

Fiscal Policy in Europe: Controversies over Rules, Mutual Insurance, and Centralization

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During the debates in the late 1980s and early 1990s that led to the creation of the euro, controls on national-level budget deficits and debt were among the key objects of contention. Strict limits for deficits and debt were enshrined in the Maastricht Treaty of 1992. Why this seeming fixation with the deficit and debt in a monetary union? The standard account is that countries of northern Europe, with Germany in the lead, worried that some members would run lax fiscal policies and eventually force the other countries to bail them out or force the common central bank to monetize their deficits, thus generating higher inflation—as had happened in the 1970s and 1980s (James 2012). In fact, the Treaty also prohibited the European Union or a member state from “assuming the commitments” of other governments, and the Eurosystem (the combination of the European Central Bank and the national central banks of the eurozone) from “purchasing directly” the debt instruments of a government. This was the famous “no-bailout clause” that, as we shall see, was framed in sufficiently generic terms to allow for a wide range of interventions during the later financial and debt crises of the eurozone.

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However, the justification for debt limits shifted in recent years. The European Central Bank purchased enormous quantities of government debt starting in 2015 as part of its quantitative easing policy—more than if it had monetized the deficits of all eurozone countries—and inflation did not budge. Yet budget deficits and government debt have become, if anything, even *more* central to the debate on the reform of the eurozone, at least until the pandemic recession (more on this below). The focus shifted from fears of inflationary pressure to fears of a variety of spillovers and contagion effects stemming from the sovereign default of a monetary union member.

In the rest of the paper, we discuss how the focus of the debate evolved, and the various proposals concerning the use of national and supranational fiscal policy in the context of the European Union and the eurozone.¹ We first follow up on the evolution of rules-based approaches to govern national debt, which have proven largely ineffective. We then turn to proposals for mutual insurance, including pan-European systems of deposit insurance, unemployment insurance, and a pre-agreed “orderly restructuring scheme” for sovereign debt. Finally, we consider proposals for a more centralized European fiscal policy, including policies of debt mutualization and a greater degree of fiscal union. At their core, these arguments over European fiscal policy are a manifestation of two age-old debates: i) rules versus discretion, and ii) risk sharing versus risk reduction and market discipline. An important recent contribution that has tried to reconcile this trade-off is the manifesto of the “7+7” (Bénassy-Quéré et al. 2018), a group of seven French and seven German economists, that has sparked a large and fruitful policy debate on which we draw freely throughout this paper.

To impose some discipline on the discussion, we will take seriously the political constraint whereby large and persistent unidirectional transfers between EU members are politically infeasible. In standard models of insurance across countries, shocks are temporary and randomly distributed, so that expected transfers between countries are typically zero over time. But in the real-life European Union, countries have highly persistent differences in their economies, including different levels and riskiness of their government debts; thus, shocks also tend to be highly persistent. Virtually all policies for risk-sharing arrangements and centralized stabilization face a political challenge, because they are likely to generate either a large, one-off transfer which is unlikely to be offset by a transfer in the opposite direction over a politically realistic horizon (as in the Greek bailout), or long periods of transfers from the core to the periphery, lasting perhaps a decade or a generation (what we call “persistent, unidirectional transfers” for short). Core-country politicians

¹Now that the United Kingdom has brexited, there are 27 European Union (EU) members, all of which are also members of the Economic and Monetary Union. Only 19 of these, however, have adopted the euro and form the eurozone. All countries that joined the European Union after the creation of the eurozone are waiting to qualify for the eurozone; two older members of the European Union, Denmark and Sweden, have chosen not to adopt the euro for the time being.

would have difficulties justifying such transfers to their electorate, especially in the current political atmosphere where nationalist feelings are resurgent everywhere.

In this respect, we recognize that the difference between “core” and “periphery” countries is real: not only are their economies and cultures different in important ways, but the fact of the matter is that a “core eurozone” could survive and maybe prosper, while a “periphery eurozone” is unlikely to be viable or to be of interest to its potential members. Hence, core countries have more bargaining power, and there is nothing to be gained by ignoring this fact. In emphasizing the distinction between different visions of “core” and “periphery” countries, we acknowledge our particular debt to Brunnermeier, James, and Landau (2016).

Unlike many scholars in other social sciences, we do not think that in the long-run a eurozone can be based on anything other than self-interest. In virtually all European countries, nationalistic and Euro-skeptical parties have become more prominent in recent years: but even at the best of times, appeals to notions like “European solidarity” are unlikely to move many voters in the core countries, except perhaps for short, emotionally charged periods. During the Greek crisis in 2010–2015, one of the most popular arguments in the Italian media in support of a European bailout was that Greece was the cradle of the European civilization—the land of Plato and Aristotle—at a time when Germany was barely inhabited. During the Italian debt crisis of 2011–2012, similar arguments were shifted forward by a few centuries to encompass the glories of the Roman empire and of the Italian Renaissance 1,000 years later. We doubt that many German taxpayers and voters found these arguments convincing.

The recent attempts to negotiate an EU fiscal response to COVID-19 illustrated these core-periphery dynamics, but also revealed a degree of added flexibility. In July 2020, the “frugal four” countries—Austria, Finland, the Netherlands, and Sweden—openly defied an agreement by France and Germany to distribute large grants to countries of southern Europe particularly hit by the pandemic, on the ground that these countries had a long history of mismanagement of their public finances. Three of the “frugal four” countries were led by social democratic governments, facing high pressure at home from nationalistic parties. However, by the end of 2020 an agreement was reached to distribute €750 billion borrowed by the union to member countries, based in part on the effects of the pandemic: for instance, Italy got the highest share, €209 billion, of which about €80 billion was in grants and the rest in low-interest loans. While our discussion will highlight how efforts toward an EU-wide fiscal policy have been affected by the pandemic, many of the issues described here existed before the pandemic and seem likely to outlast it.

It is also important to note what this paper is *not* about. The European Union has its own yearly budget, amounting to about €160 billion or 1 percent of the total EU gross national income, 85 percent of which is spent on three items: infrastructure projects, structural funds to less developed regions of the European Union, and agriculture. This budget is balanced every year, and it is funded mostly by three items: national contributions proportional to each member’s gross national income (65 percent), custom duties (15 percent), and shares in each member’s value-added

tax (10 percent). The present paper has nothing to say about this common EU budget. However, in the last section we do discuss the new €750 billion program mentioned above because this is a potential game-changer in the common EU budget.

A Rules-Based Approach

A rules-based approach to fiscal policy requires compliance with specific limits on national government deficits and debt as part of membership in a monetary union. However, there are cases where it may seem wise to bend or set aside such rules, and the list of such exceptions could defang the rule itself. As we will discuss, the pendulum has swung back and forth between tighter and looser fiscal rules. At present, there is a widespread agreement that the attempts to write enforceable fiscal rules with appropriate exceptions are too complicated, unwieldy, even arbitrary. In our view, the quest for alternative rules does not seem to have made substantial progress and might have in fact led to a regress.

The Evolution of European Fiscal Rules

The original Maastricht Treaty of 1992 envisioned two main fiscal policy rules: a limit on annual budget deficits of 3 percent of GDP, and a limit on the accumulated debt/GDP ratio of 60 percent.² An exception was allowed only in the case of a downturn of at least 2 percent of GDP. Countries violating these limits could be subject to an Excessive Deficit Procedure, in which the European Commission recommends measures to be taken and monitors the outcomes. By fall 2020, all EU members, except Luxembourg and Sweden, had been subject to at least one Excessive Deficit Procedure. To reinforce these rules, the 1997 Stability and Growth Pact also held that countries should have a budget position “close to balance or in surplus” over a complete business cycle. Still, these limits were honored mostly in the breach: in the 13 years between 1999 and 2011, they were violated by Germany in five years, by Italy in eight years, and by Greece in all years (for the complete list, see Wyplosz 2013).

It was soon recognized that this set of rules was too vague and also dangerous, because it imparted a strong pro-cyclical bias to fiscal policies. When an economy is hit by a negative demand shock, the budget deficit and government debt as shares of GDP rise automatically (because the numerators of both ratios increase and the denominator decreases). Hence, for countries close to the limit, the rules called for a move to a tighter fiscal policy exactly when the economy is hit by a negative shock.

One potential answer is to impose limits to the “structural” deficit instead of the actual deficit, where the “structural deficit” is an estimate of what the budget

²There are various accounts of where these numbers came from, none of which are verifiable; we just note that in steady state the two numbers are compatible with each other if the rate of growth of nominal GDP is 5 percent, a figure that some countries have not experienced for decades.

deficit would be if the economy were at potential output and one ignored one-off expenditures and revenues. Indeed, a 2005 reform assigned each country a Medium Term Objective, or a target for the structural balance: more lenient if the country had low debt and high potential growth and stricter in the opposite case. A country was allowed to deviate from its Medium Term Objective if it introduced a structural reform, provided it had the effect of raising potential growth and conditional on getting back to the path within four years. Many elements of judgement and uncertainty were involved in all the steps of the process: in estimating *potential* output—a somewhat mysterious and model-dependent object, in estimating the structural deficit, and in assessing whether a structural reform qualified for a deviation from the Medium Term Objective.

After the 2011 debt crisis, the pendulum swung in the opposite direction, with calls by northern European countries to make the rules on government debt more binding. The resulting set of reforms included four steps aimed at a better enforcement of the Stability and Growth pact and two others aimed at other macroeconomic indicators, and thus was nicknamed the “Six Pack.” It transformed the deposits in case of noncompliance, as envisioned in the Stability and Growth pact, into fines of up to 0.2 percent of GDP (plus a variable component). Predictably, these fines were never applied. It introduced the “debt brake,” by which a country with more than a 60 percent debt-to-GDP ratio would have to reduce it at an average speed of one-twentieth of the excess per year, where the average is calculated over the last three years. On the other hand, the Six Pack relaxed the stringency of the rules by introducing an escape clause from the Medium Term Objective, in case of an “unusual event outside the control of the Member State, which has a major impact on the financial position of the general government, or in periods of severe economic downturn for the euro area or the Union as a whole.” To assuage those countries that regarded the policies adopted by Germany as a main source of deflationary pressure on the whole eurozone, the Six Pack also introduced the Main Macroeconomic Imbalance procedure, which would take into account a number of macroeconomic variables, including for instance an excessive current account surplus. But defining an excessive current account surplus is at least as subjective and controversial as defining potential output. Predictably, the Main Macroeconomic Imbalance procedure has been largely toothless as well.

The Fiscal Compact, signed at the end of 2012, incorporated many of these provisions and added more: in particular, still stricter limits for the Medium Term Objectives and several measures to ensure a better enforcement, including an independent “Fiscal Council” in each country and “the obligation to implement measures to correct the deviations over a defined period of time.” Once again, it is not clear what this generic wording could achieve in practice. The Fiscal Compact also required countries to enshrine the various fiscal rules (the 3 percent maximum deficit, the Medium Term Objective, the debt brake) into their constitutions. This is widely, but erroneously, interpreted as the requirement of a constitutional balanced-budget amendment.

Table 1

The “Matrix” for Required Annual Fiscal Adjustment

		<i>Required annual fiscal adjustment (percentage points of GDP)</i>	
<i>Condition</i>		<i>Debt ≤ 60 percent and low/ medium sustainability risks</i>	<i>Debt > 60 percent or high sustainability risks</i>
Exceptionally bad times	Real growth < 0 or output gap < -4	No adjustment needed	No adjustment needed
Very bad times	-4 ≤ output gap < -3	0	0.25
Bad times	-3 ≤ output gap < -1.5	0 if growth below potential, 0.25 if growth above potential	0.25 if growth below potential, 0.5 if growth above potential
Normal times	-1.5 ≤ output gap < 1.5	0.5	> 0.5
Good times	Output gap ≥ 1.5	> 0.5 if growth below potential, ≥ 0.75 if growth above potential	≥ 0.75 if growth below potential, ≥ 1 if growth above potential

Source: European Commission (2015, p. 20)

In 2015 the pendulum swung back again, reflecting a backlash against the perception that undue fiscal austerity had been imposed. To take into account cyclical conditions, the European Commission devised a matrix (shown in Table 1) specifying the required annual fiscal adjustment towards the Medium Term Objective depending on the growth rate and the debt level of a country. In addition, an array of exceptions and qualifications to the Medium Term Objective itself were introduced, leading to a bewildering cobweb that even experts in the field have trouble navigating. As one example, countries were allowed to deviate temporarily from their Medium Term Objective (or the adjustment path towards it) to accommodate investment, provided that “their GDP growth is negative or GDP remains well below its potential; the deviation does not lead to an excess over the 3 percent deficit reference value and an appropriate safety margin is preserved; investment levels are effectively increased as a result; the deviation is compensated within the timeframe of the Member State’s Stability or Convergence Programme” (European Commission 2015 p. 9). As another exception, a country that enacts “structural reforms” may now have its deficit deviate by 0.5 percentage points of GDP from its Medium Term Objective “provided that such reforms (i) are major, (ii) have verifiable direct long-term positive budgetary effects, including by raising potential sustainable growth, and (iii) are fully implemented” (European Commission 2015, p. 12).

The budgetary and growth effects of structural reforms and public investment are largely guesswork, often estimated as the result of a political process of give and take. In 2015, Italy was allowed to deviate from its Medium Term Objective on

the basis of three different clauses: the “unusual events” clause for 0.12 percentage points of GDP (half to cover the costs of the refugee crisis and half for the security crisis after terrorist attacks in Europe); the “investment” clause for 0.25 percentage points; and the “structural reform” clause for 0.50 percentage points. This was based on a submission to the European Commission envisioning that these reforms would raise the level of Italy’s GDP by 1.8 percent in 2020 and 7.2 percent in the long run (Italian Ministry of Economy 2015, p. 48)

In a large and diverse union, some exceptions to the rules are inevitable: almost by definition, rules cannot foresee all the relevant contingencies. But the overall result has been unwieldy legislation, endless litigation, backdoor bargaining, and ultimately loss of trust in the European institutions. Any government (and especially any nationalist party) in any country can point to an episode where they can argue that their own country was treated unfairly by their partners according to some criterion.

An Expenditure Rule?

As an alternative way to correct the procyclical bias in rules about debt and deficits, several authors have proposed an expenditure rule (for example, Bénassy-Quéré et al. 2018; Claeys, Darvas, and Leandro 2016; Darvas, Martin, and Ragot 2018; Feld et al. 2018; European Fiscal Board 2019; Mohl and Mourrel 2020). These proposals are all variants of the following approach: the growth rate of government spending net of interest payments, unemployment benefits, one-off expenditures, a smoothed version of public investment, and the discretionary change in tax revenues—call it “adjusted spending growth”—cannot exceed a smoothed version of the growth of potential GDP in nominal terms over a window of ten years or so. Shortfalls of adjusted spending relative to this ceiling can be saved in an accumulation account, whose balance can be spent to finance excesses of adjusted spending in other years. Most proposals also envision a “debt-brake”—that is, in countries with a higher debt/GDP ratio the expenditure ceiling would be revised downward. Escape clauses and further adjustments for the cyclical conditions are also typically envisioned. All the judgment calls (estimates of nominal potential growth, smoothing of public investment, the adjustments for the debt-to-GDP ratio and cyclical conditions, escape clauses, and so on) would be made by a combination of the European Commission, a European Fiscal Council, and national fiscal councils.

We list three advantages that have been claimed for a so-called expenditure rule. We find all of them highly debatable (see also Barnes and Casey 2019). First, the expenditure rule is supposed to be more transparent than a rule based on the structural balance. However, the discretionary change in tax revenues is conceptually the same as the change in cyclically adjusted tax revenues; hence, conceptually the only difference between adjusted spending and structural balance is that the former subtracts public investment. If the estimate of adjusted expenditure is based on more reliable estimates of the discretionary change in tax revenues, the latter could and should be applied to the estimate of the structural deficit as well. In addition, the construction of an expenditure rule involves *more* steps and many actors,

some of which—like the national fiscal councils in some countries—have not always proved to be authoritative.

Second, the expenditure rule is claimed to be less procyclical than the deficit rules currently in place: in a recession, when GDP grows less than the ceiling, and adjusted expenditure grows at the ceiling, the actual (as opposed to the adjusted) expenditure to GDP ratio increases, and the opposite in periods of high GDP growth. However, as the current rule is specified in terms of the structural, not the actual deficit, it is not clear why this should be the case.

Third, the expenditure rule is supposedly less subject to the vagaries of cyclical adjustment, because revisions to the estimates of expected nominal potential output are less frequent and smaller than revisions of the estimates of potential output. This might be correct if estimating and forecasting the nominal *growth* of potential output over a window of ten years is less uncertain than estimating the *level* of potential output over a horizon of a few years. We do not see a compelling reason for this.

Thus, in our view there is no clear logical or practical advantage of an expenditure rule relative to setting a Medium Term Objective for what is already just a slightly different version of the structural primary balance. In fact, we think it would be a further step backward in terms of transparency with no obvious gains in terms of countercyclicality. Perhaps most surprisingly, a kind of “expenditure benchmark” is already in place among the EU rules: the “Six Pack” of 2011 stipulates that “public spending must not rise faster than medium-term potential GDP growth, unless it is matched by adequate revenue increases.” In implementing this rule, the construction of “public spending” is essentially the same in the expenditure rule proposals we have described above (on the performance of the expenditure benchmark, see Barnes and Casey 2019; Mohl and Mourre 2020).

In another recent effort to improve the current institutional setup, Blanchard, Leandro, and Zettelmeyer (2021, p. 20, including quotation from Sunstein 1995) argue that because rules cannot foresee all possible contingencies, they should be replaced by “standards” that “leave room to accommodate the particulars of individual circumstances [. . .] Rules have the advantage of providing greater clarity *ex ante*. But a case-by-case approach may be preferable when ‘public authorities cannot design general rules, because they lack relevant information . . . or rules [would] be poorly suited to new circumstances turned up by unanticipated developments.’” As an example of a standard, they cite the current article 126 of the EU Treaty; “Member states shall avoid excessive government deficits.” They propose that this should be made operational by resorting to a debt sustainability analysis. Whether standards of this type can be a practical basis for a yearly political process involving 27 different countries is very much an open issue: for one thing, debt sustainability analyses are probably even more contentious and subject to large areas of uncertainty than, say, the estimation of potential output.

During the 2020 pandemic, the entire framework of European fiscal rules has been *de facto* suspended: the “general escape clause” has become operational, allowing member states to depart from the adjustment path towards their Medium Term Objective. This step is meant to be temporary, but there is a widespread

perception that a radical revision of the whole framework will be needed once the emergency is over. It is most likely, however, that *some* rules and limits will remain as the cornerstone of the framework.

Mutual Insurance

We define “mutual insurance” as inter-country transfers that occur in response to asymmetric shocks. These transfers can occur automatically, via a facility like European unemployment insurance, or on an ad-hoc basis. There are obviously several market failures that could justify mutual insurance between governments. We emphasize that in a currency union with nominal rigidities, even with complete financial markets, member countries might hold a suboptimal degree of insurance. The reason is that, with a fixed nominal exchange rate, international real relative prices do not adjust efficiently to asymmetric disturbances. In this context, it is constrained efficient from a union-wide perspective to resort either to variations in government spending (Galí and Monacelli 2008) or to cross-country transfers (Farhi and Werning 2017) to stabilize the economy. In practice, however, difficulties arise in implementing mutual insurance between countries, mainly because almost any conceivable implementation of such schemes in the current eurozone would give rise to large, persistent unidirectional transfers.

We focus on two candidates for mutual insurance that are closely related to fiscal policy: a European deposit insurance scheme and a European unemployment insurance scheme. Both have figured prominently in the academic and policy debate; both have failed to make much inroad among policymakers. We also discuss a European orderly resolution scheme for government debt, which could reassure core countries that mutual insurance is less likely to lead to bailouts of periphery countries.

A European Deposit Insurance Scheme and Safe Assets

Europe has largely completed the first two steps of a banking union: a common bank supervision and a common procedure for resolving failed banks. However, the third step, a European deposit insurance system, has faced the opposition of Germany and other core countries.³

At an abstract level, one can think of a banking union as a risk-sharing tool because its ultimate goal is to ensure that risk-adjusted funding costs for banks are the same across member countries, and in particular that these risk-adjusted funding costs are independent of sovereign risk.⁴ Like all instances of insurance, a European deposit insurance system raises an issue of moral hazard that should

³The German Finance Minister has made some recent overtures to a European deposit insurance system (Sholz 2019).

⁴Martinez, Philippon, and Sihvonen (2019) study the comparative properties of risk sharing via a banking union or a capital market union.

not be underestimated: that is, governments backed by a European deposit insurance system and facing a crisis could pressure their banking system to purchase their domestic government debt and to keep lending to firms in distress. In this way, a European deposit insurance system raises the danger of a “doom loop”—the vicious circle of negative feedback that can emerge between a country’s debt and its financial sector, which could lead to large and persistent transfers to periphery countries.⁵ The “doom loop” starts with the home bias of banks in their holdings of government bonds. This increases the probability of a “bad” (or “sunspot”) equilibrium, in which the government is expected to bail out banks in distress, and banks are in distress because the expectation of a government bailout reduces the value of domestic government bonds on their balance sheets. Brunnermeier et al. (2017, especially its online Appendix) provide a model that formalizes these ideas.

The doom loop first became the object of a heated debate at the time of the sovereign debt crisis of 2011–2012, when Italian and Spanish banks surprised many by using the large injection of liquidity by the European Central Bank to double down on their holdings of risky domestic sovereign debt. In a currency union, where governments have neither access to their own “printer of last resort” nor the option to devalue their exchange rate, the spillover effects on other countries of a financial system breakdown coupled with a confidence crisis in the government debt could be particularly disruptive. Greece represents only 3 percent of the eurozone GDP, yet for several years after 2010 talks about a possible Greek default kept the entire eurozone on edge and fueled a raging debate about a possible euro breakup.

To minimize the moral hazard problem and address the “doom loop” issue, four solutions are typically put forward, all revolving about the notion of reducing the home bias of the banking sector in countries with large and risky government debt. A first proposal envisions adjusting the deposit insurance premia for bank-specific and country-specific risk, along with a first loss to be taken by the domestic government. Negotiating the appropriate premia would be challenging in practice, as they must be based on measures of the solidity of each country’s banking system that are likely to be even more contentious than government debt ratings or country-specific potential outputs.

A second idea involves “concentration charges,” in which the higher the share of a sovereign in the total assets of a bank (or in the total sovereign holdings), the higher the capital charge coefficient applied to the holdings of that sovereign in that bank (for example, German Council of Economic Experts 2015; Veron 2017; and the proposal by the German Finance Minister, Sholz 2019). Unsurprisingly, the mention of concentration charges is anathema to periphery governments with high-public debt and to their central bankers.

⁵Carmassi et al. (2020) argue that regardless of which several different risk-weights are used, the cross-subsidization via a European deposit insurance system would be zero or minimal even in the presence of bank failures, well in excess of those seen in the Great Recession. However, their results are based on symmetric shocks (in each country, banks representing a given percentage of that banking system’s assets fail, and the loss rate is the same across countries).

A third proposal envisions differentiated capital charges depending on the risk of each sovereign debt. The European Union has chosen to make use of the discretion allowed by the Basel rules and has adopted a zero-risk weight on the government debt of any EU country and held by any EU bank under the “standardized approach” (for a useful summary of the issues, see European Parliament 2019). This proposal too is anathema to high-debt periphery countries. In addition, it would largely refute current policy of the European Central Bank, which applies a rather crude differentiation to the haircut of government bonds in its repo operations, with *de facto* only two categories of sovereign risk. However, the simulations of Alogoskoufis and Langfield (2019) show that even following the finer ratings of rating agencies would not achieve a substantial reduction in risk because these ratings are noisy and unreliable.

A fourth proposal is the creation of a safe asset, often called European safe bonds or “Esbies,” via financial intermediation. The idea is that if periphery banks had access to a large supply of well-diversified safe assets, they would be somewhat insulated against a loss of confidence in their own home-country sovereign debt. To create Esbies, Brunnermeier et al. (2011) and Brunnermeier et al. (2017) propose pooling eurozone sovereign debt according to their GDP weights, and then to divide this pool of debt into tranches: the junior tranche would be the first to take any losses, which means that the senior tranche—the Esbies—can be made as safe as one wishes. For example, simulations in Brunnermeier et al. (2017) show that when the junior tranche absorbs the first 30 percent of losses, and under the observed matrix of correlations, the senior tranche can effectively be made as safe as euro-denominated bonds issued by Germany’s government. Note that the pooling and tranching of European sovereign debt could be done by the market once the European Central Bank announces that it will accept the senior tranche as collateral.⁶ The European Parliament recommended the adoption of Esbies in April 2019, and Garicano (2019) proposes a path to the implementation of Esbies.

For present purposes, the key insight is that European safe bonds could reduce the risk of a “doom loop” by limiting the home bias of banks, in turn reducing the probability of the “bad” equilibrium described above. As a result, governments of core countries would have less reason to fear that a European deposit insurance scheme would become a vehicle for large unilateral transfers.

⁶Several variants of the notion of Esbies have been proposed. There is also a large theoretical literature on safe assets, in which a general theme is that the supply of safe assets has shrunk dramatically in recent years (for discussion in this journal, see Caballero, Farhi, and Gourinchas 2017). The “safety trap” of Caballero and Farhi (2017) and Caballero, Farhi, and Gourinchas (2020), as summarized in the model of Caballero, Farhi, and Gourinchas (2016), suggests that an excess demand for safe assets can lead to a recession. Essentially, think of a natural (real) safe interest rate, which equates demand and supply of safe assets at the natural level of output. If a central bank cannot reduce the actual (real) safe interest rate to this level, perhaps because it faces a lower bound at (or near) zero percent in setting this rate, then the equilibrium is obtained via a recession that reduces the demand of safe assets (savings) until it is equal to supply.

The key question is: if European safe bonds were available, would banks in periphery economies buy them willingly? Answering this question requires studying the reasons why financial institutions of periphery countries have shown a strong home bias for purchasing debt issued by their own national government. Although there is no consensus, we list four—not necessarily mutually exclusive—reasons for this home bias.

First, home-country governments can influence the investment decision of financial institutions via moral suasion (for example, Becker and Ivashina 2018; Acharya and Steffen 2015; De Marco and Macchiavelli 2010; Horvath, Huizinga, and Ioannidou 2019).

Second, holding troubled home-country debt can be part of a “gambling for resurrection” strategy by a distressed bank. After a deep recession, a bank may find itself with a large share of non-performing loans. Risky sovereign debt has high yields, while bank regulators treat it as non-risky. Thus, banks at the periphery have loaded up on domestic sovereign debt in times of economic stress—and doubled down on this strategy when the opportunity arose, such as with the two large Long Term Refinancing operations of the European Central Bank in 2011–2012.

Third, the marginal cost of borrowing for banks (the interest paid on the bonds they issue) is closely related to the interest paid by their sovereign—and this is largely independent of the amount of sovereign debt they hold. Credit rating agencies typically do not rate the debt of financial institutions more than two notches above their home country sovereign debt. In fact, Constâncio (2018) shows that the increase in riskiness of Italian banks during the debt crisis of 2011–2012 (as measured by premia on the related credit default swaps) was unrelated to their individual exposure to home country sovereign debt.

Fourth, life insurance companies also hold large amounts of sovereign debt. Typically, the guaranteed return on their life insurance contracts are linked to the *domestic* interest rate, which means that insurance companies of the periphery have an incentive to invest their assets disproportionately in home country sovereign debt.

If these explanations for the home bias of banks and financial institutions are correct, it is unlikely that there would be a large demand for European safe bonds by the banking sector in the periphery. After all, periphery banks *could* have invested in a safe, euro-denominated asset virtually identical to Esbies—the euro-denominated bonds issued by the Germany called Bund—but they *chose* not to.

More generally, some argue that reducing the home bias of the periphery’s banking system is misguided in the first place (for example, Tabellini 2017, 2018). Conditional on periphery countries having high public debt, there are situations in which the home bias in bank holdings of sovereign debt is not only inevitable for the political and economic reasons that we have seen, but is also desirable. As one example, suppose that the “bad” or “sunspot” equilibrium arises from a pure liquidity crisis on government debt, and thus is not associated with a bailout of home-country banks. In this setting, by investing in home-country sovereign debt (perhaps using also cheap liquidity from the Eurosystem), the banking systems of

high-debt countries stabilize the markets of their sovereigns and avoid a debt run. In this view, the original sin is the high government debt: until it is reduced, forcing a reduction of the home bias could be counterproductive. This view also suggests that in order to reduce the high government debt, rules constraining national fiscal policies should be strengthened, not weakened.

For similar reasons, the other proposed solutions to the “doom loop” (like concentration charges and risk weights) could backfire, thus reinforcing rather than weakening the “doom loop.” If the exposure of periphery banks to home-country sovereign debt is inelastic to the risk of that debt—perhaps because it arises for reasons of moral suasion by home country governments or gambling for resurrection as mentioned earlier—then concentration charges and risk weights would make domestic banks *more* risky when the sovereign becomes more risky.

A European Unemployment Insurance Scheme

Unemployment insurance is perhaps the most basic and natural case of risk-sharing arrangement, yet a European unemployment insurance scheme has not found much favor with core governments. The reason, once again, is the potential for large and persistent unidirectional transfers. Table 2 displays how much higher unemployment rates have consistently been in the last decade in Italy and Spain, compared with unemployment rates of the “core” eurozone countries (the table also displays the year of the highest difference, 2014 in Italy and 2013 in Spain). In this setting, any European unemployment insurance scheme tied to unemployment rates would have generated enormous and persistent transfers.

How might this prospect be avoided? One could try to design a European unemployment insurance scheme in terms of *differences* of the unemployment rate from a “neutral” or “long-term” level, but this would entail all the analytical and political controversies associated with estimates of notions like “potential output,” “potential growth,” or the “natural rate of unemployment.” Alternatively, a European unemployment insurance scheme could be based on *changes* in unemployment instead of levels, but then one could have large transfers from countries with high yet temporarily decreasing unemployment to countries with low yet temporarily increasing unemployment, which would be unacceptable to the public. Delegating everything to an independent council will not work either because politics can *and will* take over when a large shock makes the stakes high.

Other potential features would either largely defeat the purpose of a European unemployment insurance scheme, or be also difficult to apply in practice. For example, one can imagine adjusting unemployment-insurance contributions for country-level risk; in practice, this would require assessing the risk of a country’s unemployment, again a contentious proposal. Limiting the European unemployment insurance scheme to a catastrophic insurance scheme that pays only in the case of extremely large increases in unemployment, would severely limit the usefulness of the scheme; and once again, delegating to an independent body the determination of the catastrophe clause trigger is unlikely to work when it matters most.

Table 2

Difference between the Unemployment Rate of Core Countries and That of Italy and Spain

Country	Difference with Italy			Difference with Spain		
	2009	2014	2019	2009	2013	2019
Belgium	0.1%	4.2%	4.6%	11.6%	17.7%	8.7%
Germany	1.4%	7.7%	6.8%	12.9%	20.9%	10.9%
France	−0.9%	2.4%	1.5%	10.6%	15.8%	5.6%

Source: European Commission, AMECO Database

Note: The cells of the table show the result of subtracting the unemployment rates row country from the column country.

One might think that Europe could just copy the US system. In the United States, unemployment insurance is a state responsibility, but the federal government has supplemented it in every recession since 1950 (what follows is based on Porter 2021). In 1970, the federal “extended-benefit” program was created, adding federal funding for additional weeks of benefits in deep recessions, but states still had to pay half of the extension. Perhaps because of the hidden moral hazard in this pattern of repeated federal interventions, in 2019 only 29 percent of unemployed workers received a benefit; the percentages were as low as 9 and 11 percent in North Carolina and Florida, respectively, reaching a maximum of 60 percent in New Jersey. The average benefit was one-third of the last wage. During the Great Recession, the Obama administration spent lavishly to fund the unemployment system, but states moved the opposite way. Having exhausted their unemployment insurance funds, they cut benefits, and rather than increasing taxes, they went deeply into debt with the US Treasury (\$42 billion by 2011). The political wrangling over the federal extension of benefits during the pandemic further illustrates the tensions at the core of this system.

In a country with high labor and capital mobility, tax competition between states makes it difficult to fund a state unemployment insurance system. On the other hand, federal intervention seems to have created the familiar moral hazard problem. Europe has less labor mobility than the United States, but it is difficult to escape the conclusion that a European unemployment insurance scheme would have to be funded and run at the central level with the problems highlighted above.

A European Orderly Restructuring Scheme

Sovereign defaults are typically chaotic events. This generates a vicious cycle. Exactly because defaults are often chaotic, it might be rational for core countries to limit the contagion and spillover effects by bailing out the defaulting government after the events have occurred. Knowing this, high-debt countries often procrastinate and delay the adjustment; the disruptions that follow reduce the recoverable value when the default becomes unavoidable and may in some cases cause a deep

recession. Panizza (2013a, b) discusses this and other costs of sovereign debt default. For all these reasons, core countries are unwilling to enter a risk-sharing arrangement with periphery countries with high default risk. An orderly restructuring scheme is designed to break this vicious cycle.

An orderly restructuring scheme involves a predictable and orderly process. Two key elements are a predetermined process of restructuring and rescheduling of the debt when a default occurs and a “bail-in” of private creditors: that is, knowing in advance that private creditors too will have to take a loss, and by how much. This increases the recoverable value when default is inevitable, making core countries more willing to enter a risk-sharing arrangement with high debt countries: defaults are more frequent, but they are accompanied by orderly restructuring and a bail-in limiting the losses to the government, rather than a chaotic bailout (for a model in support of this argument, see Gourinchas, Martin, and Messer 2020). In turn, the risk-sharing arrangement makes a European orderly restructuring scheme more acceptable to periphery countries because it absorbs parts of the costs associated with a default *cum* restructuring. The key point of the “7+7 proposal” is precisely that there is complementarity between risk sharing and an orderly restructuring scheme.

In practice, would an orderly restructuring process increase recoverable value? Although we have scant evidence, we know what happened after the introduction of mandatory “collective action clauses” on government bonds issued by eurozone countries with maturities above one year, starting in 2013. This kind of clause allows a specified supermajority of bondholders to agree to a debt restructuring plan that is binding on all bondholders, thus reducing the “holdout” problem. Collective action clauses can therefore be thought of as modest version of a fuller European orderly restructuring scheme, in the sense that they seek to make a restructuring with a bail-in component more likely but less costly. Indeed, sovereign borrowing costs decreased with collective action clauses, which seems to suggest that the costs of default did decline.⁷

A related problem can arise if a government in distress decides to borrow a large incremental sum, because in the absence of a well-defined seniority structure, additional borrowing when close to default hurts all existing creditors. This is different from the case of corporations, where a better-defined seniority structure protects the more senior creditors. As part of an orderly restructuring scheme, the 7+7 group advocates requiring countries to issue junior debt when their debt exceeds a certain threshold: this will increase market discipline, as the country must pay a higher interest rate at the margin.

⁷Tabellini (2018) offers the opposite interpretation of the same piece of evidence. In his view, collective action clauses were meant to make default (with bail-in) more likely, hence they should have increased borrowing costs; instead, borrowing costs decreased because holders of government bonds issued under international law enjoy more protection than holders of government bonds issued under national law (one possible reason is that national courts are captive to the domestic government). Tabellini (2018) concludes that, with all of these factors taken into account, issuing debt under international law makes debt renegotiation more difficult, not less.

Critics of proposals for an orderly restructuring scheme raise several concerns. For some, a restructuring of a periphery country's sovereign debt is likely to be at best a partial fix: it will almost surely take down the banking system of that country anyway. Most proposals for a restructuring scheme recognize this problem, although they usually rely on generic recommendations that an orderly restructuring scheme should be accompanied by a reduction of non-performing loans and of the banking system's exposure to domestic sovereigns.

In addition, a restructuring process that forces governments to issue junior debt might backfire because a default on even junior debt would most likely trigger a run on the whole debt stock.⁸ But perhaps the main concern is that merely talking about the possibility of a restructuring increases the cost of borrowing in periphery countries and, by increasing the costs of rolling over debt, it might transform a liquidity problem into a solvency problem (for example, De Grauwe and Ji 2018). However, as we have discussed above, if the alternative to an orderly restructuring scheme (and an associated bail-in of creditors) has a high chance of disorderly default, restructuring causes sovereign borrowing costs to decrease instead. Of course, this second outcome assumes that the no-bailout clause is credible: this is precisely what an orderly restructuring scheme with risk sharing is designed to do.

For the critics, proposals for a European orderly restructuring scheme tip the scale too much in favor of market discipline. Instead, they argue, reducing debt in high-debt countries must be achieved before a European orderly restructuring scheme can be introduced. Thus, they tend to argue that rules constraining national fiscal policies should be strengthened, not weakened. This is perhaps the key message of the famous “non-paper” circulated by the then-German minister of finance, Schäuble (2017), which with some oversimplification can be summarized as follows: “Put your house in order by reducing your debt, introduce an orderly restructuring scheme, and then we might talk about a mutual insurance scheme.”

Centralized Fiscal Policy, Aggregate Stabilization, Debt Mutualization, and Fiscal Union

The advantage of automatic risk-sharing mechanisms, like deposit or unemployment insurance, is that they work in the background and do not need an explicit

⁸Some argue that a better way to introduce a seniority structure in government debt would be to introduce GDP-linked bonds (Tabellini 2017). A GDP-linked bond is *de facto* junior because it pays less in bad times. The idea of GDP-linked bonds goes back to Shiller (1993); for an exposition of key issues, see Cecchetti and Schoenholtz (2017) and Shiller et al. (2018). To date, no country has issued GDP-linked bonds. The leading explanations are the risk premium demanded by investors to take on a more volatile returns, and the liquidity premium associated with a new instrument. For these reasons, Blanchard, Mauro, and Acalin (2016) argue that GDP-linked bonds are more appropriate for countries with high, but not “catastrophically” high, debt. Kim and Ostry (forthcoming) argue that the advantages of GDP-linked bonds have to be set against possible moral hazard considerations, but we find it implausible that governments would induce a recession in order to reduce the value of the principal or interest of their debt.

political agreement every time that they redistribute resources. The limitation is that they have a constrained redistributive capacity for those circumstances in which more risk-sharing might be needed. In these cases, a supranational fiscal authority that implements risk sharing after a crisis might be called for. Such authority might also be needed to respond effectively to aggregate shocks: in the presence of spillover effects, the response by individual countries acting in isolation might be suboptimal. We refer to this role of a supranational fiscal authority as “stabilization policy,” to be distinguished from the “risk-sharing” policies discussed above. Finally, a supranational fiscal authority could be the enabler of large pan-European infrastructure investment projects, again in the presence of large spillover effects and coordination problems.

Many proposals for European fiscal policy push in the general direction of “more fiscal policy at the European level.” However, this expression can mean a myriad of policies and institutional arrangements that are very rarely spelled out precisely. In what follows, we try to give a sense of the complexities that can arise when trying to give concrete content to the expression.

A European Monetary Fund

In some circumstances, there might be a consensus that a highly focused intervention is needed in a country hit by a particularly negative shock that cannot be addressed by standard risk-sharing arrangements like deposit or unemployment insurance. The European Stability Mechanism is meant to work as a sort of regional-level International Monetary Fund. It leverages a relatively small paid-in capital of €80 billion (paid roughly in proportion to the GDP shares of each country) to borrow on the market. Because it does not borrow more than the total callable capital of a few core countries (about €500 billion), effectively its debt is rated AAA; it then lends to illiquid countries at a rate below their borrowing rates.

Core countries have insisted on three key features. First, to comply with a no-bailout rule, the European Stability Mechanism can lend only to countries whose debt has been deemed “sustainable.” Second, by implication, countries with unsustainable debt can borrow only if they restructure their debt. Third, lending via the European Stability Mechanism is subject to various degrees of conditionality, depending on the specific program chosen. Periphery countries object to all three features. The mere possibility of debt restructuring is unacceptable to any periphery government already struggling with the market’s perception of its solvency. A periphery government that borrows from the European Stability Mechanism would immediately be accused by a large share of the electorate to yield to austerity plans imposed from outside, although this perception would probably be unfairly polluted also by the reminiscence of the largest intervention by the European Stability Mechanism and its previous incarnation, the second and third Greek programs between 2012 and 2018, which occurred under dramatic circumstances and a stronger conditionality.

In short, core countries want to make the European Stability Mechanism the instrument of risk prevention and the guardian of rules; periphery countries would

like to make it an instrument for stronger risk-sharing, with more resources and fewer conditions attached. Perhaps because of these conflicting views, the European Stability Mechanism has not been used since the Great Recession of 2008–2009. As we write, the two countries most affected by the pandemic, Italy and Spain, appear inclined to reject COVID-related loans at near-zero rates to be spent specifically on the public health system because of the domestic political implications mentioned above, and also because they can still borrow in the market at rates that are barely above those available from the European Stability Mechanism.

Fiscal Union

Some proposals advocate a “fiscal union,” by which they seem to mean a centralized European entity with an autonomous taxing and spending authority. This European “finance minister” could spend its resources either as block grants to individual countries or directly on specific projects (like a new high-speed train), or via automatic programs (like a European pension system). It could be funded both by its own dedicated taxes (some suggested examples include an excise tax on single-use plastics or a tax on revenues of digital companies), by shares of tax revenues collected by the member states, or by the issuance of its own debt. Thus, there is a large number of possible combinations of funding and spending patterns, which are rarely specified.

Furthermore, as discussed above, this fiscal union could be an additional instrument for risk-sharing, for stabilization policies, or for coordinating large public investment projects. Supporters of a European finance minister also often argue that it is a precondition for a closer political union.

Core countries sometimes pay lip service to more fiscal integration, but they are largely unenthusiastic about it. Once again, the key problem is its distributional implications. In principle, a fiscal union could be implemented in a distributionally neutral way in the long run: it is easy to imagine a scheme whereby a centralized fiscal authority makes unconditional transfers to member countries, and in the long run the recipients pay back what they receive in present value terms. If one goes beyond pure transfers, however, it is easy to imagine that in practice an expanded remit of a centralized fiscal authority would lead to large and persistent flows of resources from the core to the periphery. The bulk of government spending is on pensions, government employment, health, and other purchases of goods and services; the levels of these expenditures and the systems governing them are very different across European countries. Core countries fear that centralized spending on these items will inevitably flow disproportionately to the higher spending countries. If, to avoid this outcome, more homogenization of policies is imposed as a prerequisite of more centralization, this by definition means going against the collective preferences of some or all member countries on sensitive types of spending. Such an attempt would generate a strong political backlash and could well endanger the union rather than strengthening it (Alesina and Perotti 1998).

These tradeoffs remain unresolved or even unacknowledged in virtually all proposals for more centralized fiscal policy. Many academic economists and

policymakers seem to take it as given that more centralized European fiscal policy is a prerequisite for the survival of the Union and of the eurozone. Without specific details on what this means in practice, however, it is difficult to evaluate this claim.

Eurobonds

If centralized fiscal policy is financed by debt issued at the central level, this step would add another channel of potential redistribution. Currently, any debt issued by the European Stability Mechanism is covered by a *proportionate* guarantee of the member states: in case of a default by the borrower, the other countries will be called to cover the shortfall in proportion to their shares of capital, hence approximately in proportion to their GDP. Others go a step further and propose “eurobonds,” a debt issued at the European level covered by a joint and several guarantee of each member country. In a joint and several guarantee, each guarantor can be called upon to pay for the *whole* guaranteed amount in case of default by one or more of the joint issuers. That guarantor can then follow up by asking the other guarantors to contribute their shares. Obviously, eurobonds impose more risk on Germany than on Greece. In many cases, proposals for eurobonds appear to be an *intended* explicit mechanism for planned redistribution, even though exactly how the proceeds of a eurobond issue are distributed to and repaid by the individual countries is almost never specified.⁹

It should come as no surprise that eurobonds, in all their shapes, have been proposed mostly by periphery countries. The debate about eurobonds has been marked by considerable ambiguity and much political posturing: the term is often used to denote any debt issued at the European level, even without joint and several guarantees. This confusion has occurred frequently when referring to the “coronabonds” that will finance the “Next Generation EU” scheme in response to the pandemic recession, to which we now turn.

The Coronavirus and European Fiscal Policy

The pandemic recession that began in 2020 has altered the discussion about European fiscal policy. Arguments over the appropriate rules for limiting debts and deficits have been shut down until later. Issues of a European deposit insurance system or an orderly resolution system have been pushed to the back burner, as well. There has been no movement toward a proper unemployment insurance scheme, but the European Union did enact the SURE program (“Support to mitigate Unemployment Risks in an Emergency”), providing loans up to €100 billion to

⁹Over time, a large number of proposals have sought to mitigate the cruder aspects of Eurobonds. We do not have space to review these alternative proposals; suffice it to say that none of the proposals that maintain the joint and several guarantee in some form or proportion have managed to make inroads in core countries.

supplement national expenditure on short-term working schemes. The take-up has been exceptional, and all funds have been loaned out in a few months.

Much of the policy focus during the pandemic has been on a centralized European fiscal response. The road has been a bumpy one, but eventually the European Union agreed on a set of programs, collectively called the Next Generation EU, for €750 billion in total (about 5 percent of the EU GDP), of which the largest component is the Recovery and Resilience Facility for €670 billion. Of this total, slightly more than half will be in the form of loans and the rest in the form of grants. All funds will have to be spent between 2021 and 2026. The European Union will borrow the entire amount and these “coronabonds” will be repaid by 2058. The loans will then be reimbursed by the individual recipient countries, while the part corresponding to the grants will be repaid with new own resources of the European Union (like a digital tax, a carbon border adjustment mechanism, or a financial transaction tax). Notice that it is easy for the public and many politicians of the countries receiving the grants to operate under an optical illusion: obviously not all the grants are a net gift to the recipient, as the latter will have to contribute to the repayment of the whole pool of grants, roughly in proportion to its own GDP.

Is all this a game changer? It *is* the first time that the European Union borrows directly as such; before this event, it was a matter of dispute whether borrowing by the European Union is legal at all. It *is* a fairly large amount. It *is* highly redistributive: Italy, the biggest recipient, will get almost 30 percent of the Next Generation EU funds, almost three times its share in the EU GDP. On the other hand, and unlike what many think or say, the coronabonds are *not* eurobonds with joint and several liability. The biggest recipients, like Portugal, Spain, and possibly Italy and France have already signaled that they will take up the grants (no surprise here), but probably not the loan part.

The key question arises: is this a one-off or will it lead to permanent institutional changes? Of course, it is unlikely that such large grants will be repeated any time soon, but will this experience lead to a new mutual understanding of an expanded role for the European Union as such, relative to national governments in fiscal policy matters? Will it lead to a stronger role of centralized fiscal policy, however defined, and a corresponding downplaying of fiscal rules? Many commentators are convinced that this is the case, that Europe has experienced a “Hamiltonian moment,” named after the role of Alexander Hamilton in acting to federalize the state-level debts that had been incurred in US Revolutionary War and its aftermath. These commoners seem to envisage permanent Hamiltonian effects: a first step towards building a true European fiscal capacity, a stepping-stone for a sizeable future expansion of the common EU budget. We are less sure.

The new EU debt facility consists of transfers, with strings attached as to how they can be spent (mostly on digitalization, “green transition,” and infrastructure projects). Making these transfers permanent and preserving their highly redistributive bias to the periphery countries would be politically unfeasible for the reasons that we have mentioned throughout this paper. Making them distributionally neutral (such that the transfers are equal to the present value of the resources paid

back by the recipient) would make little sense, as long as all countries involved still have access to capital markets, as they do now: the only advantage to periphery countries would be a small savings in interest payments as the European Union can borrow at slightly lower rates than its periphery members. Moving from transfers to direct spending by the center would involve resolving the large diversity of collective preferences on fiscal policy and would require a wholly different institutional setup with a true central fiscal authority.

For some, a true game changer is the new autonomous taxing authority of the European Union, which will collect its own taxes to repay the coronabonds issued to finance the grants. This development is conceptually a new one: in the past, the European Union essentially relied on shares in national VAT or contributions by member countries to fund its modest budget. However, repaying €310 billion over a horizon of years implies increasing the taxing capacity of the European Union by about €11 billion per year on average (depending on the maturity profile of the debt), which is less than 0.1 percent of the EU GDP. This does not seem to be a quantum leap.

As we mentioned, several core countries only grudgingly agreed to the Next Generation EU program. It is true that, unlike the funds disbursed by the common EU budget so far (so-called Structural Funds), the facility makes the disbursement contingent on meeting certain pre-agreed criteria. But evaluating the effects of the large transfers to periphery countries will be difficult in itself, and should the perception spread among the electorate of core countries that these funds have not been spent productively by the recipients, it is easy to imagine a backlash against, and not more support for, any form of centralized fiscal policy and increased mutual insurance.

Thus, although additional European-wide fiscal policy steps may well be taken in the years ahead, the policy debate and political negotiations will continue to largely revolve around the key issues we have highlighted in this paper.

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References

- Acharya, Viral V., and Sascha Steffen. 2015. "The 'Greatest' Carry Trade Ever? Understanding Eurozone Bank Risks." *Journal of Financial Economics* 115 (2): 215–36.
- Alesina, Alberto, and Roberto Perotti. 1998. "Economic Risk and Political Risk in Fiscal Unions." *Economic Journal* 108: 989–1009.

- Alogoskoufis, Spyros, and Sam Langfield. 2019. "Regulating the Doom Loop." European Central Bank Working Paper 2313.
- Barnes, Sebastian, and Eddie Casey. 2019. *Is the Expenditure Benchmark up to Standard?* Dublin: Irish Fiscal Advisory Council.
- Becker, Bo, and Victoria Ivashina. 2018. "Financial Repression in the European Sovereign Debt Crisis." *Review of Finance* 22 (1): 83–115.
- Bénassy-Quéré, Agnès, Markus Brunnermeier, Henrik Enderlein, Emmanuel Farhi, Marcel Fratzscher, Clemens Fuest, Pierre-Olivier Gourinchas et al. 2018. "Reconciling Risk Sharing with Market Discipline: A Constructive Approach to Euro Area Reform." CEPR Policy Insight 91.
- Blanchard, Olivier, Alvaro Leandro, Jeromin Zettelmeyer. 2021. *Redesigning EU fiscal rules: From rules to Standards*. German Federal Ministry of Finance.
- Blanchard, Olivier, Paolo Mauro, and Julien Acalin. 2016. "The Case for Growth Indexed Bonds in Advanced Economies." Peterson Institute Policy Brief PB16–2.
- Brunnermeier, Markus K., Luis Garicano, Philip R. Lane, Marco Pagano, Ricardo Reis, Tano Santos, David Thesmar, Stijn Van Nieuwerburgh, and Dimitri Vayanos. 2011. "European Safe Bonds (ESBies)." <https://personal.lse.ac.uk/vayanos/Euonomics/ESBies.pdf>.
- Brunnermeier, Markus K., Harold James, and Jean-Pierre Landau. 2016. *The Euro and the Battle of Ideas*. Princeton: Princeton University Press.
- Brunnermeier, Markus K., Sam Langfield, Marco Pagano, Ricardo Reis, Stijn Van Nieuwerburgh, and Dimitri Vayanos. 2017. "ESBies: Safety in the Tranches." *Economic Policy* 32 (90): 175–219.
- Caballero, Ricardo J., and Emmanuel Farhi. 2017. "The Safety Trap." *The Review of Economic Studies* 85 (1): 223–74.
- Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. 2016. "Safe Asset Scarcity and Aggregate Demand." *American Economic Review: Papers & Proceedings* 106 (5): 513–18.
- Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. 2017. "The Safe Asset Conundrum." *Journal of Economic Perspectives* 31 (3): 29–46.
- Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. 2020. "Global Imbalances and Policy Wars at the Zero Lower Bound." CEPR Discussion Paper DP14424.
- Carmassi, Jacopo, Sonja Dobkowitz, Johanne Evrard, Laura Parisi, André Silva, and Michael Wedow. 2020. "Completing the Banking Union with a European Deposit Insurance Scheme: Who Is Afraid of Cross-Subsidisation?" *Economic Policy* 35 (101): 41–95.
- Cecchetti, Stephen, and Kim Schoenholtz. 2017. "GDP-linked Bonds: A Primer." *VoxEu*, March 17. <https://voxeu.org/article/gdp-linked-bonds-primer>.
- Claeys Grégory, Zsolt M. Darvas, and Álvaro Leandro. 2016. "A Proposal to Revive the European Fiscal Framework." Bruegel Policy Contribution 2016/07.
- Constâncio, Vítor. 2018. "Completing the Odyssean Journey of the European Monetary Union." Remarks, ECB Colloquium on the Future of Central Banking, Frankfurt am Main, May 16–17, 2018.
- Darvas, Zsolt, Philippe Martin, and Xavier Ragot. 2018. *European Fiscal Rules Require a Major Overhaul*. French Council of Economic Analysis.
- De Grauwe, Paul, and Yuemei Ji. 2018. "Financial Engineering Will Not Stabilize an Unstable Euro Area." *VoxEu*, March 19. <https://voxeu.org/article/financial-engineering-will-not-stabilise-unstable-euro-area>.
- De Marco, Filippo, and Marco Macchiavelli. 2016. "The Political Origin of Home Bias: The Case of Europe." FEDS Working Paper 2016-060.
- European Commission. 2015. "Making the Best Use of the Flexibility within the Existing Rules of the Stability and Growth Pact." <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0012&from=en>.
- European Fiscal Board. 2019. *Assessment of the European Fiscal Rules*. Brussels: European Fiscal Board.
- Deslandes, J., and M. Magnus. 2019. "Which Supervisory or Regulatory Treatment of Banks' Exposures to Sovereign Risks?" [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/624434/IPOL_BRI\(2019\)624434_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/624434/IPOL_BRI(2019)624434_EN.pdf)
- Farhi, Emmanuel, and Iván Werning. 2017. "Fiscal Unions." *American Economic Review* 107 (12): 3788–3834.
- Feld, Lars, Christoph Schmidt, Isabel Schnabel, and Volker Wieland. 2018. "Refocusing the European Fiscal Framework." *VoxEu*, September 12. <https://voxeu.org/article/refocusing-european-fiscal-framework>.
- Galí, Jordi, and Tommaso Monacelli. 2008. "Optimal Monetary and Fiscal Policy in a Currency Union." *Journal of International Economics* 76 (1): 116–32.

- Garicano, Luis.** 2019. "Two Proposals to Resurrect the Banking Union: The Safe Portfolio Approach and SRB+." <https://www.bruegel.org/wp-content/uploads/2020/02/Two-proposals-to-resurrect-the-Banking-Union-by-Luis-Garicano.pdf>.
- German Council of Economic Experts.** 2015. *The Long Road to More Financial Stability in Germany and in Europe*. Wiesbaden, Germany: German Council of Economic Experts.
- Gourinchas, Pierre-Olivier., Philippe Martin, and Todd E. Messer.** 2020. "The Economics of Sovereign Debt, Bailouts and the Eurozone Crisis." NBER Working Paper 27403
- Horvath, Bálint L., Harry Huizinga, and Vasso Ioannidou.** 2015. "Determinants and Valuation Effects of the Home Bias in European Banks' Sovereign Debt Portfolios." CEPR Discussion Paper 10661.
- Italian Ministry of the Economy.** 2015. "Documento di Economia e Finanza, Sezione I." http://www.dt.mef.gov.it/modules/documenti_it/analisi_programmazione/documenti_programmatici/SEZIONE_I_-_Programma_di_Stabilita_xdeliberato_xon-line.pdf.
- James, Harold.** 2012. *Making the European Monetary Union*. Cambridge, MA: Harvard University Press.
- Kim, Jun Il, and Jonathan D. Ostry.** Forthcoming. "Boosting Fiscal Space: The Roles of GDP-linked Debt and Longer Maturities." *Economic Policy*.
- Martínez, Joseba, Thomas Philippon, and Markus Sihvonen.** 2019. "Does a Currency Union Need a Capital Market Union? Risk Sharing via Banks and Markets." NBER Working Paper 26026.
- Mohl, Philipp, and Gilles Mourrel.** 2020. "Performance of the EU spending Rule: A Quantitative Assessment." Paper presented at the joint conference of European Fiscal Board, Amsterdam Centre for Economic Studies and CEPR on Rethinking the European Fiscal Framework, Brussels, February 28..
- Panizza, Ugo.** 2013a. "Sovereign Defaults and the Rules of Engineering." *VoxEu*, March 2. <https://voxeu.org/article/sovereign-default-and-rules-engineering>.
- Panizza, Ugo.** 2013b. "Incentives for Avoiding Delayed Sovereign Defaults." *VoxEu*, March 3. <https://voxeu.org/article/incentives-avoiding-delayed-sovereign-defaults>.
- Porter, Eduardo.** 2021. "How the American Unemployment System Failed." *New York Times*, January 21. <https://www.nytimes.com/2021/01/21/business/economy/unemployment-insurance.html>.
- Schäuble, W.** 2017. "Non-paper for paving the way towards a Stability Union." <http://media2.corriere.it/corriere/pdf/2017/non-paper.pdf>.
- Scholz, O.** 2019. "Position Paper on the Goals of the Banking Union." <http://prod-upp-image-read.ft.com/b750c7e4-ffba-11e9-b7bc-f3fa4e77dd47>.
- Shiller, Robert J.** 1993. *Macro Markets: Creating Institutions for Managing Society's Largest Economic Risks*. Oxford: Oxford University Press.
- Shiller, Robert, Jonathan D. Ostry, James Benford, and Mark Joy.** 2018. "Sovereign GDP-linked bonds: Rationale and Design." *VoxEu*, March 16. <https://voxeu.org/article/sovereign-gdp-linked-bonds-rationale-and-design>.
- Sunstein, Cass R.** 1995. "Problems with Rules." *California Law Review* 83 (4): 952–1026.
- Tabellini, Guido.** 2017. "Reforming the Eurozone: Structuring versus Restructuring Sovereign Debts." *VoxEu*, November 23. <https://voxeu.org/article/structuring-versus-restructuring-sovereign-debts-eurozone>.
- Tabellini, Guido.** 2018. "Risk Sharing and Market Discipline: Finding the Right Mix." *VoxEu*, July 16. <https://voxeu.org/article/risk-sharing-and-market-discipline-finding-right-mix>.
- Véron, Nicolas.** 2017. *Sovereign Concentration Charges: A New Regime for Banks' Sovereign Exposures*. Bruegel & Peterson Institute for International Economics.
- Wyplosz, Charles.** 2013. "Fiscal Rules: Theoretical Issues and Historical Experiences." In *Fiscal Policy after the Financial Crisis*, edited by Alesina, Alberto and Francesco Giavazzi, 495–525. Chicago: University of Chicago Press.

