EC regulation are directed at tackling financial fragmentation and the implications of sovereign risk on banks' resilience, without affecting the sustainability of national public debts. The operations of existing euro area institutions would not be altered—fiscal rules included—while a new complex private or public institutional setup would be added for managing SBBSs. The fact that these new instruments, which need public approval and support, are explicitly designed for taking into account sovereign defaults sends a clear political message: as proposed by some member countries, sovereign national debt should be subject to market discipline and bankruptcy procedures, not just to tackle legacy problems but in view of making the incentives to comply with the existing fiscal rules more effective. A possible effect of this message could be to increase the divergence between sovereign spreads, thus rendering debt sustainability more unattainable for the more indebted countries and further skewing the uneven playing field for their national economic operators.

The DC proposal starts from a different perspective. Its primary goal is to render the operations of the ECB consistent with serving a non-federal state. To be effective, a common monetary policy requires a single financial market, and that in turn requires all participants to operate with the same risk-free assets—for liquidity purposes and for pricing risks—and the same risk-free interest rates. Lacking the reference to

a common public debt, the alternative introduced by this proposal is to have the ECB produce the required risk-free assets with maturities encompassing the whole yield curve. A mixture of benefits linked to the ECB's acquisitions of public debt, new reflationary fiscal rules, and strong incentives to remain inside the scheme render the convergence to debt sustainability much easier than at present, and more compelling. Politically, it would signal that the union—through adjustments directed at increasing the coherence of its institutional setup, without requiring EU treaty changes—is undertaking a serious effort to mend social wounds, not leaving troubled countries to fend for themselves. Furthermore, it is politically relevant that a sort of new seigniorage would be used to improve the sustainability of sovereign debt, rather than dispensed as profits and costs to the private sector. In this favorable environment, it would be justified to impose harsh measures on countries that, not by accident, fail to comply with the new rules.

Within the confines of its own mandate, the HLTF has investigated, with competence, commitment, and transparency, the complex implications of setting up an SBBS scheme, although it has downplayed several of the scheme's shortcomings, like the dynamic link between stability and the profits of private arrangers and issuers. Apart from not touching the issue of sovereign debt sustainability, my opinion departs from the report's evaluation—which has been incorporated into the proposed EC regulation—of the net benefits resulting from the adoption of the project. The effects of the SBBS proposal are characterized by an excessive degree of uncertainty and its adoption could seriously undermine the financial stability of the area.

The European authorities should be conscious of the risks of allowing what the regulation simplistically calls a "market test." Furthermore, contrary to what is affirmed in the impact assessment accompanying the regulation—according to which "the choice to be made is between keeping the status quo (i.e. 'do nothing,' or baseline) versus introducing a legislative proposal to enable the development of SBBS market" (EC 2018b, 19)—feasible alternative policy options exist.

Notes

1. The two-volume document (ESRB 2018) represents a ponderous study produced by the ESRB High-Level Task Force on Safe Assets, chaired by Philip Lane, the governor of the Central Bank of Ireland.
2. I have briefly discussed other proposals based on European bonds in Tonveronachi (2016). To the best of my knowledge, none of them deals with the entire set of the three problems outlined above.
3. The more recent version of the ESBies proposal—to which the mandate given to the HLTF refers—was published as an ESRB working paper (Brunnermeier et al. 2016). The strict link between the ESBies and SBBS proposals is also confirmed by the fact that some authors of the former are also members of the HLTF, including its chairman.
4. The ECB capital keys are member countries' percentage contribution to the ECB paid-up capital. Eventual differences in the SBBS scheme would mainly come from the conditions that the pool should include only sovereign bonds with primary market access, with competitive secondary market prices, and for an amount up to 33 percent of the outstanding face value of each government's debt securities.
5. The credit-enhancing effect of a design presented as robust to parameter uncertainty can be appreciated by noting that only three euro area member countries have a triple-A rating (Germany, Luxembourg, and the Netherlands), summing up to 21.7 percent of the euro area sovereign debt securities and 32.2 percent of the pool.
6. The HLTF is evidently aware of S&P's criticisms, since the references in volume 2 of the report include the S&P document.
7. The 30 percent junior tranche is the sum of the SBBS junior and mezzanine tranches.
8. In a cautionary passage, the S&P document affirms that

> These calculations are a rough approximation. The correlation of default risk among eurozone sovereign issuers may be lower in the future. The key factor determining the structure of the assets may not be the amount of outstanding sovereign debt but GDP [akin to ECB capital keys], which would reduce the weight of lower-rated and highly indebted sovereigns. What's more, post-default recoveries could have a positive effect on the assessment of ESBies

(our sovereign issuer credit ratings are opinions on probability of default only, not on recovery). Even so, all things considered, we believe our final rating on ESBies would not likely be far from the outcomes under the approach we've outlined, that is, in the low investment-grade categories. (S&P 2017, 5).

9. Since national governments would remain sovereign in their decisions on the maturity structure of their debt, it would not be an easy task to arrange the average maturity of the pool without resorting to costly derivative contracts, which would leave arrangers or issuers exposed to counterparty risks.
10. Note that, not being subject to liquidity constraints, the central bank would be free to accommodate the maturities of issued DCs to the demand coming from the market and to its own policy, irrespective of the term structure of sovereign bonds, over which individual governments would remain in control. The ECB has already made use of the DCs in its past structural market operations. We may also note that the Reserve Bank of Hong Kong structurally issues liabilities in order to produce a yield curve; see Tonveronachi (2016).

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