



RISK REDUCTION THROUGH RISK SHARING IN THE EU BANKING INTRODUCING A CAPITAL KEY RULE IN BANK SUPERVISION

Carlo Altomonte
 Bocconi University and ISPI
Patrizia Bussoli**
 Asset Manager

This Dossier is published as part of a research project on Europe's identity crisis and the challenges facing the relaunch of the European project.

The project is realised also thanks to the support of the Italian Ministry of Foreign Affairs and International Cooperation.

The opinions expressed in this Dossier are those of the authors. They do not reflect the opinions or views of ISPI or the Italian Ministry of Foreign Affairs and International Cooperation.

During 2018 the debate on the future of the EMU has left the drawing board of academics and policy advisors and has entered (albeit at the usual very slow pace) the realm of political discussions. The Franco-German [Meseberg declaration](#) of June 2018, 19 set the stage for the adoption of a Euro Area common budget funded with permanent tax resources, the completion of the banking union through the ESM backstop to the Single Resolution Fund, and steps forward in the setup of a European Deposit Insurance Scheme (EDIS).

The Meseberg declaration received [mixed opinions](#), and it produced some limited steps forward in the December 2018 [Euro Summit](#). On that occasion, Member States approved the terms of reference of the common backstop to the Single Resolution Fund (SRF) by the ESM, together with the main guidelines of the ensuing ESM reform, which will be achieved through amendments to the ESM Treaty to be tabled by June 2019. The agreement also specified how the backstop will be operationalized by the end of the SRF transition period (2023), and possibly anticipated provided sufficient progress has been made in risk reduction, an assessment which will take place in 2020. No progress has been achieved on the front of a Euro Area (EA) common budget "for convergence and competitiveness", whose discussion has now been merged with the one on the Multi-annual Financial Framework 2021-2027, and hence subject to all sorts of political compromises. It is also telling that in the 2018 Euro Summit [statement](#) there was no mention of the EDIS. In June 2019, it is acknowledged that "further technical work is still needed".

Hence, after several years of discussion, we are not very far from square one. On the fiscal side, there seems

* The information and views set out in this paper are those of the authors and do not necessarily reflect the opinion of the Institutions they are affiliated with. Responsibility for the information and views expressed in the paper lies entirely with the authors.

** We are very much grateful to Luca Bagato, Giovanni Barone, Laurence Boone, Gabriele Giudice, Mario Nava, Manmohan Singh, Andrea Sironi for discussion and comments to this paper.



to be agreement on the principle that the fulfilling of existing rules on the sustainability of public finances by individual Member States is a necessary but not sufficient condition for a 'complete' monetary union, as the latter also requires fiscal instruments in the form of some management of aggregate demand across the Euro Area. There is the shared interest however in supporting the weak economic cycle with fiscal expenses which are becoming more green and sustainable. But little progress has been achieved on this front so far. Similarly, on the front of completing the EU banking union, the size of the ESM backstop is limited to the amount of money available in the Single Resolution Fund. Moreover, as mentioned, there is still no agreement on the setup of an EDIS scheme.

Yet, having, if not a 'complete', at least a **'no-doom-loop'** banking union is of vital importance for a working EMU. In fact, notwithstanding the introduction of a Single Resolution Mechanism for bailing-in failing banks and the adoption of the Deposit Guarantee Scheme directive, the Euro Area banking structure is still fragmented along national boundaries. In particular, on top of a deposit insurance that is still national, EA banking systems have ended up in the post-crisis context with a significant and yet diversified home bias in their sovereign exposures, as shown in Table 1. On one extreme, Dutch banks have 44% holdings of national bonds out of a total of 73.7 billion euros of EA sovereigns on their balance sheets, which represent only 3.1% of their total assets. On the other, Italian banks have almost 88% of national government bond holdings over a total of 434.5 billion euros of EA sovereigns, which represent 11.6% of their total assets.¹

The EU Commission itself **recognizes** that the persistence of a strong link between national sovereign debt and national banks exposes individual Member States' public finances to unbalanced default risks, should a banking crisis become systemic. Furthermore, and even more importantly, the uncertain market access brought about by the persistence of a sovereign-bank loop limits the ability of Member States to use fiscal policy in a counter-cyclical fashion in crisis periods. As a result the costs of participating in a monetary union for citizens and firms worsen significantly, with obvious political consequences.

**TABLE 1. MONETARY FINANCIAL INSTITUTIONS (MFIs) HOLDINGS OF
EURO AREA SOVEREIGNS**

	Euro area sovereigns		Euro area sovereigns		National sovereigns		National sovereign	Capital key
	Total assets (€ bln)	(€ bln)	(% on total assets)	(€ bln)	(% on total sovereign)			
Germany	7804.7	274.4	3.5%	180.7	65.9%			17.997%
Italy	3747.7	434.5	11.6%	380.6	87.6%			12.311%
France	8777.7	180.1	2.1%	149.9	83.2%			14.179%
Spain	2700.6	249.6	9.2%	201.0	80.5%			8.841%
Belgium	1040.4	53.9	5.2%	33.0	61.3%			2.478%
Netherlands	2410.7	73.7	3.1%	32.7	44.4%			4.004%
Portugal	401.3	49.7	12.4%	35.2	70.8%			1.743%
Ireland	1058.7	58.0	5.5%	46.6	80.3%			1.161%
Greece	291.8	13.8	4.7%	3.4	24.8%			2.033%
Other	2667.2	118.3	4.4%	66.6	56.3%			35.253%

Source: ECB, MFI Balance Sheets - Euro Area, Table 1.2. Aggregated balance sheet - country breakdown; MFI Balance Sheets - National tables, Table 4. Cross-border position (by country).

Data updated to June 2018.

A number of contributions have been put forward in the EMU debate in order to solve the 'doom loop' risk once and for all. These contributions are mainly centered around two main ideas. On the one hand, a number of proposals (including some from the European Commission) try to foster the creation of a new Euro Area safe asset in the form of sovereign-bond backed securities (SBBS). Other proposals aim at imposing a set of regulatory disincentives focused on reducing the home bias in sovereign exposures of banks. A version of both proposals, trying to achieve the necessary balance between risk sharing and risk reduction in the Euro Area, has been put forward in a comprehensive and influential [document](#) by French and German economists, and has raised much [debate](#).

Still, both set of proposals, because of technical or political problems, seem to have failed short of achieving enough consensus to move from the drawing board to the actual implementation table.



Looking at SBBS, the idea is that, through the introduction of these sovereign-backed collateralized securities, banks would have an incentive (either market-based or regulation-induced) to exchange a share of the national bonds they hold in their portfolio for securitized European bonds. SBBS would then constitute the new Euro Area safe asset, replacing to that extent the role insofar played by national sovereign debt (a role largely fictional after the crisis, or truly played only by German bunds). The major stumbling block of the different SBBS proposals, however, is of technical nature: most analysts agree on the fact that advanced financial engineering would not be able to create a sufficient amount of SBBS with adequate high rating to be used as a safe asset for the whole Euro Area banking system. Moreover, even if technically feasible, the SBBS would have as unintended consequence a drain of liquidity on some individual sovereign bond markets, and thus might expose European sovereigns to higher financial volatility. Finally, in a negative yield world, it would be costly.

Considering the other set of proposals, i.e. introducing disincentives aimed at reducing the home bias in sovereign exposures of banks, those could take two forms: the introduction of risk weights on sovereign exposure; or [sovereign concentration charges](#) (SCC), i.e. a regulatory incentive for EA banks to diversify their sovereign exposures within the area away from their home country. Both solutions are in principle appealing, but some technical and political problems emerge also in this case.

Risk weights on sovereign bonds are difficult to quantify and, if restricted to the Euro Area only, would create an uneven playing field in international banking markets. Moreover, they would further increase the risk of a pro-cyclical impact of prudential regulation on the economy. For these technical reasons the Basel Committee on Banking Supervision has [decided](#) to maintain the status quo on the issue, acknowledging that at the current stage of the debate there is no consensus to amend the framework.

SCC, on the contrary, have less technical problems and as such are a potentially promising way forward to reduce the risks currently built into the EA banking system, thus paving the way for a subsequent agreement on risk



sharing. However, SCC currently face the political opposition of a number of countries, in particular Italy and, to a lower extent, Spain. These countries fear that creating an incentive for their banking system to deleverage local debt might generate, in absence of an adequate demand by the rest of the market, a potentially pro-cyclical sell-off of their national sovereigns. As a result, a political deadlock characterizes the EMU debate so far. On the one hand, countries like Germany agree to further steps in the integration process only to the extent that a reduction in sovereign-debt risks can be achieved via stricter rules on the bank-sovereign relationship; on the other hand, countries like Italy reject constraints on sovereign risk weights or, to a lesser extent, the idea of SCC on banks' holding of national debt, hiding behind the [formula](#) that 'nothing is agreed until everything is agreed'.

In this paper we put forward a proposal aiming at possibly solving this deadlock. We start with the idea of Sovereign Concentration Charges, as this is the one around which a compromise is currently more likely, and try to shape it in such a way to create a more symmetric burden sharing in the necessary reduction of the home bias in sovereign exposures of banks. At the same time our proposal, at regime, should pave the way for a relatively straightforward introduction of a viable Euro Area safe asset. Similar to the original SSC idea, our proposal does not require any Treaty change, being it only a function of specific amendments in prudential supervision rules.

The idea is the following: starting from a certain date, and possibly through an adequate phase-in period, a Pillar 1 binding rule in bank supervision assigns risk weight 1 (the minimum) on sovereign exposure only to those EU banks that have differentiated **holdings of sovereign debt proportional to the ECB Capital Key rule**. Any holding of sovereign debt which is unbalanced in favor of one or more countries in a bank's balance sheet would receive a higher risk weight. Hence, **the sovereign holdings in any European bank's balance sheet should in principle mirror, in their cross-national distribution, the same structure present in the balance sheet of the European Central Bank**. Or, put it differently, **the capital key rule should be the natural benchmark for defining concentration charges on sovereign exposures, symmetrically across all Member States**.



The working of the proposal can be easily understood by looking at Table 1. Spanish banks, for example, in June 2018 reported a total of 249.6 billion of EA sovereigns in their balance sheet, out of total assets of 2.7 trillion (9.2%). Of those sovereigns, around 201 billion are national (80.5% of total sovereign holdings), according to ECB sources. If the capital key (CK) rule is enforced, however, Spanish banks can hold at risk weight 1 national sovereigns for only 8.8% of their total EA sovereign holdings, i.e. a target of around 22 billion. Any additional holding would be subject to concentration charges. Hence, to avoid the higher risk weight and ensuing capital absorption, Spanish banks have an incentive to sell Spanish bonos up to 178.9 billion. This is the 'standard' idea of a SCC.

However, this is not the end of the story, as the proposal **works symmetrically** also for the demand side of Spanish bonds. In fact, German, French and Italian banks, just to quote the major Euro Area countries, will also have a similar incentive to deleverage their national share of sovereigns (equal to 65.9, 83.2 and 87.6%, respectively in June 2018). Under the CK rule, to maintain the risk weight 1 they can however compensate the difference with a higher share of other EA sovereigns, including Spanish bonds, for a total of at least 8.8% of their sovereign holdings. Given the current holdings of EA sovereigns in these three banking systems, and their estimated current holding of Spanish bonds (see footnote), a prudential estimate shows an additional demand of around 60 billion euros of bonos from these three countries alone (14.2 billion euros to be bought by German banks, 12.8 billion euros by France and 33 billion euros by Italy, respectively). The latter creates additional demand of bonos on the market by other banking systems, and reduces the risk of a one-sided sell-off of sovereigns if a standard asymmetric SCC rule is implemented.

Working along a similar logic for all the countries, Table 2 reports by row the full reallocation that would take place across the major Euro Area banking systems under the CK rule, assuming that total holdings of sovereign assets by each banking system remain unchanged in volumes (sum by row is zero). Going back to the previous example, Spanish banks would have an incentive to sell up to 178.9 billion euros of national sovereigns (the diagonal



element), replacing them with an equivalent purchase of other EA sovereign bonds proportional to the CK of these countries, as shown by the numbers in the row. For example, Spanish banks would have to buy 35.3 billion euros of German bunds, 24.2 billion euros of Italian BTPs and 27.8 billion euros of French OAT, among others, if they want to avoid a concentration charge on their sovereigns. Table 2 also reports by column the demand side faced by the country, i.e. how much Spanish sovereigns each country has to buy under the CK rule, given the size of sovereign assets in their banking systems and the existing holdings of Spanish bonos. As already discussed, given their estimated current holdings of Spanish debt, German, French and Italian banks combined will have to buy an additional amount of 59.9 billion euros of bonos (the first three figures in the column) to achieve the proposed CK rule in their banking systems, with the total Euro Area demand for Spanish bonds estimated in 76.4 billion euros.

**TABLE 2. REALLOCATION WITH CK RULE ACROSS MFIS
(STATUS QUO - BLN EUROS)***

	Germany	Italy	France	Spain	Belgium	Netherlands	Portugal	Ireland	Greece	Other
Germany	-131.3	19.7	22.7	14.2	4.0	6.4	2.8	1.9	3.3	56.5
Italy	67.1	-327.1	52.9	33.0	9.2	14.9	6.5	4.3	7.6	131.5
France	26.1	17.8	-124.4	12.8	3.6	5.8	2.5	1.7	2.9	51.1
Spain	35.3	24.2	27.8	-178.9	4.9	7.9	3.4	2.3	4.0	69.2
Belgium	5.9	4.0	4.6	2.9	-31.7	1.3	0.6	0.4	0.7	11.5
Netherlands	5.6	3.8	4.4	2.7	0.8	-29.7	0.5	0.4	0.6	10.9
Portugal	6.3	4.3	5.0	3.1	0.9	1.4	-34.3	0.4	0.7	12.3
Ireland	8.4	5.7	6.6	4.1	1.2	1.9	0.8	-45.9	0.9	16.4
Greece	0.6	0.4	0.5	0.3	0.1	0.1	0.1	0.0	-3.1	1.1
Other	6.9	4.7	5.5	3.4	1.0	1.5	0.7	0.4	0.8	-24.9

(*) Negative figures = sale of sovereigns. Rows sum to zero.
Source: Authors' elaboration on ECB data reported in Table 1.

Looking at Italy, with a required sale of 327.1 billion euros of sovereigns, the country would experience the largest deleveraging of national sovereigns in the Euro Area if Italian banks decide to implement in full the CK rule. This result is driven by the combination of a relatively high level of holdings of sovereigns in Italian banks' assets (434.5 billion euros, or 11.6% of total banks'

assets, the second highest percentage within the Euro Area) with a very high percentage of national sovereigns (87.6%, the highest in the Area). This is the reason why Italy has opposed insofar any proposal on SCC, as the latter would imply a one-sided sell-off of national debt on the market. Under the CK rule, however, the deleveraging would be mitigated by the symmetric incentive by other EA countries to buy part of the Italian debt. The latter can be estimated in a total purchase of roughly 85 billion euros of Italian sovereigns, which would put the net Italian deleveraging of sovereigns in the range of 242 billion euros, given a constant distribution of banks' balance sheets. The figure is certainly sizeable (around 10% of the Italian outstanding debt), but under certain conditions (see *infra*) it can be absorbed by the market, especially in the case of a multi-annual phasing-in of the regime.

Graph 1 summarizes the extent of the required net reallocation for the major EA countries keeping constant the current allocation of sovereigns across national banking systems (the status quo scenario).

GRAPH 1. REALLOCATION UNDER CK PROPOSAL AND STATUS QUO – SELECTED COUNTRIES (BLN €)



Source: Authors' elaboration on data reported in Table 2.



euros of German bunds and around 5 billion euros of French OAT, thus basically unchanged. Italy and Spain, instead, would be pushed on the net selling side for quite sizeable amounts, which would require a sufficiently long time horizon during which the regulation is phased-in.

As already noted, the asymmetric deleveraging of Italy and Spain vs. France and Germany stems from the fact that Italy and Spain have a relatively large share of sovereigns in their bank's balance sheet (12.4 and 11.6%, respectively), and thus would have to sell relatively high volumes of national debt under the CK regime. At the same time, France and Germany have relatively little share of sovereign (2.1 and 3.5%, respectively), and thus, under the status quo, their banking systems would absorb relatively lower (absolute) amounts of Italian and Spanish bonds, even if they fully adhere to the CK rule.

The latter observation opens the door for another consideration, and notably the fact that the current large dispersion in the percentage of sovereigns as a total of banks' asset is a relatively recent phenomenon induced by the financial crisis. As previously recalled, in fact, before the crisis sovereigns were around 4% of banks' total assets across EA countries, with limited variation across banking systems (see [Figure 1](#) in Lanotte and Tommasino, *Vo eu.org*, 5 February 2018).

The current situation is instead different: the average holding of EA sovereigns in banks' balance sheets (weighted by total asset, as retrieved from [Table 1](#)) is currently equal to around 4.9% of total banks' assets, but the dispersion is much higher across countries with respect to the pre-crisis situation. If a combined effect of regulation and market forces could lead to a more homogeneous distribution of this share across countries, the amount of net reallocation likely to be generated by the setup of the CK rule becomes even more manageable. Under a purely hypothetical scenario, we can calculate how the redistribution implied by the CK rule would change if every national banking system starts from a homogeneous distribution of 5% of sovereigns over total banks' assets (i.e. the pre-crisis scenario). In that case the reallocation induced by the CK rule would be more homogeneous (see [Table 3](#), and [Graph 2](#) for the major EA countries), with the only exception of France,



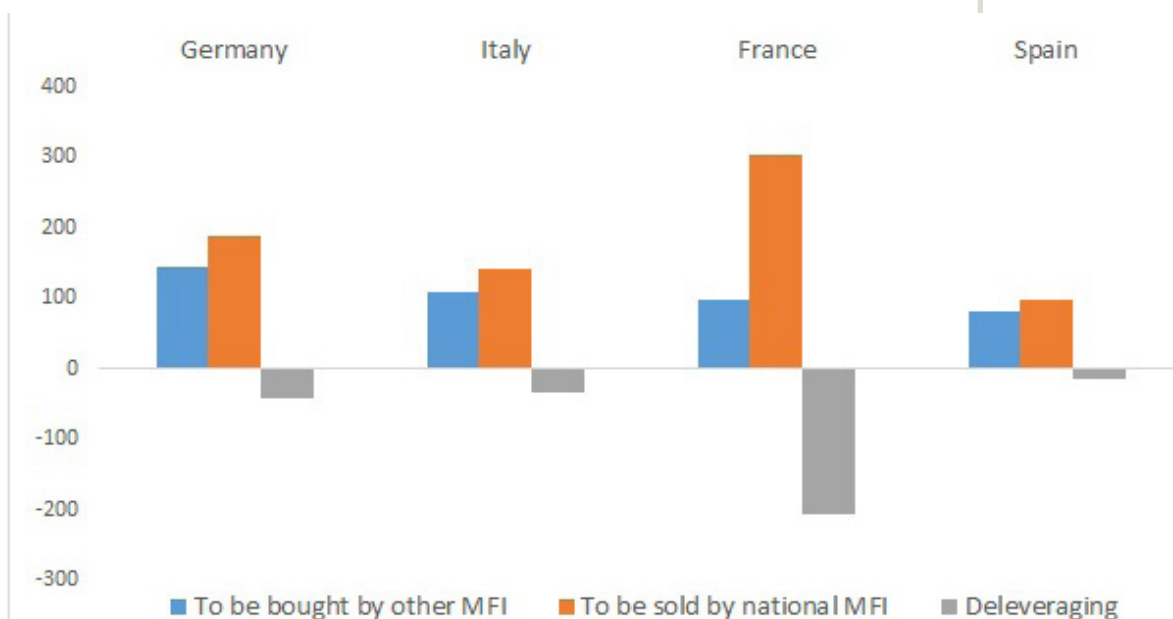
as OAT would be net sold on the market for around 200 bn euros, i.e. 9% of total French debt. Under this hypothetical scenario the adjustment would be smoother, as in this case most of the deleveraging would apply to French AA-rated securities (highly demanded also outside the Euro Area).

**TABLE 3. REALLOCATION WITH CK RULE ACROSS MFIS
(5% HOMOGENEOUS SOVEREIGN - BLN EUROS)***

	Germany	Italy	France	Spain	Belgium	Netherlands	Portugal	Ireland	Greece	Other
Germany	-186.6	28.0	32.3	20.1	5.6	9.1	4.0	2.6	4.6	90.2
Italy	28.9	-140.8	22.8	14.2	4.0	6.4	2.8	1.9	3.3	56.6
France	63.6	43.5	-303.1	31.2	8.8	14.1	6.2	4.1	7.2	124.5
Spain	19.1	13.1	15.1	-96.8	2.6	4.3	1.9	1.2	2.2	37.4
Belgium	5.6	3.9	4.4	2.8	-30.6	1.3	0.5	0.4	0.6	11.1
Netherlands	9.1	6.2	7.2	4.5	1.3	-48.4	0.9	0.6	1.0	17.8
Portugal	2.5	1.7	2.0	1.2	0.3	0.6	-13.8	0.2	0.3	5.0
Ireland	7.6	5.2	6.0	3.8	1.1	1.7	0.7	-41.9	0.9	15.0
Greece	0.6	0.4	0.5	0.3	0.1	0.1	0.1	0.0	-3.3	1.2
Other	7.9	5.4	6.2	3.9	1.1	1.8	0.8	0.5	0.9	-28.3

(*) Negative figures = sale of sovereigns. Rows sum to zero.
Source: Authors' elaboration on ECB data reported in Table 1.

**GRAPH 2. REALLOCATION UNDER CK PROPOSAL AND
5% HOMOGENEOUS SOVEREIGNS (BLN €)**



Source: Authors' elaboration on data reported in Table 2.



sheets. Clearly, the main implication of the proposal would be a rise in yield for core countries' banks government holdings, and a decrease for peripheral banks. This might pose an issue of yield mismatch between asset and liabilities. However, the improved confidence in the Euro Area banking system and in monetary policy transmission should be reflected in falling funding rates for peripheral banks, which, in turn, would lead to equalization between asset and liabilities yields. In addition, the movement in yields should foster a convergence between core and peripheral EA countries, thus restoring conditions similar to the pre-crisis situation.

The CK proposal just discussed has a number of advantages with respect to existing schemes aimed at overcoming the current deadlock in the completion of the EMU banking union, both from a technical and a political point of view. Moreover we believe some of its drawbacks can be dealt with within the existing legislative initiatives aimed at improving the working of the EMU, as argued in the remaining of the paper.

The first advantage of the CK rule is that it allows for the introduction of SCC in a symmetric way, creating a residual demand for the securities that have to be deleveraged. If a sufficiently long phase-in period is foreseen, the scheme should mitigate the current opposition of Italy (and Spain) to the implementation of this type of instruments of risk reduction. For example, the Italian net supply of public debt has averaged around 60 bn euros per year since 2012, with limited variation (+/- 20 bn). Considering that ECB has re-started its QE program (for limited amounts, but as an open-ended operation), together with the rolling-over of the maturing debt in the ECB balance sheet, the burden of deleveraging should not affect significantly the absorptive capacity of the market if phased in over a period of around seven/ten years, i.e. a net supply increase of some 24 to 30bn euros per year, respectively. Clearly, the latter holds under the condition that the net supply does not vary significantly with respect to the status quo, i.e. it requires a strict implementation of the existing rules on the control of public debts within the EMU. In other words, the implementation of the CK rule automatically creates incentives for fiscal discipline in the euro-periphery during the deleveraging transition period.



To further sweeten the pill, the extent of the burden of deleveraging falling on each national banking system can be redistributed from the periphery to the core of the Euro Area once a more homogeneous percentage of sovereigns as a share of each bank's total asset is achieved across banking systems, in line with the pre-crisis situation. Importantly, such a redistribution of the burden in implementing the CK rule requires a reduction of the existing fragmentation of the banking systems across national segments. This can be achieved by refining the current (post-crisis) bank regulations that are still maintaining national silos for capital and liquidity, as well as restrictions on intra-group transactions. A relaxation of these rules, already under consideration in the public [debate](#), would likely generate a more homogeneous distribution in the exposure of each banking system to the euro-area sovereigns, as in the pre-crisis situation. Thus, it would further reduce the burden of implementation of the CK rule, fostering its introduction. For example, in case of a homogenous holdings of government bonds by MFIs at the current 5% level, the implementation of the CK rule would have a negligible impact on the Italian net supply of public debt. The process allows room for political negotiations, as different changes in the current set of rules on bank fragmentation, as well as different phase-in periods, would imply a different extent of the redistribution brought about by the introduction of the CK rule, and, as a result, different incentives for fiscal discipline.

The second clear advantage of the CK proposal is that the 'legacy' component of sovereign risks in MFI balance sheets would be eliminated, as the overall sovereign risk faced by each national banking system would be the same of the ECB. In this way, banks' balance sheet would become more countercyclical instruments of monetary policy, in particular in difficult times, since they would be able to provide credit at a more homogeneous rate across the Euro Area. Clearly, it would be naive to believe that idiosyncratic sovereign risks would disappear from banks' balance sheets, as the risks of banks' lending activity are correlated to the sovereign through the macro-economic framework. However, these risks would be: a) greatly reduced for those banking systems currently holding a legacy of high levels of national sovereigns; and b) redistributed across the entire Euro Area. As a result of the underlying change in risk, additional demand for euro-area sovereigns is also



likely to come from global financial players, contributing to easing the cost of national deleveraging for the euro-area periphery.

The latter opens the door to the most serious criticism to the CK proposal, and namely the fact that, once individual sovereign risk is distributed across the entire banking system in the Euro Area (i.e. at the end of the transition period), this might undermine market discipline. On the one hand, in fact, with the CK rule at regime some Member States could spread the economic and political cost of their fiscal profligacy to the entire MFIs, rather than only to its own banking system, creating negative spillovers. On the other hand, once sovereigns are proportionally spread across Euro Area MFIs, any form of national debt restructuring would be opposed by the entire banking system, rather than only the concerned country, creating moral hazard.

While we take this criticism very seriously, we believe that given the volumes at stake to implement the CK proposal, this concern could be dealt with through an adequate ESM backstop to the SRF. To see how, let us assume that the CK rule is fully implemented by German banks. Under the status quo scenario, German banks would have bought from Italy, Spain, Portugal and Greece combined a total of 40 billion euros of their sovereigns to match the CK standard. Under the scenario with a 5% of euro-area sovereign holdings as a share of German bank's total assets, this amount would be around 56 billion euros. The combined volumes of euro-peripheral sovereigns sitting in German banks would correspond to 0.51-0.71% of German total banks' assets, respectively in the two scenarios. For France, these figures would be comprised between 36 and 88 billion euros (0.4 to 1% of French total bank's assets), while for other euro-area core countries the amounts are of a lower order of magnitude.

As a result, the potential loss accruing to the banking system in case of a partial default of (some) of the euro-periphery securities are not only manageable by the single banking systems, but they are squarely within the range of a solid ESM backstop. Moreover, considering that once sovereign bonds are homogeneously distributed across national MFIs, and legacy problems are eliminated from the system, there is no need to excessively constrain the size of the back-stop mechanism, as the risk of creating a form of potential fiscal transfer



from certain countries to others would be greatly reduced. Still, why would a country like Germany accept the (albeit limited) risk of euro-periphery sovereigns sitting in its national banking system, only to be told that this risk is, after all, manageable through the ESM backstop that Germany funds anyway? The reason is that the setup of the CK rule plus the ESM backstop paves the way for the introduction of feasible mechanisms of sovereign debt restructuring within the Euro Area. In fact, a banking system whose assets are differentiated across national sovereigns would be essentially protected from a (managed) restructuring event in one Member State. The latter in turn reduces moral hazard for non-compliant Member States and creates incentives for fiscal discipline, as under the new regime it would be impossible for national banks to absorb excesses of local public debt. Hence, rationally, implementing the system from the point of view of a euro-core country, such as Germany, could be considered as an insurance policy: the potential cost implied in absorbing peripheral sovereigns yields in return a safer banking system across the euro-area, and higher incentives for fiscal discipline by periphery Member States. As such the system is preferable to the *status quo*, given the (large) exposure that core countries already have in any case towards the Eurosystem.

An additional argument justifying the economic rationale of the CK proposal is that the excess of concentration of national sovereigns in banks' balance sheets has a cost for the Euro Area *per se*, i.e. on top of the sovereigns' risk level, and thus should be discouraged (through higher capital requirements in this case). This is because the functioning of the EMU is pretty unique in having a Central Bank which relies upon the European banking network to distribute monetary policy decisions to the real economy. A dysfunctionality in some areas of the system, such as an excess of concentration of national sovereigns, leads to an asymmetric transmission of monetary policy, which ultimately undermines the effectiveness of the policy itself. Asymmetries in monetary policy transmission would in fact distort capital movements in the Euro Area, which in turn would affect the efficiency of resource allocation, one of the key drivers of productivity and growth.

Moreover, given the specific nature of the EMU, the CK proposal has two additional indirect impacts on the general working of the EU capital markets:



the 'communitarization' of the demand for government bonds, and a more efficient working of the inter-banking market.

Once the CK rule is at regime, the demand of national sovereign bonds will not depend anymore upon national financial institutions. Government bonds will thus be more exposed to the overall Euro Area external demand, with asset managers progressively replacing national banking systems in the role of marginal buyers of national bonds. This would call for an evolution within the asset management industry, also from a regulatory point of view, in line with the goals of the ongoing [Capital Market Union](#) set of proposals.

At the same time, the exposure of the banking system to a similar basket of EA sovereign bonds could induce changes in the collateral used for repo activity. The collateral could become the basket itself. This evolution would correct one of the distortions at the moment characterizing the General Collateral market, where German paper trades much below the depo rate because of the excess demand for bunds as collateral, creating a significant dispersion among short term rates within the Euro Area. Such a change in the structure of money markets would alleviate significantly the dispersion in the short end of the curve, making monetary policy transmission more homogenous across countries. The immediate impact would be a lower differentiation in borrowing costs for companies, since also the Commercial Paper market would become more homogenous. A lower money market segmentation through a homogenous collateral market would also be reflected in lower and more homogeneous short term borrowing rates for banks, with a consequent improvement in lending rates to firms and consumers.

Banks would then become a relatively frictionless (at least in terms of national risk) vehicle of monetary policy transmission, as well as the lending vehicle of cross-border activities, especially in times of economic slowdowns. As the links with debt sustainability would be substantially weakened, the consequence would be a more symmetric monetary policy transmission across countries.



Finally, it is easy to see how the holdings by the Euro Area MFIs of a financial instrument which mirrors the ECB government bond portfolio, jointly with the implications of creating a new form of collateral for money market transactions, de facto creates a new 'synthetic' Euro Area safe asset, pretty much as the ECU created a synthetic single currency, without all the technical difficulties associated to the current SBBS proposals.

The idea to synthesize this instrument within an ETF (see Box 1 for an operational proposal in this sense) would imply that the duration of the ECB balance sheet would become the reasonable time horizon over which investment are deemed to be sustainable. Possible evolutions are then the creation of futures with this basket of government bonds as underlying asset, adding to more liquidity into the system and less asymmetries in financial markets within the Euro Area.

Concluding, the crisis taught us that the concept of national banking systems within a monetary union is obsolete and dangerous during times of turbulence. Still, the new EA banking union is short of being 'doom-loop' free, let alone complete, which hinders a proper working of the Euro Area monetary policy as well as exposes the EU to potential future crises. To properly function, regulation should be aimed at decreasing asymmetries in the way the benefits and costs of common policies are distributed, with an adequate balance between risk reduction and risk sharing. In this paper we show how the latter could be achieved by designing regulatory incentives such that **the sovereign holdings in any European bank's balance sheet should in principle mirror, in their cross-national distribution, the same structure present in the balance sheet of the European Central Bank** (the Capital Key rule). Creating a government bond portfolio in banks' balance sheet similar to the one of the ECB would allow to disentangle banks risks from government risk, improving the transmission mechanism of monetary policy and obtaining, as a by product, a new 'synthetic' euro safe asset in the form of the EA sovereign bonds basket, thus restoring and improving the situation existing before the financial crisis.

Reducing asymmetries in monetary policy distributions would allow to better appreciate the overall benefit of belonging to the Euro Area across all Mem-



ber States. The benefit from a political stand point would be significant, since it would reduce the scope of speculative attacks against the Euro Area, as well as help preventing the rise of populism through a better redistribution of the benefits of the monetary union.

1. These figures were much more homogeneous before the start of the financial crisis, with sovereigns being around 4 % of banks' total assets across Member States, with limited variation, see Figure 1 in Lanotte and Tommasino, Voxeu.org, 5 February 2018.

2. This is the key difference between the CK rule, and the imposition of simple concentration charges, as the latter works asymmetrically only on the seller's side of sovereigns.

3. Current levels of holding of non-national EA sovereigns by country are estimated proportionally to the capital key rule. For example, French banks have 180.1 billion EA sovereigns, of which 149.9 national. The remaining 30.2 billion are attributed proportionally to each other Euro Area country according to the respective weight in the CK rule, i.e. we estimate that French banks currently hold some 6.3 billion of German bunds, 4.3 billion of Italian BTPs and 3.1 billion of Spanish bonos. In doing so,

we are likely to under-estimate the current holdings of German (and other core EU) sovereigns and over-estimate the current holdings of peripheral sovereigns.

4. Since we are likely to over-estimate the current holdings of peripheral sovereigns by the rest of the EA banking system, the latter implies that the net demand of peripheral sovereigns that we obtain in Table 2 under the implementation of the CK rule is likely to be downward-biased, i.e. the actual demand of peripheral sovereigns by core banking systems might be slightly larger.

5. As already stated, since we are likely to be over-estimating the current holdings of Italian debt by other EU banks, the actual deleveraging for Italy might be smaller, as the net demand of Italian debt to be purchased by the EU core banks in order to fulfil the CK rule might turn out to be slightly larger.



Box 1. A EURO-SOVEREIGN ETF

Creating a portfolio of government bonds that will mirror the ECB holdings in its balance sheet is not practically efficient for banks. Neither in terms of operational effort related to the managing of portfolio bonds rollover, nor in terms of market access to bonds issued by the smallest countries. Such difficulties could create asymmetries across banks in the implementation phase, in particular between small and big banks, thus significantly reducing the benefits of the proposal.

A way to overcome these difficulties is to let banks invest in just one financial instrument, whose underlying will be the basket of government bonds that mirrors ECB balance sheet portfolio. Essential characteristics of such instrument are liquidity, capacity and easy accessibility by banks. Its size needs to satisfy banks demand. It has to represent the characteristics of the underlying portfolio, therefore it needs to vary through time, according to the ECB monetary policy changes. Probably, it should distribute a coupon/dividend (which is one of the reasons for banks to invest in government bond portfolio). The financial instrument that could satisfy all these characteristics would be an Exchange Traded Fund (ETF), with physical underline. This would be a passively managed fund, benchmarked to the ECB government bonds portfolio.

ETFs are liquid, easily tradable like a share, its bid offer is very close to that of the underlying bonds. The fund could distribute a variable dividend, reflecting the coupon of the portfolio through time. The size of the ETF, which depends on the evolution of its demand, is managed through an accretion/ redemption mechanism, therefore, its size should not be a source of concern. ETF (and its shares) have the same characteristics of the underlying in terms of exposure (i.e. duration, maturity, yield). It would not suffer of any type of rolldown by construction, since it would constantly reflect the ECB portfolio management decisions (either reinvestment operations and/or active QE), therefore the banks operational and maintenance costs would be minimal and related only to the bank balance sheet management.

Such an instrument would be easily accessible to every bank (small or big) in the Euro Area. Last but not least, the issuer would be either a European institution like the ESM, if compatible with its mandate (in such a way the risk associated with the issuer would be very low, or almost not existent) or an existing ETF provider. For the latter, a process on how to identify the best provider, or a pool of providers in order also to guarantee liquidity in the secondary market, should be identified.