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REVISITING THE ECONOMIC CASE FOR FISCAL UNION IN THE EURO AREA

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Abstract

After significant progress as an immediate result of the euro crisis, the drive to complete Europe's Economic and Monetary Union (EMU) has decelerated. While there is a broad consensus in Europe that EMU needs further development, the exact nature and timing of the reform agenda remains controversial. This paper makes an analytical contribution to the ongoing discussion about the euro area's institutional setup. An in-depth look at the remaining gaps in the euro's architecture, and the trade-offs that repairing them would present, suggests the need for long-run progress along three mutually supportive tracks. First is more fiscal risk sharing, which will help enhance the credibility of the sovereign "no bailout" rule. Second is complementary financial sector reforms to delink sovereigns and banks. Third is more effective rules to discourage moral hazard. Helpfully, this evolution would ensure that financial markets provide more incentives for fiscal discipline than they do now. Introducing more fiscal union comes with myriad legal, technical, operational, and political problems, however, raising questions well beyond the domain of economics. These difficulties notwithstanding, without decisive progress to foster fiscal risk sharing, EMU will continue to face existential risks.

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OVERVIEW: CONFRONTING FUNDAMENTAL CONSTRAINTS

The question of how to complete EMU's architecture remains urgent.[1] The euro area's institutions evolved rapidly under the pressure of crisis—adding conditional lending facilities, enhanced surveillance, and key elements of a banking union—but the promise of continued progress toward "more Europe," including in the fiscal domain, slowed dramatically as the crisis ebbed. Despite a general recognition that serious gaps in the euro architecture remain, disagreement continues about the nature and pace of future reform efforts. Although aspects of this discussion go well beyond the sphere of economics, it is also true that accepting political constraints as unchangeable will leave Europe ill-equipped to mitigate the harsh economic reality of a modern-day currency union operating in an environment of volatile international financial markets. More challenging economic conditions could well test the single currency again.

Feasible paths forward are constrained by a fundamental quadrilemma. In an economic area comprising multiple countries, the following four attributes of a national government are not all simultaneously compatible:

1. Inability to finance government by printing the domestic currency.
2. Unavailability of fiscal transfers from other countries (including through a central authority).
3. Government debt that is risk-free in terms of the domestic currency.
4. A configuration of domestic spending commitments, tax capacity, and debt that, absent other fiscal resources, would imply vulnerability to a sovereign debt crisis.

Monetary policy in EMU has been delegated to the European Central Bank's (ECB), which is prohibited from funding governments when private lenders flee, vulnerable public finances may imply an unfortunate choice between enforcing the euro area's "no-bailout" rule and accepting that national sovereign debt carries risk. We contend that the most efficient approach to improving the euro's architecture requires some simultaneous movement away from *all* of conditions 2 through 4: governments should explicitly accept and make appropriate provision for nominally risky country-level sovereign debt; they should act to reduce their vulnerability to debt crises; and they should embrace further elements of fiscal union. These changes are highly complementary, as we will argue below, and so progress toward completing the euro area's architecture will have to tackle multiple issues at once.

[1] For recent contributions to the debate see, for example, Thomsen (2017), European Commission (2017), Bénassy-Quéré and others (2017, 2018), Arnold and others (2018), Cimadomo and others (2018), Stráský and Claveres (2019), and the contributions in Bénassy-Quéré and Giavazzi (2017).

Importantly, because EMU is not a political union, the need to enhance confidence in "no bailout" goes beyond the standard efficiency benefit of reduced moral hazard; it is central to maintaining trust among EMU members, and hence, political stability support for the currency union.

EMU's under-developed fiscal union preserves vulnerability that is bound to resurface under pressure. As the euro area debt crisis demonstrated, current arrangements provide a dangerous mix bound to return in a sharp slowdown: hard constraints on relative-price adjustment under the common currency; a pervasive lack of fiscal discipline; and the speed and force with which shocks—amplified by a still-tight sovereign-banking embrace—travel through the euro area's financial system. Without the deliberate creation of a more extensive fiscal union, this vulnerability presents an existential risk that policymakers should not ignore—especially with macroeconomic policy space much lower than before the recent crises.

Progress toward a banking union has substantially enhanced the euro area's resilience to shocks. The need for a Single Supervisory Mechanism (SSM) and a Single Resolution Mechanism (SRM) became evident during the euro crisis, and led to important institutional reforms. By now, the need for an adequate common fiscal backstop is also well understood and broadly accepted in principle.[2] Accordingly, the European Stability Mechanism (ESM)-based bank-sector backstop includes some elements of fiscal union.

But an improved banking union, however vital, is not enough to support EMU economies in times of stress. It would be foolhardy to depend entirely on Europe's reaching any time soon the idealized goal of a "complete" banking union—one in which a large bank's fortunes depend on those of its home country no more than Bank of America's depend on North Carolina's. Moreover, if Europe succeeds in its goal of promoting capital-market development complementary to the banking sector, further financial-stability challenges could emerge alongside the accompanying benefits.

Essential in addition, therefore, is progress along several complementary dimensions to strengthen EMU's fiscal framework, including the following:

- further EMU fiscal risk sharing, beyond the minimal needs of banking union and beyond what private capital markets can provide—which can reduce the incentive for governments to provide ad hoc support in crisis situations, thereby helping make the sovereign "no-bailout" pledge more credible;
- more effective fiscal rules and, critically, market discipline through the pricing of country-level sovereign debt—both working to discourage a range of moral hazards; and
- coordinated system-wide fiscal policy to help counter common shocks when monetary policy is constrained by the effective lower bound.

[2] See Thomsen 2017; IMF 2017; and Goyal and others 2013.

While economic considerations suggest that EMU will function most smoothly if its institutional framework evolves along all of these dimensions, some phasing will be necessary in practice. A realistic sequence may be to strengthen the banking union further first while tackling legacy financial-sector weaknesses, improving governance (at both the currency union and national levels) to build trust, and gradually introducing more elements of a central fiscal capacity on top of those that are clearly essential to support banking union.

THE ECONOMIC CASE FOR FISCAL UNION

In an ideal world, households, firms, and even governments would be able to purchase insurance against any undesirable state of the economy, guaranteeing a first-best, efficient outcome. But the world is far from perfect. Financial frictions and externalities prevent risk-averse individuals from buying optimal levels of insurance or smoothing over income shocks. Moreover, vast disparities in wealth prevent many from either self-insuring adequately by running down assets, or from accessing financing markets. Governments therefore can potentially raise welfare by stepping in effectively with policy tools, including monetary and fiscal policies.

Constrained National Policies Imply a Case for More Fiscal Union

The European single currency represents the culmination of an intense economic harmonization process toward a complete internal market for goods, services, capital, and labor. It has greatly facilitated intra-European trade flows (Baldwin and others 2008; Berger and Nitsch 2008). Stable exchange rates can promote efficient resource allocation by reducing uncertainty in trade and preventing asset markets from driving swings in competitiveness. At the same time, however, with prices and wages rigid in the short term, the absence of a flexible exchange rate may severely complicate adjustment to idiosyncratic national economic shocks.

The adjustment problem is complicated by imperfect labor mobility within the EU, notwithstanding the ideal of free movement. Cross-country labor mobility remains significantly below what is observed in other common currency areas (for example, Arpaia and others 2015). Hard-to-overcome differences in culture and language along with regulatory impediments, can limit labor mobility. Although intra-European labor mobility contributes to long-term adjustment much the way it does in the United States, the process takes about twice as long in Europe (Beyer and Smets 2015; House, Proebsting and Tesar, 2018).[3]

Outside of currency unions, monetary policy and exchange rate flexibility typically play a critical role in countering country-level shocks. It is well known that flexible exchange rates serve as a buffer,

[3] This remains true even though intra-EU labor mobility increased significantly owing to the crisis and interstate migration in the United States has dropped (Molloy, Smith, and Wozniak 2011; Dao, Furceri, and Loungani 2017).

helping shift demand to countries facing a shortfall and away from those whose economies are overheating (Friedman 1953; Mundell 1961). Less discussed is the fact that flexible exchange rates are a buffer precisely because they act as a risk-sharing mechanism within countries. In a country hit by an adverse demand shock, for example, currency depreciation limits higher unemployment, which has uneven domestic incidence, but does so at the price of a terms of trade loss that is more tolerable politically because it is spread more evenly across the domestic population.

If country-level monetary policy is unavailable within a currency union with common monetary policy focusing on the union-wide aggregate, then fiscal policy needs to play a bigger role in offsetting country-level shocks. Unfortunately, however, a member country's fiscal policy is likely to be more constrained within a currency union, and especially so in the current European context.

National government simply have less fiscal space in currency unions, as they can become vulnerable at lower sovereign debt levels to self-fulfilling debt crises, as occurred in the 2010-2012 euro crisis. As Draghi (2014) put it: "[S]ince 2010 the euro area has suffered from fiscal policy being less available and effective, especially compared with other large advanced economies. This is not so much a consequence of high initial debt ratios—public debt is in aggregate not higher in the euro area than in the U.S. or Japan. It reflects the fact that the central bank in those countries could act and has acted as a backstop for government funding. This is an important reason why markets spared their fiscal authorities the loss of confidence that constrained many euro area governments' market access. This has in turn allowed fiscal consolidation in the U.S. and Japan to be more backloaded." Draghi's account shows the preceding quadrilemma in action. The resulting vulnerability is compounded within a unified market for capital and labor, served by a single currency, because the tax base is likely to be more even mobile across national borders than it is between distinct currency areas.

High public debt ratios exacerbate the danger, but fiscal prudence may not be enough to assure fiscal space in a severe downturn. Even an initially moderate public debt is no guarantee that when an adverse shock hits, public finances will not deteriorate rapidly due to strains in private financial markets. A powerful *sovereign-bank nexus* remains operative in EMU, even after the post-crisis reforms, and it magnifies the hazards of aggressive counter-cyclical fiscal policy at the country level. These linkages, present in every country, become a greater concern in the context of a currency union, where monetary policy cannot react to individual country shocks.

The health of banks and sovereigns is linked by multiple interacting channels: banks' sovereign bond holdings; a safety net that still depends largely on the domestic sovereign for fiscal support, even under the European Union's Bank Recovery and Resolution Directive (BRRD); and limited cross-border portfolio diversification, which makes banks' health highly dependent on national economies (Acharya, Drechsler, and Schnabl 2014; Dell'Ariccia and others, 2018a; Farhi and Tirole 2016). The bank-centered nature of the euro area financial system adds vulnerability, with the crisis showing how some banking systems are now large enough to threaten government solvency (Mody and Sandri 2012; Obstfeld 2013; Navaretti and others 2016). In countries with large banking systems, bank distress can overwhelm national fiscal resources directly, because of explicit and implicit public

guarantees, and indirectly, through its effect on real activity. Fiscal stress, in turn, cast doubt on the continuing effectiveness of government guarantees, aggravating financial stress.

While there has been progress with financing the Single Resolution Fund (SRF) to support the SRM, some argue that serious gaps are left even after the December 2018 Euro Summit decision that the ESM will furnish a revolving credit line as the common backstop to the SRF (Demertzis and Wolff 2018). Consistent with that view, our reading is that EMU's financial stability framework still operates without an adequate joint fiscal backstop, leaving it incomplete in vital dimensions. This weakness is a serious matter forOn p. 6 the currency union as a whole, because a sovereign's inability to deal with the consequences of a systemic banking crisis may even challenge the integrity of the single currency. But it also reinforces our contention that low public deficits and debt do not guarantee fiscal invulnerability under the current or foreseeable banking union infrastructure.

Finally, EMU members may be constrained by union-wide rules that may limit the national responses to adverse shocks. Some have argued (for example, Eichengreen and Wyplosz 2017) that rules are unnecessary and are never enforced anyway. Our reading is that this conclusion ignores some significant possible spillovers from severe fiscal crises. These could arise through linked financial markets, for example, by inducing bailout transfers meant to prevent a euro zone exit, or through the repercussions of an actual exit – ranging from default on TARGET2 balances to diminished credibility of exchange stability for remaining euro members. Tail risks emanating from the financial sector could overwhelm even countries that appear initially to have been fiscally prudent on conventional measures—with any resulting need for public support burdening whatever area-wide common resources have been dedicated to that purpose.[4] Finally, notwithstanding the views of academic scribblers, defunct or not, the fiscal rules play a key *political* role in binding together a set of EMU members with disparate cultures and approaches regarding economic policy (Brunnermeier, James, and Landau 2016) – EMU is also, at least to some degree, a political union. We will return to the need for fiscal rules below.

The Economic Case for Fiscal Risk Sharing

There is a structural, efficiency-based case for some degree of fiscal federalism to augment automatically the resources of countries suffering temporary adverse shocks (Kenen 1969; MacDougall Report 1977). Importantly, the rationale for such arrangements goes beyond what is strictly necessary to backstop the financial system (although, as mentioned, the latter need is vital). In a world where sovereign debt repayment was assured, and sovereigns were not subject to borrowing limits more binding than their intertemporal budget constraints, national fiscal policy would be able to smooth out most transitory shocks (for example, through deficit-financed increases in spending). But even in such a hypothetical world, higher deficits today must be repaid through higher primary budget surpluses later, so purely national fiscal responses would be less potent in countering more persistent shocks than a system of intergovernmental transfers (Bayoumi

[4] Dell'Ariccia and others (2018b) discuss why financial-sector bailouts using taxpayer resources can never be fully off the table, notwithstanding official protestations to the contrary. As it turns out, they are likely to be big precisely when they are most justified. See also Avgouleas and Goodhart (2016) and Gros and de Groen (2015).

and Masson 1998). In other words, an inter-governmental risk-sharing mechanism comes closer to the theoretical ideal of insurance than does the intertemporal re-allocation of spending via variation in public deficits. Farhi and Werning (2017) demonstrate analytically the superiority of an international transfer regime over standard domestic fiscal instruments under fixed nominal exchange rates—even in a setting with complete markets.[5]

The euro area is not a full political union, so inter-regional transfers will not arise organically through common social safety nets or a large common budget. But comparisons with unitary currency areas still provide a useful benchmark. Empirically, net fiscal transfers help smooth about 10–15 percent of idiosyncratic income shocks at the state level in the United States and about 20 percent at the Land level in Germany, with a significant role played by cyclically sensitive revenue and spending functions at the federal level (Poghosyan, Senhadji, and Cottarelli 2015). Such offsets would be potentially even more important for EMU, due to more limited labor mobility between countries. Alcidi, D'Imperio, and Thirion (2017) show that capital markets in the euro area are a less powerful tool for risk sharing than in the United States, while also indicating that fiscal transfers play a bigger role there.[6]

Traditional public finance arguments provide one more rationale for fiscal union, as they suggest that certain government functions, such as the provision of public goods benefiting all, should be provided centrally (Oates 1968). Such public goods need EMU-wide financing, potentially introducing another possible channel of fiscal risk sharing (see below). The prime example of a public good is an adequate shared fiscal backstop for the banking union, but common defense, natural disaster response, and border security also fall into this category.

There are many ways to share fiscal risk. For example, if essential government functions and area-wide public goods—from unemployment, pensions, and health insurance to deposit insurance, bank restructuring, and common security services such as border control and disaster relief—are provided at the aggregate level, a country's sovereign bankruptcy is far less likely to threaten the basic functioning of government. Such approaches would also provide a degree of fiscal risk sharing if aggregate revenue obligations to the center could be made procyclical—for example, social insurance payments and tax payments would move along with a member country's GDP growth (Allard and others 2013; Demertzis and Wolff 2016; Dolls and others 2015, 2016).[7] Of course, the

[5] The paper demonstrates that even when financial markets are complete in the Arrow-Debreu sense, international fiscal transfers have a role when prices are sticky because people will not buy socially optimal levels of insurance. For example, during recessions, they do not internalize sufficiently the contribution to aggregate demand they make by spending additional insurance receipts. The advantage of transfers over fiscal policies could be even bigger in general than under the calculations presented by Farhi and Werning (2017) because their assumptions make the domestic distributional consequences of an adverse shock implausibly small. For example, even their "hand to mouth" consumers, who are constrained to consume just their incomes, derive part of those incomes from pro rata holdings of shares in domestic firms' profits. Further, more realistic heterogeneous-agent models of incomplete markets, such as that of Mitman, Manovskii, and Hagedorn (2019), likely accentuate the advantage of external transfers over domestic fiscal policy, especially under constrained space to run deficits.

[6] See their Figure 8 for a comparison.

[7] This would be the case even if these government functions were located at the EU level.

centralized provision of public goods is beyond the limit of EMU's current institutional and political framework—for example, even though the European Union has a common budget and democratic accountability, the budget is small and supports the entire EU, not just the euro area. However, it is important to observe that the common currency itself, along with the ECB and new institutions such as the ESM, SSM, and SRM, exemplify how the provision of public goods can be gradually expanded.

Several authors have analyzed mechanisms—all designed to operate in a nondiscretionary manner to provide short-term transfers. Among the proposals are the following:

- *Rainy day fund:* A dedicated macroeconomic stabilization mechanism would collect permanent contributions from EMU members in exchange for transfers linked to the occurrence of country-level shocks (Allard and others, 2013; Furceri and Zdzienicka 2015; Bénassy-Quéré and others, 2018; Arnold and others, 2018). As discussed earlier, even the introduction of limited formal risk-sharing arrangements may make a difference. Moreover, a more complete banking union and further progress toward the development and integration of euro area capital markets could strengthen market-provided risk sharing. If a rainy day mechanism could borrow with joint and several liability, it could also help counter EMU-wide shocks.

- *Centralized budget:* An EMU-based fiscal capacity could provide area-wide public goods or long-term public investment (IMF 2016) financed by government contributions, taxes, or a combination of both. To the degree that the revenue collected to fund it would vary with country-specific macroeconomic shocks, whereas spending on public goods would continue, it would generate fiscal risk sharing for EMU members, stabilizing consumption fluctuations (Evers 2015). If the central budget could borrow with joint and several liabilities, that could, in addition, help automatically counter EMU-wide shocks—which would matter most when the ECB operates at the effective lower-interest-rate bound or when monetary policy is otherwise overburdened (Corsetti and others 2016). Moreover, it could be easier to realize economies of scale and increase spending efficiency (Escolano and others 2015).

- *Common borrowing schemes:* A central entity could borrow at market rates and on-lend to national budgets or the private sector in EMU member countries (De Grauwe and Ji 2016; IMF 2016). The introduction of Eurobonds—that is, national treasuries' access to jointly guaranteed borrowing—would have similar effects. As with the short-term liquidity provided through the ESM, fiscal risk sharing would occur through the funding-cost differences.

- *Microeconomic risk sharing*: Integrating existing social insurance programs would provide risk sharing at the microeconomic level by stabilizing household incomes directly across currency union member countries (e.g., Dolls and others 2016).

In December 2018, EU leaders endorsed further Eurogroup study of a euro area "budgetary instrument for convergence and competitiveness"—though not for stabilization, as had also been asked by France, Germany, and the European Commission. Although this is a step in the right direction, much more will be needed.

In particular, when monetary policy operates at the effective lower bound, fiscal policy can play an outsized role in responding to aggregate, union-wide shocks. In the absence of a central fiscal instrument with some borrowing capacity, an effective fiscal response would require coordination of policies so that all countries contribute (Gaspar and others 2016)—a prospect riddled with practical difficulties.

Can Enhanced Financial Markets Do the Job?

As noted, there is broad agreement among European policymakers that evolution toward complete banking union and the promotion of area-wide capital market activity outside of banks—through measures to foster Capital Markets Union (CMU)—will enhance the performance of EMU. Some point to the other currency areas' experiences of more extensive market-based risk sharing by households and firms, and argue that financial-market development could obviate the need for explicit risk sharing among government through a more elaborate fiscal union.

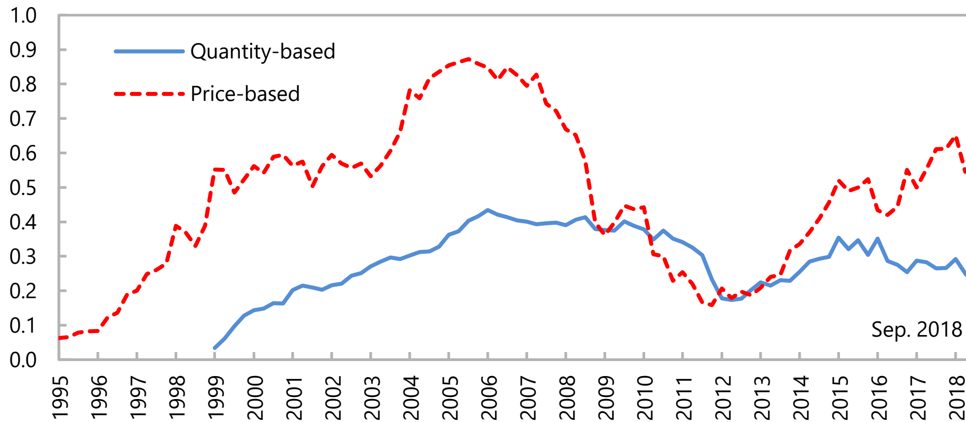
While market-provided risk sharing (that is, risk sharing through private financial transactions) smooths about 55 to 70 percent of regional income shocks within federations such as Canada, the United States, and post-1990 Germany, the number is significantly lower in the euro area (Allard and others 2013; Cimadomo and others 2018). Cross-country credit flows—EMU's only significant source of market-based risk sharing—have been smoothing only about 35 percent of national shocks in normal times, a number that drops to 17 and 11 percent, respectively, during severe or very severe economic downturns (Furceri and Zdzienicka 2015).

A key danger of relying on markets to provide risk sharing is that they can misfire, becoming risk amplifiers rather than risk absorbers precisely when big risks are realized (Figure 1). Cross-border equity holdings within EMU have grown, but financial integration is still biased toward debt financing, which tends to be more procyclical than equity financing (Allard and others 2013; Beck and others 2016; ECB 2016). The debt bias in Europe helps explain why market-provided risk sharing within EMU has been unstable and collapsed during the crisis (Kalemli-Ozcan, Luttini, and Sorensen 2014; Beck and others 2016; Furceri and Zdzienicka 2015; Ehrmann and Fratzscher 2017). Thus, financial markets in EMU have tended to provide not more but less risk sharing in times of crisis, when it is most needed.

Perhaps the most telling reply to the claim that financial markets can substitute for fiscal transfers, however, rests on the indisputable heterogeneity of populations with respect to income, wealth, and financial-market access. All the empirical studies mentioned above, in contrast, focus on the smoothing of regional aggregates. When an adverse shock hits a country, its government is better placed than financial markets to channel public resources to those most in need—those dependent on labor income, and perhaps on housing wealth, and without extensive diversified portfolios or even an ability to borrow to ride out unemployment spells. It is highly implausible to achieve the same outcome in practice by counter-cyclically levying higher taxes on the rich, to support the unemployed. In addition, the impact of such a taxation scheme on portfolio choice and other incentives is difficult to predict.

A final obvious point is that, even abstracting from domestic inequality, risk pooling through financial markets mitigates *system-wide* shocks only to the extent that those shocks are globally diversifiable. Therefore, there would still be a role for centralized fiscal expansion when the policy interest rate is at the effective lower bound.[8]

Figure 1. Indicators of Financial Integration in the euro area
(index; 1=full integration, 0=full fragmentation)



Source: ECB Report on "Financial Integration in Europe, May 2018."
Note: The composite indicators measure the average degree of financial integration across the euro area, and are constructed by aggregating various sub-indicators across money, bond, equity, and banking markets.

To summarize thus far: On the way to navigating EMU's quadrilemma, we have argued that some degree of fiscal union, even beyond the critical—but still unfulfilled—need adequately to backstop the financial sector, is necessary. This development would relax the constraint described in quadrilemma element 2. State-contingent insurance arrangements among currency-union partners will promote economic stability, and financial markets alone cannot realistically do the job, no matter how fully developed. It is important to distinguish such agreed, ex ante arrangements, designed to benefit all union members potentially, from ad hoc bailouts triggered by crises. While there is also a key role for crisis support—subject to strict conditionality—as the establishment of the ESM attests, it would be far better for EMU arrangements to minimize sovereign debt crises and instead offer an environment in which debt default could take place in cases of insolvency without cataclysmic financial consequences (relaxing quadrilemma constraint 3). We next turn to the need for making EMU markets robust to sovereign default events, and the complementarity of that goal with fiscal union (including more complete banking union) and measures to reduce the vulnerability of public finances (quadrilemma element 4).

[8] Centralized fiscal policy can also internalize potentially inefficient externalities from national fiscal policies such as those modeled by House, Proebsting, and Tesar (2019).

LETTING GO OF RISK-FREE SOVEREIGN DEBT

Although prone to self-fulfilling multiple equilibria in turbulent times, financial markets in tranquil times have paid limited attention to fundamentals when pricing national sovereign risks. Sovereign bond markets' sensitivity to differences in national economic and fiscal developments has likely increased since the crisis—after having been almost absent the late 2000s—but risk pricing remains imperfect today. Apart from any effects of ECB large-scale asset purchases, this quiescence may reflect a continuing skepticism that sovereign default is at all likely in the euro area. An abrupt change in market sentiment could thus lead to a sharp increase in some sovereign yields—with destabilizing effects that extend to other markets. It would be far better to foster more

substantial debt repricing outside of crisis periods, while at the same time creating conditions in which default by an insolvent sovereign is also less likely to trigger a broader crisis.

In addition, allowing sovereign debt to reflect default probabilities fully and continuously can also impose needed discipline—both on governments, who might be dissuaded from fiscal actions likely to drive up borrowing costs, and on market participants, who would have incentives to surveil government policies more closely.

A final potential advantage of a regime with potential sovereign debt haircuts is that it pools the government's risks with private-sector bondholders, drawing in resources from them, rather than bailout transfers from currency-union partners. Of course, this can cause political problems when the bondholders are citizens of modest means, or financial stability problems when they are domestic financial institutions.[9] The latter may emerge whenever the sovereign-bank nexus is strong enough.

The Current Fiscal Landscape Makes No-Bailout Pledges Time Inconsistent

Recognizing the reality of possible government debt restructuring, the ESM Treaty of 2012 mandated that all euro area government securities of at least one-year maturity issued starting in 2013 must contain collective action clauses. In December 2018, the Eurogroup agreed to facilitate restructuring by insisting that collective action clauses be single-limb starting in 2022—thereby avoiding the need for bond-by-bond votes and reducing the risk of hold-outs and litigation.

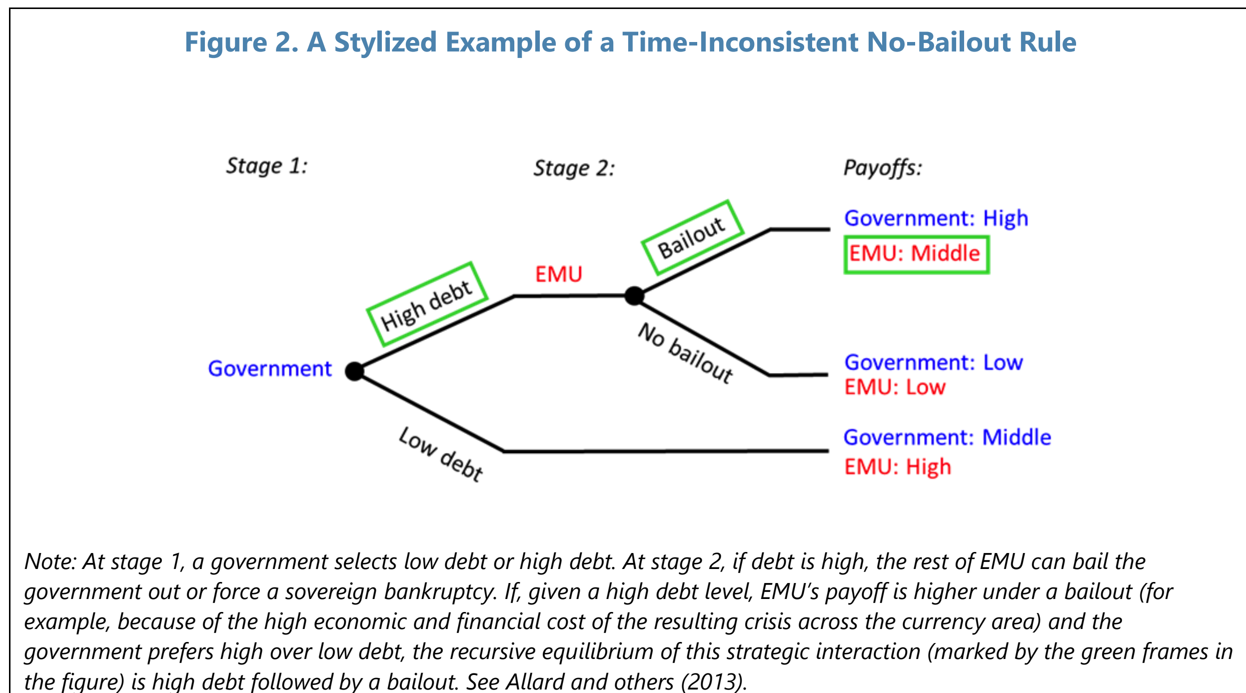
But these initiatives are in fact inconsistent with the current reality within EMU. Large national banking systems, a still-potent sovereign-bank nexus, and potential country-to-country financial spillovers would make sovereign default very costly, and thus undermine EMU's rules and safeguards against taxpayer-funded bailouts. In the absence of sufficient fiscal risk sharing, idiosyncratic shocks tend to cut deeper, implying higher potential costs for other EMU members and thereby making a bailout more likely (e.g., Allard and others 2013). Informative bond pricing is undermined and sovereign debt markets may wait too long before punishing profligate borrowers with higher spreads, effectively setting the stage for a more severe future crisis. This mechanism, in

[9] These issues have also bedeviled attempts to apply the BRRD.

turn, may breed complacency and thereby reduce a government's incentive to keep debt levels low in the first place. Therefore—as we explore further below—one way to edge the no-bailout rule closer to time consistency is through minimum fiscal risk sharing, including funding of a full banking union, which would limit the economic fallout from a government default and enhancing the credibility of no-bailout pledges.[10]

A no-bailout promise is credible only if it can stand the test of a crisis. Indeed, once the debt of a currency union member becomes unsustainable and a crisis ensues, bailout can be policymakers' best choice, making it more likely that the rule will be bypassed. This happens when, from policymakers' perspective, the overall cost of a sovereign default is higher than that of a bailout (Figure 2). Depending on the country, the cost of sovereign default can be high, including both the economic and social consequences to the stricken country and the repercussions across the entire currency area through economic, financial, migration, and political spillovers—and in extreme cases, even exit from the euro area. These prospective costs can make the fiscal resources needed for a bailout look comparatively small after the fact. Thus, if markets expect the cost of a sovereign

Figure 2. A Stylized Example of a Time-Inconsistent No-Bailout Rule



Note: At stage 1, a government selects low debt or high debt. At stage 2, if debt is high, the rest of EMU can bail the government out or force a sovereign bankruptcy. If, given a high debt level, EMU's payoff is higher under a bailout (for example, because of the high economic and financial cost of the resulting crisis across the currency area) and the government prefers high over low debt, the recursive equilibrium of this strategic interaction (marked by the green frames in the figure) is high debt followed by a bailout. See Allard and others (2013).

default to be relatively high, they will question the no-bailout clause and fail to impose the discipline that contains moral hazard and keeps debt lower in the first place.[11]

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[10] Similarly, Cœuré (2016) concludes that "a degree of fiscal risk sharing" underpinned by "a set of rules at euro area level, mutually agreed and enforced by common institutions" may be required for sovereign debt markets to effectively indicate sovereign risk.

[11] Gros and Mayer (2010) presented an early argument for enhancing the credibility of no-bailout through a mechanism that would facilitate orderly sovereign debt restructuring. According to Bénassy-Quéré, Ragot, and Wolff

Fiscal risk sharing can ameliorate this time inconsistency. Ex ante, the no-bailout promise—if credible—is optimal. It increases fiscal prudence by raising a country's expected cost of default and simultaneously forces private creditors to internalize sovereign risk and, thus, to price it correctly. In practice, however, governments cannot commit to steering clear of bailouts, and under the conditions discussed above, a bailout may become optimal ex post, as its immediate benefits may vastly exceed its immediate costs. This possibility undermines credibility. Bulow and Rogoff (1988), for example, show that when a creditor-country government cannot commit to allowing private creditors and debtors to work out debt problems on their own, it can be gamed ex post into making side payments to those private parties. In general, containing the fallout from sovereign debt problems reduces creditor governments' incentives to get involved in bargaining games between debtors and creditors, and the introduction of some fiscal risk sharing, by limiting the expected EMU-wide costs of idiosyncratic country shocks, will therefore likely ameliorate the time-inconsistency problem and lend credibility to the no-bailout rule.[12] (This is akin to what happens with rules governing the use of public funds in the resolution of banking crises. In a world without deposit insurance and bail-in-able securities, the economic and social consequences of bank failures may mean that bailouts are unavoidable. The introduction of deposit insurance reduces the externalities from bank failure and makes bail-ins more credible.)

Consider the case of a government default with significant consequences undesirable for the rest of the euro area membership (for instance, a deep banking crisis and recession, with large spillovers to others). Under these conditions, market participants would see the no-bailout clause as time inconsistent and would just assume that if the need emerged, it would be finessed and the other members would do whatever it took to end the crisis. Then, the presence of a formal arrangement to share some fiscal risk (for example, a common fiscal backstop for bank resolution and deposit insurance and fiscal transfers linked to the recession) that limited the negative consequences of a default could make default acceptable from an economic and political standpoint.

In addition, by mitigating the fiscal consequences of economic shocks to individual countries, the introduction of formal risk-sharing arrangements would help stabilize the affected economies and prevent potentially more harmful crises. This benefit, in turn, will likely reduce the need for bailouts in the first place.

The Critical Role of the Public-Private Finance Nexus

(2016), the main issue does not concern so much the introduction of a debt restructuring mechanism as it does ensuring that it is feasible—including through banking sector resilience and the introduction of better economic stabilization tools. Bénassy-Quéré and others (2018) emphasize that credible debt restructuring also requires legal mechanisms that protect sovereigns from holdout creditors—the purpose of the envisioned single-limb aggregation of sovereign liabilities--and procedures to strengthen the no-bailout commitment on the institutional side. Andritzky and others (2019) and Grund and Stenström (2019) discuss sovereign restructuring mechanisms.

[12] Several factors are at work. Risk sharing might affect bargaining between debtors and creditors, tilting bargaining power toward the latter and making creditor governments more eager to bail out their lenders by orchestrating an EMU bailout of the sovereign. A more direct likelihood, however, is that by shielding the debtor economy in the case of an idiosyncratic shock, risk sharing would reduce lender losses conditional on no bailout, which would, in turn, enhance the credibility of a no-bailout promise.

A key obstacle to making the default threat credible—and thus, to the possibility of effective market discipline—is the continuing strength of the sovereign-bank nexus.

Even sovereigns that carefully manage the non-contingent fiscal vulnerabilities arising from both the size and structure of their debt stocks are critically exposed to systemic problems in their domestic financial systems, especially when these are large relative to the size of the domestic economy.

That exposure is especially elevated in the euro area. Prudential regulation and other incentives still encourage banks to hold their own sovereigns' liabilities. As in other jurisdictions, the zero risk weights the EU Capital Requirement Directive sets for banks' sovereign bond holdings favor sovereign assets over others with similar risk characteristics but higher capital charges. In addition, especially in times of bond market duress, the absence of a lender of last resort for sovereigns not only precludes central bank financing of government liquidity needs; it can also amplify the temptation for sovereigns to motivate banks through moral suasion to accumulate domestic sovereign bonds. In Coeuré's (2016) words, domestic banks may "act ex post as a contingency liquidity buffer to their sovereigns" to reduce their vulnerability to multiple equilibria (see also Altavilla, Pagano, and Simonelli 2016).

In the wake of the crisis, strengthened financial supervision, higher loss absorption buffers (especially for systemically important financial institutions), and new bail-in requirements have likely lowered the expected fiscal needs associated with bank distress. The introduction of positive risk weights and/or concentration limits/charges on sovereign bonds and a more risk-sensitive collateral policy by the ECB would both likely weaken the bond-holding channel (Obstfeld 2013; Brunnermeier and others 2016; Dolls and others 2016; Véron 2017).[13] Risk-sensitive weights and collateral policies could, however, introduce an undesired element of cyclicality in capital regulation, as banks would be forced to raise capital when sovereigns are downgraded—as typically occurs during recessions. Further, recognizing the riskiness of sovereign debt may complicate liquidity management during crises, and government financing would also be affected (Cœuré 2016). This recognition is a logical implication if these bonds are subject to default, but the sensitivity of their treatment to market conditions could be smoothed so as not to induce excessive procyclicality in credit conditions.

Measures targeted to limit banks' exposures to their *own* sovereigns would go furthest to dilute the sovereign-bank nexus at the member-state level. Such measures alone, however, might still leave an excessive exposure of the euro area banking system as a whole to the area's overall sovereign risk (Alogoskoufis and Langfield 2018). That concern motivates the introduction of some sort of euro "safe asset," such as ESBIEs (Brunnermeier and others 2016; Leandro and Zettelmeyer 2019).

Stronger sovereign and bank balance sheets would reduce the risk of crises, and tighter rules on bank bond holdings could reduce direct exposure. But even these measures leave most of the fundamental links between banks and sovereigns, which operate through the implicit and explicit

[13] At the peak the crisis, the EBA imposed capital buffers based on "prudent valuation" of sovereign debt held to maturity. This exercise had a forward-looking element resembling positive risk weights on sovereign bonds. However, a more systematic and fully ex ante approach would provide a better incentive structure for the banking system.

safety net and the macroeconomy, intact. Thus, the nexus can be broken only through genuine completion of the banking union, including mutualized deposit insurance and resolution funds supported by an adequately sized and reliable common fiscal backstop (Goyal and others 2013).

It follows that, absent a full banking union, sovereign distress will inevitably remain a threat to countries' bank stability and the payments system, undermining the credibility of the no-bailout clause. As illustrated in Greece during the spring and summer of 2015, a sovereign debt crisis can easily escalate into a full-fledged bank run with immediate consequences for a country's links with the euro area payment system, even putting euro membership at risk. Under these conditions, the no-bailout pledge could be repeatedly tested.

In contrast, a full banking union is necessary to allow sovereign debt restructuring without impairment of credit and payments. A mutualized banking safety net anchored by a mutually guaranteed fiscal backstop, together with limits on banks' exposures to their own sovereigns, would sever the *direct* link between national sovereign and bank distress. A sovereign crisis would still affect domestic banks *indirectly* through its effect on local activity, but as for regional crises in a single-country setting, public guarantees and liquidity support from the center would do much to contain vicious spirals. Fiscal risk sharing *beyond* the minimal needs of banking union would mitigate the previous indirect channel and therefore add to the credibility of no-bailout rules. Such risk sharing becomes even more important to the extent that banking union remains partial.

REDUCING PUBLIC FINANCING RISKS

Whatever the political challenges, the ingredients for completing EMU discussed so far are necessary conditions for reducing public sector vulnerability. Specifically, EMU needs more fiscal risk sharing to help cushion country-specific shocks, reduce the need for ad hoc crisis interventions, make no-bailout more credible, and enlist financial markets to strengthen governments' incentives against excessive fiscal deficits. This task also requires complementary financial sector reforms, including a complete banking union (one that severs the sovereign-bank nexus) and a capital market union.

To resolve completely EMU's quadrilemma, however, we have to turn to the final constraint: public financial vulnerability. A key element in reducing that vulnerability, complementary with more meaningful levels of fiscal risk sharing, is a set of more effective rules and institutions to reduce moral hazard—both at the EMU and/or national levels.

Fiscal Rules Remain Necessary

Rules are an indispensable complement to fiscal risk sharing, financial reform, and market discipline over sovereigns. Market discipline better aligns incentives and presupposes the possibility of private sector bail-in, but it also limits sovereigns' fiscal room to maneuver, making risk sharing among member states more valuable. Financial sector reform can enhance private markets' contribution to risk sharing while loosening the bank-sovereign nexus, thereby making sovereign default a viable

possibility in times of stress and sovereigns less vulnerable to domestic shocks. At the same time, several factors point to the need to limit moral hazard:

- Even in the best case, spillovers from sovereign default will remain, possibly inducing bailouts.[14]
- The strength of EMU's collective financial sector backstop depends on the strength of its individual members, opening the door to free riding.
- Efficiency and political sustainability of any risk sharing system among sovereign states requires that none exploits (or is seen to exploit) the system.

Introducing meaningful mechanisms of fiscal risk sharing will first strengthen government incentives for fiscal prudence by lending credibility to no-bailout rules. Once formalized risk sharing reaches higher levels, however, it may undermine fiscal discipline at the country level, and fiscal rules will therefore have a role to play as well. As Berger, Dell'Ariccia, and Obstfeld (2018) illustrate, moral hazard will first decrease and then increase in the amount of formal fiscal risk sharing that a currency union's institutions provide. Assume that the alternative to formalized fiscal risk sharing is a bailout covering all costs of a crisis-stricken country and that, in the absence of a formal risk-sharing arrangement, the ex post costs associated with default are such that the bailout is expected to arrive with certainty. Then, introducing even a small amount of formal risk sharing can lower the probability of receiving the full bailout. If that is the case, the expected overall amount of support a country would receive in case of a crisis—coming through the combination of bailout and formal risk sharing—drops. Therefore, the incentives to choose prudent policies that prevent crises improve, and moral hazard falls. But as the amount of risk sharing provided through formal arrangements rises closer to the full-bailout level, this effect reverses and moral hazard rises.[15] Beyond a certain threshold, the larger the degree of fiscal risk sharing expected to arrive through formal mechanisms, the more important it will be also to enforce more stringent governance rules that keep moral hazard in check.

If the environment could be made safe for sovereign restructuring, why would not market discipline over sovereigns provide a sufficient brake on moral hazard, without the need for rules? Even in such an idealized world, markets tend to remain complacent too long, giving governments too much rope. As de Haan and Kosterink (2018) put it, rules "remain necessary as a backstop for markets reacting too much and/or too late." Markets' forbearance, in turn, would be a temptation for myopic governments. In fact, well-enforced rules can serve as a timely trigger for market discipline—making

[14] Indeed, due to some costs being external, sovereign defaults may occur too frequently (from the community-welfare perspective) relative to politically difficult domestic adjustment measures. For a discussion of U.S. municipal default from this perspective, see Gillette (2012).

[15] The presence of spillovers will matter in this context. The positive relationship between formal risk sharing and moral hazard is likely to be stronger if the programed support benefits only the crisis country—such as improving a country's payoff under financial autarky in models of bilateral sovereign debtor/creditor negotiations. However, in a closely integrated currency area, crisis costs are likely to be shared (for example, through trade and financial channels), giving rise to an initially negative effect of higher formal risk sharing on moral hazard.

rules and market pressure complementary. And since a well-designed formal fiscal risk-sharing mechanism, backed up by rules and coupled with market discipline on sovereign borrowing, will generally provide less financial support than a bailout during a full-blown crisis, it is likely to entail less moral hazard overall than a non-credible no-bailout regime without formalized risk sharing.[16]

Finally, while the economic arguments for risk sharing are clear in principle, distinguishing between provision of insurance against idiosyncratic risks and redistribution can be difficult in practice. In that context, it will be critical that all countries have similarly strong incentives to strengthen public-sector balance sheets, to reform, and to reduce structural impediments to economic growth and convergence. This balance will ensure that all benefit from tackling risks together, without some countries becoming systematically and predictably givers or takers.

EMU's Economic Governance Needs Strengthening

The institutions governing European banking have seen impressive evolution this decade, but on the fiscal front, EMU governance is generally seen as lacking power. There is consensus in the literature that EMU's self-imposed structural reform commitments (for example, the Lisbon strategy) and fiscal rules lost effectiveness once the so-called Maastricht criteria for joining the euro were no longer binding (Bénétrix and Lane 2013; Ioannou and Stracca 2014). It is still mostly the smaller countries that obey the rules of the Stability and Growth Pact (SGP), perhaps because larger countries are less likely to be sanctioned under the existing SGP framework.[17]

There is likewise little evidence that the new rules and surveillance procedures introduced since the start of the crisis have made a difference. Most observers agree that the "Six Pack," "Two Pack," and "Fiscal Compact"—meant to buttress the SGP, including by more granular surveillance and the operationalization of the debt rule—as well as the "European Semester" and "Macroeconomic Imbalance Procedure"—aimed at improving economic governance and policy coordination more broadly—have had no notable impact.[18] Eyraud, Gaspar, and Poghosyan (2017) point out the potential importance of the changed majority requirements for certain SGP enforcement decisions. But they conclude that, overall, these reforms failed to change underlying political incentives. This stasis is not helped by the lower transparency inherent in the proliferation of rules and contingencies, reinforced by the general overlap of EMU- and EU-based governance procedures.

Although provisions that account for meaningful contingencies can increase rules' resilience, built-in flexibility often undermines enforcement and introduces complexities that defeat the purpose of a clear and predictable anchor to fiscal policy (Eyraud and others, 2018). Andrle and others (2015)

[16]Addressing this need will be aided by the fact that risk sharing shifts part of the task of stabilizing state-level business cycles to the central level, which makes it easier for states to implement credible deficit limits at their level.

[17] See, for example, the analyses and discussions in de Haan, Berger, and Jansen 2004; Beetsma, Giuliodori, and Wierts 2009; Carlino and Inman 2013; Gros and Alcidi 2015; Eyraud and others 2017; and Bénassy-Quéré and others 2018.

[18] See, for example, Hallerberg 2016 and Demertzis and Wolff 2016. On the European Semester, the analysis of Gros and Alcidi (2015) and Darvas and Leandro (2015) suggests that implementation of recommendations was poor from the start in 2011 and continued to decline over time.

argue that a better fiscal governance framework could begin with simplification (by merging the preventive and corrective arms of the SGP or making them more consistent) and the introduction of a single fiscal anchor with a single operational rule (for example, combining a debt target with an expenditure rule). However, these initiatives will mean little unless they come with much stricter enforcement. Among the reform options considered by Andrle and others (2015) are better monitoring (by coordinating the European Commission and national fiscal councils); more credible sanctions (for example, through deployment of nonmonetary sanctions in bad times); and more automatic enforcement through gradually stepped-up monitoring and constraints once countries are found to be noncompliant with the rules.

Defenses against Liquidity Runs

When sovereign default is a credible possibility, markets can play a constructive role in disciplining sovereigns; but the possibility of default also opens the door to self-fulfilling runs on their debt, even when the sovereign would be solvent in a "benign" equilibrium. To counter this threat, the ESM is an essential part of EMU's architecture, and its role could be expanded. That said, the European Central Bank should remain ready to address liquidity concerns affecting monetary policy transmission, as it can play a constructive role notwithstanding quadrilemma constraint 1. Since September 2012, the Outright Monetary Transactions (OMT) program, while yet to be formally tested, in principle allows the ECB to purchase sovereign bonds on secondary markets if necessary to safeguard the monetary policy transmission mechanism.[19] Further, mechanisms in support of financial intermediaries, such as various long-term lending facilities, have indirectly also supported liquidity in national sovereign bond markets.

MOVING FORWARD: WHICH DIRECTIONS AND HOW FAST?

Despite recent progress, EMU remains vulnerable to shocks and subject to the corrosive force of uncoordinated national policies in critical areas (Table 1). Specifically, given the limited borrowing room of several sovereigns and large banking systems with continued pockets of fragility, more extensive fiscal risk sharing facilities are urgently needed, both to cushion local shocks and to underpin a complete banking union. These changes would add credibility to the no bailout principle and strengthen fiscal discipline with the help of financial markets. Improving governance is critical to

[19] OMT do not constitute a full "backstop for government funding" in the sense of Draghi (2014); that is, they do not eliminate quadrilemma constraint 1 for national governments (though they do relax constraint 2). OMT are subject to conditionality; the ECB Governing Council, not the member state issuing purchased bonds, makes the decision to deploy OMT; member states must pay interest to the European System of Central Banks on any of its bonds purchased owing to OMT; an insolvent sovereign might still have to restructure its debts before eligibility for OMT; and, as noted, OMT remain untested. The European Court of Justice ruled in June 2015 that OMT do not constitute monetary financing of Member States. OMT do not eliminate the risk of multiple equilibria, since there is no assurance the ECB will intervene to remove such equilibria regardless of circumstances.

contain moral hazard at higher levels of formalized risk sharing and to align national policies with common goals.

Progress is especially urgent along two critical dimensions. First, in the near term, the completion of the banking union is key to removing a potentially explosive sovereign-bank nexus that could still threaten the integrity of the single currency. Second, over the longer term, more extensive formal fiscal risk sharing would contribute to the efficient functioning of the euro area.

Completing EMU's institutional architecture will be a complicated journey. There are myriad legal, technical, and operational problems to overcome, including those stemming from the euro area's unique institutional setup, which combines EU legal norms and processes with EMU-specific intergovernmental frameworks. Even more critically, because many of the necessary steps require fundamental changes to the TFEU and national law, the lack of political union and ideological differences will be a critical obstacle for EMU completion (Brunnermeier, James, and Landau 2016). As the European Commission (2017, p. 27) concludes, for the currency union to become stronger, one way or the other, member states will have to "accept to share more competences and decisions on euro area matters, within a common legal framework."

Advancing formal fiscal risk sharing, be it at the microeconomic or macroeconomic level, is vital. It promises not only efficiency gains compared with stabilization that relies solely on national policy tools, it will also support the credibility of EMU's no bailout clause. Several proposals—on their own or in combination—could be steps in the right direction. These include establishing some sort of central fiscal capacity with an automatic macroeconomic stabilization function or a budget to contribute to the provision of prospective EMU-wide public goods, such as defense, border control, and common infrastructure programs (for example, as in the Juncker plan). Either facility could be supported by a dedicated euro-area-wide tax source and could feature some limited ability to draw additional resources—for example, from member countries or from the issuance of jointly guaranteed Eurobonds. At the same time, steps to introduce harmonized basic unemployment insurance at the EMU level, with a common backstop, could be provided by the central budget.

Distinguishing in practice among risk sharing, redistribution, and legacy issues is a notable difficulty. In principle, risk sharing should include any type of shock—whether transitory, persistent, or permanent—provided the underlying risk is indeed random and has the potential to affect all EMU members. At the same time, it can be difficult to determine the underlying nature of observed differences in income or other economic variables in real time. For example, based on microdata simulations of an EU-wide tax and benefit system, Bargain and others (2013) argue that microeconomic approaches are likely to have both risk-sharing and redistributive qualities.

Table 1. Completing EMU: Steps toward a Functioning Fiscal Union

Principal Requirements	Progress since the Crisis	What More Is Desirable
(1) Fiscal risk sharing		
• Macroeconomy • Banking union backstop	• Small-scale centralized investment initiative • Conditional liquidity provision, usually at below-market rates (European Stability Mechanism) • Single Resolution Fund (Single Resolution Mechanism) • ESM loan facility for Single Resolution Fund	• Macroeconomic risk sharing of relevant size • Common deposit insurance • More robustly jointly financed bank resolution fund
(2) Governance		
• Policy coordination • Rules	• Various increasingly complex fiscal governance reforms • Single Supervisory Mechanism	• Effective coordination • Simpler but more effective rules to reduce moral hazard
(3) Markets		
• Factor market integration • Incentivizing fiscal and financial institution discipline • Reducing the risk of adverse self-fulfilling equilibria in sovereign debt markets	• Stronger supervision, higher loss-absorption buffers, and bail-in requirements • Financial market integration not fully recovered from the crisis • Collective action clauses introduced, to be strengthened	• Fully unified supervision, regulation, deposit insurance, and resolution to defuse the country-level sovereign-bank nexus • Full capital market union • Credible limitations on taxpayer-funded bailouts, supported by a minimum of risk sharing • Euro area safe asset

Legacy issues, such as existing nonperforming loans (NPLs) on bank balance sheets, pose issues that are even more challenging, unless specific tools are available to deal with them outside of risk-sharing mechanisms. Recent proposals by the European Banking Authority for a European-level "bad bank" to purchase existing NPLs at their real market value as determined by due diligence (Enria 2017) would harmonize the approach across countries but stops short of providing a joint EMU-wide guarantee for its financing. Disposing of legacies is a thorny problem, not least because they condition, and in general worsen, the national and EMU-wide effects of new adverse shocks. Precisely for this reason, however, legacies should not be allowed to stand in the way of necessary institutional innovations. But those innovations will be impossible to advance unless the path to greatly reducing legacies is clearly delineated and credible.

To make no bailout credible, however, a necessary step is to complete the banking union blueprint as originally conceived. Completion requires an adequate fiscal backstop for both common deposit insurance and the SRM. In combination, these resources would eventually have to be similar in size to those of other currency areas to sever the bank-sovereign nexus fully, but initial moves in the

right direction would send an important signal to markets and are an urgent priority given how quickly markets can react to economic setbacks.

EMU also needs complementary financial sector reforms. While advancing fiscal risk sharing and completing the banking union will clearly raise the credibility of the no bailout clause, complementary financial sector reforms would go even further to enlist financial markets in strengthening incentives against excessive fiscal deficits. Still, any such reform would have to carefully balance the trade-off between increasing the sensitivity of sovereign bond holdings to risk and generating unwanted regulatory cyclicality. The introduction of ESBIEs (or one of the alternatives) could play a supporting role in ensuring adequate safe assets for the financial system, provided there is a fiscal backstop or sufficient paid-in capital to ensure the relevant assets' safety.

Facilitating intra-euro-area capital flows through the CMU would also be beneficial. The action plan by the European Commission (2015, 2018) presents two sets of arguments in favor of deeper and more integrated capital markets in Europe. The first is cyclical. The lack of growth during the post-crisis period has in part been attributed to banks' distress and the associated inability or unwillingness to lend. In that context, the CMU is portrayed as an alternative source of external financing for small and medium enterprises. The second set of arguments is structural. Deeper and more efficient capital markets would reduce the system's vulnerability to future crises. Should banks again fall into distress, stronger capital markets could prevent or at least weaken the vicious bank/real-sector/sovereign spirals that played a critical role during the recent crisis. The CMU is also seen as a complement to the banking union that would further the introduction of uniform standards, including for securitization and collateral. Finally, more efficient capital markets are an obvious precondition to reduce the centrality of debt as a source of external funding, which, among other advantages, would promote risk sharing through private markets.

Along with the introduction of more formal fiscal risk sharing, EMU needs more effective macroeconomic governance. Immediate measures would include the simplification of the existing SGP framework and ensuring tighter monitoring, including by fiscal councils. At the same time, a process should be set in motion to strengthen the enforcement of simplified rules by making sanctions more credible and embedding them in a more automatic, gradual process. Eventually, as fiscal risk sharing is scaled up beyond the minimum required to ensure the credibility of the no bailout clause, some delegation of sovereignty to the center will likely be needed, requiring commensurate movement toward enhanced democratic accountability.

EMU must also find more effective ways to coordinate other national economic policies in pursuit of common goals. Structural reforms, or their absence, can cause EMU-wide spillovers just as fiscal policy can. This interdependence suggests a need to improve current policy coordination systems.

Sequencing these reforms may have advantages from a pragmatic point of view. The banking union is relatively advanced, and completing it would largely weaken the sovereign-bank nexus and the associated crisis-amplifying mechanism. In contrast, the introduction of meaningful levels of fiscal risk sharing will require creating a new institutional framework. Models of risk sharing that play an important role elsewhere—especially, large common budgets that support the provision of public

goods at the central level—will be difficult to implement until there is fuller political union. This reality puts additional emphasis on building trust and overcoming moral hazard to ensure participation by all members. Against this backdrop, pragmatic sequencing of reforms could yield benefits: completion of the banking union, addressing legacy issues, and strengthening governance—followed by the introduction of an initially small, targeted fiscal risk sharing instrument, such as a central fiscal capacity.

Progress in all directions, however demanding, is an economic necessity. The steps set out here to equip EMU with the beginnings of full fiscal union involve complicated institutional decisions, reallocation of sovereign power, and questions of democratic accountability. These issues call for thorough public debate at a time when even the goal of European integration is no longer shared by all, and decisions that are not based on broad public support have the potential to backfire. Economic reality has a way of asserting itself, however, whatever the prevailing political tides. Ultimately, without more tangible elements of a fiscal union, EMU will remain fundamentally vulnerable to shocks. By the same token, the promise of a more complete EMU tomorrow will add to its resilience today.

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