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# Squaring the circle: How to guarantee fiscal space and debt sustainability with a European Debt Agency<sup>\*</sup>

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## Abstract

The paper contributes to the debate on European macroeconomic governance. What is at stake is creating fiscal space for eurozone countries, while ensuring the sustainability of large public debts. Whether fiscal space is created through fiscal rules' reform, the creation of a central fiscal capacity, or a mix of the two, the question of public debt management, past and future, is paramount. Here we discuss a proposal that aims at systematic debt management through an ad hoc European Debt Agency. This EDA would progressively absorb Member States' debt, while keeping them accountable through pricing based on fundamental risk. We further show that (1) a Debt Agency could be designed so as not to imply debt mutualization or moral hazard and that (2) common debt management would allow the ECB to normalize monetary policy without creating instability in sovereign debt markets. An important argument of the paper is that any proposal that does not deal with the entirety of debt risks decreasing sustainability thus being counterproductive.

*Keywords:* European Debt Agency; Fiscal Space; EMU Fiscal Governance; Growth and Stability Pact; Fiscal Rules; Risk Sharing; Public Debt; Debt Management

The choices Europe made to support the economy during the pandemic paved the way to a wide-ranging debate on institutional reform and possibly a deeper integration of macroeconomic policies. As we write, the EU is at a crossroads: a new German government is sworn in, France takes the rotating presidency of the Council, Next Generation EU starts unfolding its effects, and the Commission works on a proposal for a reformed fiscal rule. This debate takes place against the backdrop of record-high levels of public debt and mounting concerns about the impact that the normalization of monetary policy will have on sovereign yields and on the sustainability of public debt in some EU countries.

While it is obvious that the pandemic deficit levels cannot become a new normal, the structural debt level for the foreseeable future will be structurally higher than in the past. Furthermore, the pandemic stroke while policy makers had finally become aware that challenges of the green and digital transition have become irrevocable. Whether it will endow itself with a central fiscal capacity or will leave most of the fiscal sovereignty in the hands of Member States, Europe needs to rethink its institutions to at the same time create the fiscal space needed to face the challenges of the next decades and find ways to ensure its sustainability. This dual objective emerges for example in the recent opinion piece by Mario Draghi and Emmanuel Macron on the [\*Financial Times\*](#). To put it differently: the EU needs to finally solve a crucial trade-off between financial stability and proactive growth policies. Ironically enough, this very trade-off is enshrined in the name of its current fiscal rule, the Stability and Growth Pact, which did not actually deliver either objective, so that the issue inevitably reappears in the discussion on reforming the EU fiscal rule.

In the past decade markets have poorly managed a segmented sovereign debt market, characterized by different risk profiles and structurally incapable of providing an adequate supply of safe assets. It is essential, to create a fiscal space apt to meet today's challenges in terms of tangible and intangible investment, to protect governments from the undue pressure that market segmentation amplifies. The most effective way to do so is to pool European sovereign debts while keeping national governments' accountable in front of citizens and markets. In other terms, sovereign debts should be managed jointly without mutualising them.

This working paper proposes a reasonable solution to the abovementioned trade-off, the creation of a European Debt Agency (EDA) to jointly manage sovereign debt. There are different ways to design such an institution; we will argue below that, to ensure its political acceptability (especially in core EMU countries), an EDA would need (a) to avoid any form, explicit as well as implicit, of debt mutualisation; (b) to provide markets with a safe asset, thus relieving core EMU countries from excessive demand and from the curse of negative rates; (c) to help the normalization of monetary policy allowing the ECB to focus on its mandate without the fear of creating instability on sovereign debt markets. We will show in this working paper that these are precisely the characteristics of the EDA as proposed by Amato et al. (2021).

## 1. The post 2008 debate on fiscal policy

From the 1980s until at least the global financial crisis of 2008, the consensus in macroeconomics revolved around the notion of a ‘natural’ equilibrium, to which the economy would tend spontaneously in the medium term (for details see Saraceno 2017, 2018). It was argued that, even in the presence of rigidities, persistent deviations from the natural equilibrium would eventually exert pressure on prices and bring the economy back towards the attractor. Within this framework, the state obviously plays a limited role: as in the old pre-Keynesian model, structural reforms are the main policy tool, removing the frictions that on the one hand hinder potential growth, and on the other amplify the magnitude of cyclical fluctuations. On the contrary, discretionary macroeconomic policies are not particularly appropriate; governments should instead follow clear and predictable policy rules, to reduce uncertainty and allow markets to converge more quickly to the natural equilibrium.

This consensus was not a European peculiarity, but the pressure to reduce the role of the state in the economy has been particularly strong in the EU. The perimeter of the welfare state has over time been slowly but pervasively reduced, the role of automatic stabilisers undermined (somewhat inconsistently with the Stability Pact emphasis on their importance in absorbing business cycle fluctuations), while reducing the cyclical regulation of the economy through discretionary policies. This stance has particularly affected public investment, as crucial for long-term growth as it is ‘invisible’ to the public (Cerniglia et al. 2021; Cerniglia and Saraceno 2020).

The Maastricht Treaty of 1992 designed the rules of the game for the eurozone, from the criteria for adopting the single currency to the statute of the European Central Bank (ECB). In 1997, the Treaty of Amsterdam completed the institutional framework with the Stability and Growth Pact (SGP), which laid down the rules of conduct for the euro area member countries’ fiscal policy. In accordance with the then prevailing consensus, the main objective of the Stability Pact was to limit fiscal policy to the operation of automatic stabilisers, by imposing a balanced structural budget. The reforms, hastily approved in 2011-13 during the Greek debt crisis (the Two-Pack, the Six-Pack, and the Fiscal Compact) add to this rule the constraint of progressively but steadily reducing public debt whenever this is above the 60% level set by the Maastricht Treaty. The EU fiscal governance, in short, is consistent with the pre-2008 view that laid most of the burden of adjustment on market mechanisms and that restricted macroeconomic policy. It is not surprising, then, that in 2020 it had to be put on hold to allow countries to respond to the pandemic.

### The return of fiscal policy, between short-run stabilization and secular stagnation

The global financial crisis of 2008 challenged the consensus. In 2008-2009, in adherence to the Keynesian prescriptions, monetary policy and then fiscal policy were called to the rescue of an economy unable to recover on its own. This ‘Keynesian moment’ was short-lived and, especially in Europe, there was a rapid return to the fiscal discipline advocated by the pre-crisis

consensus. Nevertheless, following the crisis, the slider between the state and the market shifted back towards the centre: economists and policy makers began to question the old recipes and the foundations of the market-based consensus itself. A wide-ranging debate is still ongoing on how to re-assess the role of the government in managing business cycles, in regulating markets and in correcting their inefficiencies. The discussion spares no dogma of the consensus, from industrial policy to income distribution, from capital controls to trade barriers, from taxation to the role and nature of structural reforms. In particular, fiscal policy turned out in the past decade to be pivotal for macroeconomic stabilisation<sup>1</sup>, among other things because monetary policy has been constrained by the zero lower bound.

But the role of fiscal policy is being reassessed beyond the short run. Larry Summers (2014, 2016) recently revived the old concept of secular stagnation: slower technical progress and population growth, together with high debt, tend to reduce investment. At the same time, the burden of debt, together with the accumulation of international reserves (public and private) induced by financial instability, rising inequality and other factors (see also Fitoussi and Saraceno, 2011) tend to increase the level of savings. These forces are mostly non-contingent, explaining the structural excess of savings over investment and the long run tendency of the natural interest rate to fall towards (or below) zero. Other factors may play in the opposite direction; one such factor could be, in the medium term, an inflation revival following the recent increase of debt (the Fiscal Theory of the Price Level might make a spectacular comeback); over the longer term, aging could play towards inflationary pressures, as future retirees consume their savings (Goodhart and Pradhan 2020). Nevertheless, these factors do not seem quantitatively large enough to substantially change the picture, as the savings glut might be more important and long-lasting (see, e.g., Mian et al. 2020). Thus, the natural interest rate could remain close to zero or even negative well beyond the current economic slowdown (Rachel and Summers 2019). The conclusion is not particularly reassuring, as policy makers face the trade-off between accepting a constant excess of savings and slow growth and trying to fight secular stagnation fueling asset bubbles that remove excess savings at the cost of increased instability and the risk of new violent financial crises. In a world of secular stagnation and recurring effective lower bounds, then, fiscal policy should find a prominent role among the instruments for macroeconomic regulation (Blanchard 2016b). If the economy is to remain tangled in a semi-permanent situation of excess private savings, at or close to the zero lower bound, there are only two ways to avoid secular stagnation: either a semi-permanent current account surplus, or a semi-permanent public negative savings. The first option, the export-led growth model that Germany is today successful in generalizing at the EMU level, is (by definition) not sustainable for the global economy. The second option is certainly viable as long as  $g > r$ , which many believe will be a ‘new normal’ (ERSB (2021)). In principle, as long as the excess of private savings persists, overall deficit financing should not be an issue. In a  $g >$

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<sup>1</sup> In 2013, the IMF issued a mea culpa on the size of multipliers. The crisis had shown that their value was much higher than estimated by the pre-crisis models used as a justification for European austerity programmes (Blanchard and Leigh 2013). On the policy mix see the recent report published by the CEPR (Bartsch et al. 2020).

*r* world the focus shifts from payability and debt targets to sustainability; furthermore, the relevant time horizon for debt management changes (Blanchard (2019); Blanchard et al. (2021)). Nevertheless, as we saw during the sovereign debt crisis, the segmentation of the eurozone public debt markets may create problems of debt financing in some countries despite a context of overall large demand for public debt. Therefore, the global reassessment of the European fiscal governance should ensure that savings are efficiently channelled into national public debts without creating instability.

## 2. The Maastricht governance: Unfit to rule

The Maastricht rule-based framework proved unfit already in 2008-2009, when the EMU's timid reaction to the global financial crisis stood in sharp contrast with the activism of the US. Things then turned into a nightmare with the beginning of the sovereign debt crisis. It would be simplistic to say that European fiscal rules imposed austerity, which was rather the result of a vision that traced financial instability and the debt crisis back to the profligacy of southern Eurozone countries; with or without the SGP, European countries would have walked that path anyway (for a similar point, see Aldama and Creel 2021). However, the European macroeconomic governance framework provided the European institutions with the appropriate pressure instruments to impose it on even the most recalcitrant governments. With the Covid crisis, these institutions suddenly appeared, even in Brussels and Frankfurt, as wreckage from another age. To react to the pandemic (as they did egregiously, and beyond expectations), European countries had to massively use discretionary policies, prompting the Commission to pre-emptively activate the SGP suspension clause and to soften state aid rules. At the same time the ECB accompanied the massive fiscal effort with a new asset purchase program, the PEPP, that besides its size (1850 billion euros from March 2020 to March 2022) is notable because for the first time the ECB stood ready to temporarily deviate from the self-imposed capital keys (forcing purchases to be continuously proportional to countries' shares in the ECB capital). Going into the details of these measures is beyond the purpose of this working paper. It is just worth noticing that, in order to effectively react to the pandemic, the EMU had to disavow all its rules for macroeconomic governance.

In fact, beyond the crises, the first twenty years of the single currency have shown that markets cannot always be relied upon for absorbing macroeconomic shocks and ensure long term convergence. On the contrary, they sometimes row in the wrong direction even in good times: in the past decades we saw destabilising capital flows, deepening structural differences among the members of the eurozone, increasing asymmetry of shocks, and financial market turmoil. Therefore, no matter how hard individual countries may push the reform effort, exclusive reliance on markets will necessarily be unwarranted: part of the burden of adjustment following whatever exogenous shock may hit the economy must necessarily fall on the

shoulders of public policies. Even in the United States, a federal monetary union characterized by strong flexibility and factors' mobility, macroeconomic policies play a central role not only during crises but also in normal times (Alcidi et al. 2017). The coronavirus crisis makes it even more evident that only real mutual insurance mechanisms could make it possible to guarantee stability and growth by operating alongside (and sometimes in place of) market adjustments. Be it a common fiscal capacity, a stabilization fund (or EU unemployment benefit), or more aggressive national fiscal policies, government risk sharing will have to be built around a more proactive fiscal policy.

### 3. A role for fiscal policy in the new EU governance

It is important that the new EU governance recognizes the newfound centrality of fiscal policies, especially when it comes to investment in global public goods such as ecological transition or social protection. Yet, at present, Member States are still limited by very strict rules and the EU has no real fiscal capacity. It is crucial, therefore, that the discussion on fiscal rules is not kept separate from that on the creation of a European fiscal capacity. Different paths can be taken. Fiscal capacity can be created at the central level, providing the EU bodies with a significant and permanent tax and spend capacity; if that were the case, fiscal rules could remain as restrictive as they are today. Alternatively, if one considers (as some legitimately do) that the creation of a significant central fiscal capacity, in a system that remains non-federal, is problematic and cumbersome, room must be given to fiscal policies at the country level, with rules more permissive than the Stability Pact. In short, what the 'optimal' fiscal rule is will depend on the direction that the debate on a European fiscal capacity will take. Let's look into it.

#### Towards a central fiscal capacity?

The Next Generation EU (NGEU) programme could be a first step towards a European fiscal capacity. Hopefully European countries will be able to use its quantitatively more important item, the Recovery and Resilience Facility (RRF), to revive the economy, channel resources efficiently into a green transition that can no longer be postponed, and transform the Union into a dynamic knowledge-based economy. Were the NGEU package successful, this could pave the way for a discussion on the creation of a *permanent* fiscal capacity. It would not be the first time that temporary instruments have acted as icebreakers and led to innovations in European governance. The NGEU possesses (albeit at an embryonic stage) the characteristics of a federal-type ministry of finance: its own borrowing capacity, a (prospective) ability to finance itself from its own resources, an allocation of resources that combines the needs of individual countries with the pursuit of common goals such as ecological transition and digitalisation. Speculative attacks on sovereign debt, and the risk of free riding by national



governments, so feared by the ‘frugals’, would be greatly reduced if the eurozone were to equip itself with such an instrument. Yet, discussion on this subject is just starting, and the political space seems for the moment limited. On the contrary, the SGP reform is on the table right now.

### What fiscal rules for the reformed EU?

If fiscal capacity were not created at the centre, the rules constraining Member States would need to be thoroughly revisited, to allow governments to better use the fiscal lever. The activation of the SGP suspension clause is obviously motivated by the pandemic; however, it came a few weeks after the opening of a consultation process on fiscal rules European Commission (2020)<sup>2</sup>, which in turn was based on a surprisingly severe assessment of the existing framework. The Commission took on board the criticisms that had been unanimously voiced by independent economists for several years: (a) the current framework is overly complex, arbitrary, and difficult to enforce; (b) the rules allowed to control deficits, but much less debt dynamics; (c) public investment has been penalised at least since the global financial crisis; (d) finally, the Commission acknowledged for the first time that the current framework pushed many governments to implement procyclical fiscal policies. In short, between the lines the Commission acknowledged that European rules in the recent past have made fiscal policy a factor of instability rather than of stabilisation. More recently, also the ESM acknowledged the inapplicability of the current fiscal framework in the post Covid era, and proposed to raise the debt threshold to 100% (Francová et al. 2021). It is worth emphasizing, furthermore, that similar problems are somewhat intrinsic to fiscal rules. As Blanchard et al (2021, page 19) note, “economists would be incapable of defining any rule that gets the trade-offs right ex ante [...] The reason for this is ‘Knightian uncertainty’. [As a consequence,] a rule that seeks to map observable economic variables into a maximum ‘safe’ debt level would have to take an exceedingly conservative approach” (see also Martin et al. 2021).

The consultation process was suspended by the Covid emergency, but in June 2021 Commissioner Gentiloni relaunched it, while announcing that the suspension clause would remain activated at least until end 2022. It is therefore likely that the existing rules will be replaced before they come back into force. The reform proposal that seems to have more political space, the *Golden Rule*, has been around since the 1990s. It aims to preserve public investment by excluding it from the deficit limits. The appeal of such a rule is that a massive infrastructure investment plan seems to be no longer unavoidable among other things to push the structural transformation of the economy (green transition, digitalization, etc.) that will go beyond the NGEU time horizon. Furthermore, the pandemic showed that investment is to be

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<sup>2</sup> The Commission embraced the recommendations of the European Fiscal Board (2019).

understood in the broadest sense as any expenditure (e.g., on health) capable of increasing tangible and intangible capital<sup>3</sup>.

In short, the reformed EU governance will have to allow for some fiscal space, either at the center or at the Member States' level. This, of course will raise the issue of debt sustainability. The current framework, centered on a plethora of exoteric numerical targets and indicators, is clearly incompatible with the need for proactive fiscal policies for business cycle management, for public investment, for the provision of public goods. A better framework for assessing debt sustainability, consistent with the persistent low interest rates environment and with a more proactive role of the government in the economy, needs to be implemented. A precondition for that is, however, a deep rethinking of what sustainability should mean with regard to public debt.

#### 4. Reopening the debate on debt sustainability

What's wrong with the 'good household' narrative?

'The [idea] that the government should balance its budget, just as a household should balance its budget in order to avoid mortgaging the future— [is] fundamentally flawed'

(Eichengreen et al. 2021)

The good household narrative pushes an analogy between the State and private borrower and is the main justification for fiscal consolidation in good and in bad times. Nevertheless, once sustainability replaces solvency as the guiding principle, the narrative simply collapses: 'not all debt as been created equal' (Krugman 2011).

Solvency is not an issue simply because, whereas every private actor has a finite horizon for its income capacity and therefore must eventually repay its debts, *states generally do not*. This specificity, which marked the history of public debt financing since its inception in late 17th century England, is finally resurfacing in the public debate. What is crucial about public debt are the effective conditions for its refinancing. For whatever debtor, debt sustainability depends on the capacity to service it, i.e., on the future stream of income. In the case of the state, its income (fiscal revenues) is certainly finite in each period but indefinite in its duration. The intrinsic non-payability as a positive virtue of public debt was already very clear to classical

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<sup>3</sup> See the introduction of Cerniglia and Saraceno (2020); on the proposal for an 'augmented Golden Rule', see Saraceno (2017b).

liberal economists and was forgotten with Barro’s ‘Ricardian equivalence’, i.e. with the idea that any increase of public deficit will have to be sooner or later repaid by an equivalent tax increase. Even if we model the equivalence within an infinite time horizon, there will always exist a ‘last period’ (a transversality condition) which will put the public debtor on the same foot as private debtors. But, as Sardoní (2021) notes, precisely in that case the state *would cease to be a state*. The states’ operational horizon is indefinite, certainly not because they cannot end, but because they do not end for ‘natural’ and therefore somehow predictable causes (it is not possible to calculate their life expectancy). At any time of the ‘life’ of a state, an additional period can be introduced, postponing payment. This does not mean that states are eternal, but that they enjoy an essentially *perpetual* nature, i.e., they are intrinsically capable of continuing. This also means that as long as the debt is sustainable (i.e., it can be serviced), it will always be priced as if its maturity structure was irrelevant.

Taking now a glance at history, in his now classic studies on the birth of the modern state, Kantorowicz ((1948; 1957)) reports an early modern maxim that sums up icastically the essence of state temporality: *Dignitas non moritur*. With an important consequence: the peculiar ‘immortality’ of the state implies the ‘immortality’ of its revenue capacity: *Fiscus non moritur*. And this is precisely the reason why in eighteenth-century England public debt became established as perpetual, thanks also to the institutionalisation of the role of the central bank as a public mediator between the public debtor and private creditors (Capie et al. 1994). With their expenditure, states do not ‘mortgage the future’: sometimes they even *help to build it*, and public debts live of the possibility of perpetually discounting states’ perpetual revenues. This brings us to the basic debt dynamics equation,  $b_t - b_{t-1} = \left(\frac{r-g}{1+g}\right) b_{t-1} - s_t$ , for which “historically, and perhaps surprisingly, it is in fact more the rule than the exception that  $g$  is higher than  $r$ ” (Blanchard 2019), so that permanent primary deficits ( $s_t < 0$ ) can be considered sustainable.

History and theory seem indeed to tell us the same story: every public debt is an intrinsically perpetual debt, i.e., it does not imply repayment of the principal but only the payment of interests. What can change is how perpetuity is constructed: whether explicitly, with a perpetual rent (consols et similia) or with careful management of debt rollover. In both cases, although in different ways, market long-term expectations come into play. And they come into play on the basis of *uncertainty*, not of simple risk. Thus, insofar as the perpetuity structure of public debt (i.e. the fact that it does not need to be repaid *at any determined time*) may, under certain conditions, represent the most efficient way to stabilise long-term expectations, public debt may appear to be the *safest* debt.

The indefinite duration of the state clearly does not mean that everything is permitted, but simply that the feasibility (and therefore the financial sustainability) of fiscal policy cannot be captured by, and anchored to, simple quantitative parameters, because radical uncertainty also applies to states and sustainability analysis is essentially *stochastic*: “[Stochastic debt sustainability analysis] would generate a distribution of paths of the debt ratio (sometimes called

a ‘fan chart’), based on forecasts for the drivers of the debt dynamics, which are themselves stochastic: the path of primary balances, one-off liabilities (e.g., related to aging or the retirement system), growth, interest rates, and the maturity structure of the debt.” (Blanchard et al, 2021, p. 22).

On the other hand, however, precisely because of the structural perpetuity of public debt, a clever management adapted to its specific temporal structure can also act as a factor in reducing uncertainty, hence instability, on financial markets.

### Markets need safety, and safe assets

What implications should be drawn from the new scenario we have just depicted? As fiscal policy is back, even in Europe, governments, markets and central banks must prepare to live with a large stock of debt which, were it to be repaid, would spell trouble. Luckily it needs not, suggesting that it is possible to make its financing sustainable without resorting to costly fiscal consolidations. Moreover, the safety of debt strongly depends on the way in which its rollover is managed, bearing in mind that a sustainable public debt is a potential stabilisation factor for financial markets and private debts.

It is increasingly consensual that, given their structure, contemporary financial markets exhibit a growing need for safe assets, among other things to be used as collateral for inherently risky private operations and to regulate the financial cycles of banks, insurance companies and pension funds. Moreover, recent history has clearly shown that safe assets, understood as "a simple debt instrument that is expected to preserve its value during adverse systemic events" are essentially public assets Caballero et al. (2017). The safety of assets obviously goes hand in hand with sustainability. The historical role of the US as the sole provider of safe assets is beginning to clash with the emergence of a ‘safe asset dilemma’: the demand for safe assets could push to a growth in US debt that could eventually lead to a reduction in safety (Davis (2018); Ilzetzki et al. (2021). But this only means that demand of safe assets is wider than the US deficit allows, and that it is urgent that other actors step in, most notably the Eurozone (Carney 2019).

### Debt and risk, the importance of safe assets for debt sustainability

The obsessional attention that in recent decades was directed towards public debt led to an underestimation of both the danger of private debt buildup and of the stabilising role of public debt, especially when central banks do not shy away from their structural role of mediators between private markets and public issuers. The central bank-Treasury circuit is still at the heart of financial market stabilisation, particularly in the US.

Posing that public debt is sustainable as long as a ‘debt explosion’ can be ruled out, certainly raises the issue of defining a threshold. However, radical uncertainty makes the search for ‘long- term stability thresholds’ an impossible task for markets, hence the need for them to hedge themselves from uncertainty with shorter term devices. As Keynes already pointed out

in his *General theory*, uncertainty about future rates is the *raison d'être* of liquidity preference and of liquidity itself, since the liquidity of an asset constitutes for its holders a protection against uncertainty about the future. Yet, the liquidity of an asset is a double-edged sword, since whilst it ‘calms the nerves’ of financial investors, it brings along an additional risk, namely the liquidity risk: market expectations do not always capture the debt fundamentals dynamics, but tend alternatively to under- or overestimate them, in waves of optimism and pessimism (Blanchard and Pisani-Ferry 2020; Shiller (2003)), with the ensuing vicious circle of self-fulfilling expectations and the multiple equilibria that may follow. Until Draghi’s ‘whatever it takes’, this has been the reality of the explosion of interest-rate differentials on sovereign bonds in the eurozone. But as we shall see, even before the crisis markets were not that efficient in aligning the cost of public debts to their fundamental credit risk

To escape the Scylla of uncertainty and the Charybdis of liquidity risk, it is crucial to be able to count on assets that can be considered reasonably *safe*, i.e., characterised by stable long-term expectations about their prospective yield, reinforcing the stability conditions of the whole system and making it possible to govern expectations about interest rates, especially when central banks are proactive in that sense (forward guidance).

## 5. A European Debt Agency

The crucial trade-off for a monetary union is between the fiscal (self)discipline of individual member states and the efficiency with which they manage to *collectively* interact with financial markets. It is a question on the one hand of minimising moral hazard, and on the other of finding a cooperative or at least coordinated way of accessing markets by leveraging not on the default risk of individual states, but on that of the monetary union as a whole. In the eurozone this trade-off has so far prevented an agreement on the creation of Eurobonds: market-based solutions (Eurobonds based on pooling and tranching, without any form of public guarantee, like the ESBies) are exposed to overshooting risks on junior tranches; centralised solutions, based on a common issuer with adequate capital endowment are expensive in terms of loss absorbing capital and do not structurally avoid mutualisation, that could in principle lead to free riding and moral hazard.

A federal Treasury would be an obvious, though today politically quite unrealistic, solution to the trade-off. In its absence, however, it is possible to think of a ‘European synthetic Treasury’, with the task of issuing Eurobonds and subsequently providing financing to the Member States while maintaining a differentiated financial treatment according to the credit risk of each of them. Amato et al. (2021) give all the details on the working of such a *European Debt Agency* (EDA), which would be compatible with the existing treaties.

A European Debt Agency had already been proposed by Diev and Daniel (2011), who nevertheless had in mind a lending facility similar to what would eventually become the ESM,

hence quite different in nature from the Amato et al proposal. Most recently, Giavazzi et al (2021) proposed an arrangement intended in its main purpose only for Covid-19 debts: their ‘European Debt Management Agency’ (EDMA), nevertheless, looks far more limited and less structural than the Amato et al proposal and, more importantly, would not avoid partial debt mutualisation. This would affect its pricing methods and raise significant concerns about its political acceptability. However, despite its drawbacks, the contribution of Giavazzi *et al.* (that served as a basis for the [Financial Times letter](#) by Draghi and Macron in December 2021) is to be welcomed because it opens a debate that has remained below the radar for too long.

The Amato et al (2021) EDA proposal does not incur into these problems; for the details on how it would work we refer to their article, while here we discuss the broad principles underlying its operation and focus on two main features that we think are crucial for its political feasibility: first, the EDA would create joint debt without mutualization and set the ECB free from the need to run a ‘semi-permanent QE’, thus increasing the overall efficiency of debt management at the Eurozone level; second, the EDA would not limit its operation to Covid-19, or in general ‘crisis debt’, thus avoiding a juniority effect with respect to the part of the MSs’ debt left to the ‘market discipline’.

#### Filtering risk without mutualisation.

Based on an adequate insurance scheme equivalent to a solvency capital endowment (in order to protect the Agency from MS’s defaults), the EDA (i) collects liquid funds on markets by issuing plain vanilla bonds<sup>4</sup> with *finite* maturity; (ii) uses these funds to finance Member States (MSs) with *infinite* maturity (perpetual) *loans*. The fact that the loans are of infinite maturity does not imply that they necessarily go up over time, since the pricing of the EDA includes an amortisation charge, which in turn raises reserves as long as the MS does not default. These reserves constitute in all respects a sinking fund. This means that the EDA might periodically draw on the fund to write-off part of the debt<sup>5</sup>. In other terms, and contrary to what happens in other projects of Debt Agency, the EDA as Amato *et al.* propose it would not exhibit a structurally increasing balance sheet.

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<sup>4</sup> Plain vanilla bonds are securities issued by national and supranational public bodies and listed private companies. They grant the holder the right to receive 100% of the stated nominal value and periodic coupon interest. Once issued, they may be traded on the secondary market

<sup>5</sup> This decision would be taken each time on the basis of policies determined by the market opportunities of the Agency: for example, in a situation of rising rates, the EDA could protect itself by liquidating part of these reserves.

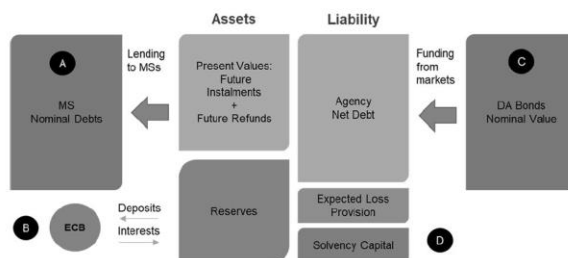


Fig. 1 Debt Agency's balance sheet structure

A look at figure 1 (drawn from Amato *et al.* 2021) can help us understanding the EDA modus operandi. The agency builds its balance sheet asset side by granting to MSs *perpetual loans* corresponding to the *new or maturing* public debt of each of them.

To be precise, these loans are continuously renewable at discretion of each MS ('perpetuity option clause'), although, by its own decision, each MS can always decide to liquidate its expiring debt positions. As a result, the EDA framework allows the financing of the MSs on a perpetuity scheme *without implying any form of perpetual bonds issuance*. In fact, the EDA finances the MS's loans by issuing bonds with finite maturity on the primary market according to a current market price.

The bonds issued by the EDA are liabilities on its balance sheet and are valued at amortised cost. The market price of the issuing portfolio reflects the duration structure of the EDA's portfolio and its own creditworthiness<sup>6</sup>.

As to the asset side of the EDA, for each MS the cost of its loan follows a rate of a perpetual amortization scheme, in line with its *specific* creditworthiness, i.e. proportional to its degree of compliance to the agreed EU rules. No mean instalment is charged, which would entail a lower cost for the MSs as a whole, but would also imply that taxpayers of higher rating MSs should pay a part of the bill of lower rating MSs.

In technical terms: the cost for each MS is a function of the market cost of the EDA's issuing portfolio, *plus* a differential cost reflecting the MS's *specific* creditworthiness. In more popular but perhaps clearer terms: the more (less) 'virtuous' you are, the less (more) you pay! In one formula: *the European Debt Agency does not involve any form of mutualisation nor does it incite to moral hazard*.

The EDA only finances MSs' new or expiring debt, according to predetermined price formulas based on the MSs' fundamental risk, i.e. on the risk of default which corresponds to the possible deterioration of the fundamentals underpinning the MS' economy<sup>7</sup>, which is also

<sup>6</sup> The EDA manages the potential mismatch between its assets (receivables from MSs) and its liabilities (EDA bonds portfolio) using techniques that minimise the liquidity requirements.

<sup>7</sup> The fundamental risk can be measured by quantifying the Member State's one-year probability of default (for the details the reader is referred to Amato *et al.* (2021)).

linked to the degree of its compliance with the (renewed) EU fiscal rules/standards. This means that concerning macroeconomic surveillance nothing would change: given a set of rules agreed by the MSs, the compliance therewith would be (as is already the case now) entrusted to the supervision of the Commission; the EDA would only deal with the pricing of payments, while the allocation of member states to different risk classes on the basis of their compliance with the rules, would be the exclusive competence of the Commission. In case of non-compliance, the EDA is obliged to revise the pricing of the MS's instalment, thus leaving government accountability in front of the Commission intact.

Moreover, given that the EDA does not purchase securities on the market, either primary or secondary, but grants loans, all the commitments would remain with the MS (in the event of its bankruptcy it would be liable on its own, according to the negotiation clauses established with the EDA). The EDA, which as we have said has absorption capital and is protected by an insurance scheme, would bear market risk, but being only responsible for eventual default on its own debt issued on the market. Therefore, the EDA would not be liable for or assume the commitments of any MSs.

Being perpetually held by the EDA, the share of debt it finances does not need to be rolled over and is structurally hedged from liquidity risk. For this reason, and thanks to the insurance scheme, no seniority clause is needed to support the EDA creditworthiness. This avoids a structural dualism between debt in the EDA and debt still floating in the markets. This feature of the EDA is not less important than the absence of mutualisation and constitutes a strong argument for the EDA to take progressively in charge *all* previous eurozone debt as they mature and *all new debt*.

Leandro and Zettelmeyer (2018, p.55) enumerate several criteria to assess Eurobonds proposals. Compared to the authors' 'ideal attributes' of a debt agency, the EDA would satisfy most of the criteria<sup>8</sup>. Among the Leandro and Zettelmeyer criteria it is worth emphasizing the one on juniority. In fact, every project of a Debt Agency which does not progressively take in charge the whole eurozone debt, may trigger a 'juniority effect' on the debt not taken in charge, thus causing a negative feedback effect on the Agency itself. This is another difference between the EDA and the Giavazzi et al (2021). EDMA proposal<sup>9</sup>. A recent VoxEU column (D'Amico et al. 2022) lists this and other shortcomings of the EDMA proposal, Whether or not these shortcomings undermine the EDMA or not (as D'Amico et al argue), it is worth noticing that the EDA does not suffer from them.

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<sup>8</sup> The criterion that the EDA would not satisfy is the one related to increasing liquidity in the government bond markets, since these markets are meant to shrink and disappear in favour of the emergence of a Eurobond market.

<sup>9</sup> The risk that, as a Debt Agency subtracts *part* of the floating debt from the markets, the part *still floating* on the market be subject to a 'juniority stigma', can only be averted by committing, ex ante, the Agency to lend to a MS the equivalent of the expiring principal at the due date. This is what the EDA does in the Amato et al proposal, by substituting expiring MS's bonds with infinite maturity loans



## Set the ECB Free

The overall flow of instalments, net of legal provisions, enables the Debt Agency to remunerate its bondholders at a rate in line with its high rating. Indeed, the ECB could stabilize the overall Debt Agency mechanism first by remunerating the Debt Agency's reserves at an ad hoc long-term directory rate, and second by declaring its willingness to buy the Debt Agency's bonds. These two provisions would have the effect of aligning the Debt Agency's bond yield to that rate, which will be lower than the average of the fundamental cost of each Member State, allowing the EDA to reach its financial equilibrium at more advantageous conditions than any portfolio manager in the market. Furthermore, and more importantly, the ECB engagement would firstly, free it from 'systematically going unconventional' with a sort of permanent QE; secondly, from the self-imposed (because politically unavoidable) but distortionary constraint of the capital key rule. Notice, furthermore, that the stabilization of interest rates would be beneficial even to mitigate the inflation risk premium, were generalized price increases to materialize because of large debt levels, as some fear.

With an EDA, MSs could borrow through an agency that acts as a private entity in interacting with markets but has the public mission of minimizing borrowing costs for the States themselves while keeping them accountable for fiscal misbehaviour. The EDA framework is entirely neutral with respect to any political configuration concerning collaborative relationships between the MSs that the European legislators could adopt. In other terms (and here is the main point) the EDA is neutral with respect to any possible fiscal rule, and also, as we will argue shortly, compatible with the creation of a significant central fiscal capacity.

## A rule-neutral agency, in retrospect and in prospect

The technical neutrality of EDA is a crucial point in favour of its adoption. But the reasoning can also be reversed: since the EDA aligns the cost of debt with the 'fundamentals' of each MS for any given set of rules, then it is possible to think of less stringent fiscal rules without jeopardising the stability conditions. It is therefore possible to think of new rules that substantially mitigate the trade-off between growth and stability, two equally indispensable components from the point of view of the economic and political robustness of the Union. A proof, albeit indirect, of the EDA efficiency as a debt management tool is provided by the counterfactual exercise whose details can be found in Amato et al. (2021)). Here we show the results of a refined exercise, which gives an estimate of what might have happened to debt servicing rates had the EDA been in operation between 2002 and 2015:



Figure 1. EDA and Spreads: A counterfactual

Take the cases of Germany and Italy (Figure 1): in spite of the intrinsic limitations of this type of exercise, the counterfactual that we present here suggests two things: i) in the presence of the EDA the market turmoil between 2012 and 2015 would not have occurred; and consequently, ii) the explosion of spreads was plausibly not linked to a deterioration in fundamentals, but to distortions in expectations that not only may not absorb shocks but, under certain conditions, actually amplify them. While markets tended to underestimate southern countries fundamental risk until the sovereign debt crisis, they irrationally overestimated it from 2012 onwards<sup>10</sup>, a pattern which has been laboriously curbed only with the systematic intervention of the ECB, starting in 2015. This overestimation of fundamental risk must be explained by the emergence of expectations about solvency, hence about euro breakdown. The presence of the EDA could have both averted the turmoil and made more indirect the ECB's calming intervention, which involved stretching the interpretation of the treaties. The EDA could have acted in place of the ECB, but without the distorting effects associated with the application of the capital key rule in the QE bond buying programmes; a distortion that, it is worth reminding it, exacerbated the downward trend of AAA MS' yields. The EDA would have avoided the 'negativisation' of core countries' interest rates in the interest of German institutional investors! Moreover, since the yield increases for southern countries have been far greater than the gains that market turbulence and flight to quality have brought to northern countries, the sovereign debt crisis resulted in a *negative sum game*. The counterfactual strongly

<sup>10</sup> "Market pressure could not be viewed as an efficient way to promote fiscal sustainability as it tends systemically to underestimate vulnerabilities in 'good' times and overestimate risks in 'bad' times that may well trigger self-fulfilling insolvency of vulnerable states" Diev and Daniel (2011): p. 1175.

suggests that, had it been in place, the EDA would have turned this very game into a positive-sum one, with a net welfare increase for the eurozone as a whole. As Carlo M. Cipolla (1976) warns us, it is always irrational (better: foolish) for everyone to cause losses to someone else while himself deriving no gain and even possibly incurring loss... It is apparent that an institution capable of both systematically reducing interest rates and reflecting MSs' compliance with European rules in its pricing, could i) increase the fiscal space for any given country given the growth rate, ii) ensure debt sustainability for even low levels of growth. The importance of increasing fiscal space can be appreciated especially if we consider that in the coming years the green and digital transition will require important and not postponable investments.

By issuing a common bond that would have all the characteristics of a European safe asset, the EDA could act as a key factor in reducing systemic uncertainty, thus stabilising market expectations on overall debt sustainability. Not only, in fact, the EDA by filtering the liquidity risk, could avoid the tendency during market turmoil towards bad equilibria; but by anchoring the cost of debt to MSs' fundamentals, it could also orient market expectations towards good equilibrium, thus preventing turmoil. Hence, it could support the adoption of rules giving to states more leeway, without sacrificing either fiscal discipline at the national level (no mutualisation) or the financial stability of the Union.

The EDA would be compatible with either a European Central Capacity or New Rules (or both)

The EDA's basic solution is fully non-mutual. However, its working is also compatible with mixed methods. For instance, following specific political decisions, it could build segregated (mutualized and non-mutualized) sub-portfolios. By way of example, 'the Debt Agency could apply a mutualisation scheme to national expenses carried out in the framework of European infrastructure cooperation programmes (such as new NGEU-like programs), while non-mutualisation would continue to be applied to debt expansions linked to strictly national fiscal policies' (Amato et al. (2021)).

In this very same logic, the EDA can manage not only the debt already issued by the Commission under the NGEU, but the financing of a central fiscal capacity, were it eventually be agreed upon. This issue is key, not only because an EDA would allow the Commission and MS to lock into low rates their perpetual debt, but also because it would substantially increase the supply of safe assets that will remain in high demand for the foreseeable future.

A quick glance at how the markets have until now 'warmly welcomed' Commission debt issuances is extremely instructive: the potential demand for European safe assets is very high, and these common bonds are already considered as European safe assets. "Therefore, there are good economic and institutional reasons to methodically approach the question of the possible rollover of the common debt, and to provide innovative operational solutions". (Amato et al. 2021).

The EDA would prove to be an instrument to anticipate the beneficial effects of a federal Treasury without requiring its actual constitution. The issue of European integration is essentially a political one, but it would not be alien to the logic of European integration experienced so far that an economic institution would help create the political space for an institutional transition towards greater integration. In any case, the fundamental effect of setting up an EDA would be the progressive transformation of all the previous debts of the states into a common yet unmutualised debt: thanks to the protective gap represented by the EDA, the MSs would be definitively preserved from the market risk of rollover, and they would remain free to buy back part of their debt towards the EDA if they wanted to reduce the flow of interest payments. This protection of course would have to be accompanied by more effective enforcement of fiscal discipline through rules and/or peer pressure. As the EDA would remain free not to finance MSs deficits, its governance and decisional procedures should be carefully crafted to avoid it being either ineffective or prey to ideological capture (for example by austerity partisans, as those that prevailed during the sovereign debt crisis). An involvement of EU institutions (the Council and the Parliament) should be envisaged.

As we already said, the core characteristic of the EDA is its neutrality with respect to any set of rules. Thanks to this feature, the EDA makes it easier to manage the trade-off between stability and growth, which has always been at the heart of the European debate. The already mentioned proposal of introducing a golden rule, possibly augmented to cover investment in tangible and intangible capital (Hafele et al. 2021; Saraceno 2017b), would particularly benefit from the flexibility provided by the EDA. While old national debts could be treated in non-mutualised portfolios on the basis of reasonably stringent fiscal rules, investments could receive preferential treatment in dedicated sub-portfolios: part of the states' investment expenditures, most notably joint investment projects of two or more Member States could be treated in mutualised portfolios (recall that, given the *modus operandi* of the EDA, the cost of the mutualised instalment is lower than the average of the costs of the non-mutualised instalments); another part could be entrusted to specialised supranational bodies, and yet another part could be directly entrusted to the expansion of the Commission's budget in the framework of a revision of its competences and of its increased taxation capacity. In short, the EDA could accompany the progressive transfer of fiscal capacity to the EU level and at the same time facilitate the efforts to protect and foster public investment, in various forms at once.

### Using the ESM Blueprint?

The EDA would have to be an institution proper to the Eurozone. The procedure to implement it could be therefore benefit of the experience of the creation of the ESM, in 2012. The reader may remember that to clear the ESM it had been necessary to make sure that it would not act in violation of article 125 of the TFEU (the no-bailout clause). This is why it is crucial that the EDA does not imply debt mutualization (for this reason, the Giavazzi et al 2021 EDMA proposal would almost certainly incur in legal hurdles). As it has been correctly observed, *'the moral hazard inherent in Eurobonds is related to the mutualization of the*

*principal (in bonds that the issuers are jointly and severally liable for) or of the interest (in bonds that issuers are liable for on a pro rata basis)*' (Kämmerer (2016): 601). Since the framework of the EDA avoids both these cases, its compliance with art. 125 should not be an issue.

A way to proceed would be to transform the ESM into an EDA, by thoroughly rewriting its statute.<sup>11</sup> The first advantage of such a choice would be that the ESM in its current form has today a limited role to play in the Eurozone governance; a role that would be further reduced by the existence of an EDA. Thus, its transformation would avoid the proliferation of institutions that in the past plagued the European construction. A second advantage would be that the absorption capital required by the EDA would not imply additional financial commitments by Member States. Net of the part committed to cover the loans still outstanding, the 80 billion already contributed by the member states would be more than sufficient to guarantee the smooth operation of the EDA in the first phase of its existence. Indeed, it is in this phase that a capital endowment would be most useful, since over time, the reserves accumulated based on its insurance scheme would relieve the EDA of the need for further capitalisation.

As for the relationship with the Commission, the renewed ESM/EDA would be a purely technical body, whose purpose would be to optimise the management of national debts. This means that decisions on debt sustainability and adherence to the fiscal framework, subject to interpretation and therefore more political, would have to be taken elsewhere. It is important to underline once again that fiscal policy management is not a technocratic endeavor but a political process that needs to involve governments and EU political bodies such as the Commission. With the EDA, the division of labour would be very clear: the assignment of a State to a particular risk class would be the task of the bodies responsible for enforcing the agreed fiscal rules (that are also part of the political process). Once the risk class has been assigned, the EDA would proceed with debt pricing and debt management.

The ESM has been established with an intergovernmental Treaty, and in principle its transformation (or the creation of an EDA following a similar blueprint) may follow the same route. Nevertheless, that was an anomaly that many at the time hoped to be temporary. EU law already includes Eurozone-specific institutions (such as the ECB), and since 2012 many have advocated a repatriation of the ESM within the EU (European Commission 2017; Guttemberg 2020; Pröbstl 2020) .

Nevertheless, while it would seem preferable to embed the EMA into EU law from the outset, the best institutional arrangement will eventually depend on considerations that are partly legal (*de iure condito*, according to the treaties in force) and partly political (*de iure condendo*, according to the will to amend them).

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<sup>11</sup> Micossi (2021) proposes to amend the ESM statute to allow it to purchase the ECB Covid-related debt. The juridical arguments in support of his proposal seem to apply a fortiori to an EDA that would limit itself to financing expiring or new debt.

## 6. Conclusion

The creation of a European Debt Agency would go a long way to resolve the trade-off, that plagued European countries in the past decade, between financial stability and growth. Our starting point has been on one side that as long as European countries do not go ‘fully federal’, any institutional arrangement needs to keep Member States accountable for their fiscal policy; on the other side, that the segmentation of European sovereign debt markets that proved inefficient and unstable needs to be greatly reduced. The tension between these two objectives has periodically resurfaced both while dealing with the (too many) crises that the EMU has suffered in the past and while discussing the rules of the game and the long-term objectives of the EU; many remember the regrettable quarrel between the so-called ‘frugal’ and ‘profligate’ countries during the negotiation of Next Generation EU, the most significant investment (and corresponding joint debt) program the EU ever agreed upon.

In the recent past it has become customary that EU institutions (the ESM, the SURE mechanism, the Commission itself with NGEU) borrow at preferential rates and then pass along these rates to Member States, acting de facto as a guarantee and as an intermediary. The EDA could be modeled upon these mechanisms and would bring the intermediary role to its very limit, extending perpetual loans and virtually eliminating rollover risk. The sustainability of Member Countries’ public finances would be determined by their capacity to service their debt to the EDA, and their accountability would be guaranteed by an appropriate pricing of the (variable) interest instalment.

While the idea of an EDA may seem at first sight quite unorthodox, we believe that a few characteristics make it politically viable. The first and more important is the absence of mutualization, that would de facto eliminate incentives to free ride or moral hazard. The second is that substituting the ECB in financing the Member States it would facilitate the normalization of monetary policy, something that many ‘frugal’ countries have been asking for some time now. These two characteristics should reassure those who fear excessive laxity of the new EU fiscal governance. Also of interest for core European countries would be the increase in the supply of a EU safe asset; this would relieve the pressure on savers and institutional investors that have been struggling with low or negative rates for a decade. Last, but not least, the EDA could be designed to manage mutualized and non-mutualized portfolios, allowing it to support and efficiently manage public debt with any type of fiscal governance, be it a central fiscal capacity or a renewed role for national fiscal policies. To put it differently, the EDA would be compatible and useful with any institutional architecture that will emerge from the political process of the next years. In a complex (political and institutional) setting like the European one, this seems an important point in favour of the proposal.

## References

- Alcidi, C., P. D'Imperio, and G. Thirion (2017) 'Risk-Sharing and Consumption-Smoothing Patterns in the US and the Euro Area: A Comprehensive Comparison', *CEPS Working Document*(2017/04).
- Aldama, P. and J. Creel (2021) 'Real-Time Fiscal Policy Responses in the OECD from 1997 to 2018: Procyclical but Sustainable?', *European Journal of Political Economy*: 102–35.
- Amato, M., E. Belloni, P. Falbo, and L. Gobbi (2021) 'Europe, Public Debts, and Safe Assets: The Scope for a European Debt Agency', *Economia Politica* 38(3): 823–61.
- Bartsch, E., A. Bénassy-Quéré, G. Corsetti, and X. Debrun (2020) 'It's All in the Mix. How Monetary and Fiscal Policies Can Work or Fail Together', *Geneva Reports on the World Economy* 23.
- Blanchard, O.J. (2016) 'Rethinking Macro Policy: Progress or Confusion?', in Blanchard O.J. et al. (eds), *Progress and Confusion: The State of Macroeconomic Policy*. MIT Press.
- Blanchard, O.J. (2019) 'Public Debt: Fiscal and Welfare Costs in a Time of Low Interest Rates', *PIIE Policy Brief* 19-2(February).
- Blanchard, O.J., A. Leandro, and J. Zettelmeyer (2021) 'Redesigning EU Fiscal Rules: From Rules to Standards', *Economic Policy* 36(106): 195–236.
- Blanchard, O.J. and D. Leigh (2013) 'Growth Forecast Errors and Fiscal Multipliers', *American Economic Review* 103(3): 117–20.
- Blanchard, O.J. and J. Pisani-Ferry (2020) 'Monetisation: Do Not Panic', *VoxEU*(April 10).
- Caballero, R.J., E. Farhi, and P.-O. Gourinchas (2017) 'The Safe Assets Shortage Conundrum', *Journal of Economic Perspectives* 31(3): 29–46.
- Capie, F., C. Goodhart, S. Fischer, C.W. Munn, and N. Schnadt (eds) (1994) *The Future of Central Banking: The Tercentenary Symposium of the Bank of England*. Cambridge: Cambridge University Press.
- Carney, M. (2019) 'The Growing Challenges for Monetary Policy in the Current International Monetary and Financial System', *Speech given at the Jackson Hole Symposium*(23 August).
- Cerniglia, F. and F. Saraceno (eds) (2020) *A European Public Investment Outlook*. Cambridge: Open Book Publishers.
- Cerniglia, F., F. Saraceno, and A. Watt (eds) (2021) *The Great Reset: 2021 European Public Investment Outlook*. Cambridge: Open Book Publishers.
- Cipolla, C.M. (1976) *The Basic Laws of Human Stupidity*. London: Penguin Books (reprinted 2019).
- D'Amico, L., F. Giavazzi, V. Guerrieri, G. Lorenzoni, and C.-H. Weymuller (2022) 'Revising the European Fiscal Framework, Part 2: Debt Management', *VoxEU*(January 15).
- Davis, A.E. (2018) 'The New Triffin Dilemma', *Review of Radical Political Economics* 50(4):

691-8.

- Diev, P. and L. Daniel (2011) 'What Prospects for a European Debt Agency?', *Revue Économique*, *Revue Économique* 62(6): 1147-62.
- Eichengreen, B., A. El-Ganainy, R. Esteves, and K.J. Mitchener (2021) *In Defense of Public Debt*. Oxford: Oxford University Press.
- ERSB (2021) *Lower for longer. macroprudential policy issues arising from the low interest rate environment*.
- European Commission (2017) 'Proposal for a Council Regulation on the Establishment of the European Monetary Fund', December 6(COM(2017) 827 final).
- European Commission (2020) 'Communication on the Economic Governance Review', February 5.
- European Fiscal Board (2019) 'Assessment of EU Fiscal Rules', (August).
- Fitoussi, J.-P. and F. Saraceno (2011) 'Inequality, the Crisis and After', *Rivista Di Politica Economica*(1): 9-28.
- Francová, O., E. Hitaj, J. Goossen, and R. Kraemer (2021) 'EU Fiscal Rules : Reform Considerations', *ESM Discussion Paper Series* 17(October).
- Goodhart, C. and M. Pradhan (2020) *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*. London: Palgrave Macmillan.
- Guttemberg, L. (2020) *Time to come home. If the ESM is to stay relevant, it should be reinvented inside the EU Jacques Delors Centre Policy Brief* (Vol. 12 Novembre).
- Hafele, J., L. Bertram, L. Korinek, F. Temory, E. Dirth, and J. Barth (2021) *Fiscal Policy for a Thriving Europe: Feasibility and Impact Analysis of Fiscal Policy Reform Proposals*.
- Ilzetzki, E., C.M. Reinhart, and K.S. Rogoff (2021) 'Rethinking Exchange Rate Regimes', *NBER Working Paper* No. 29347(November).
- Kämmerer, J.A. (2016) 'How Can Eurobonds Be Legally Implemented into European Law?', *Review of Law and Economics* 12(3): 585-604.
- Kantorowicz, Ernst Hartwig. (1948) 'Christus - Fiscus', *Synopsis : Festgabe für Alfred Weber*.: 223-35.
- Kantorowicz, Ernst Harwig (1957) *The King's Two Bodies; a Study in Mediaeval Political Theology*. Princeton: Princeton University Press.
- Krugman, P. (2011) 'Mr Keynes and the Moderns', *VOX CEPR Policy Portal* June 21st(<https://voxeu.org/print/6668>).
- Leandro, A. and J. Zettelmeyer (2018) 'The Search for a Euro Area Safe Asset', *PIIE Working Paper* 3(March).
- Martin, P., J. Pisani-Ferry, and X. Ragot (2021) 'Pour Une Refonte Du Cadre Budgétaire Européen', *Notes Du Conseil d'analyse Économique* n° 63(9): 1-12.



- Mian, A.R., L. Straub, and A. Sufi (2020) ‘The Saving Glut of the Rich’, *NBER Working Paper* No. 26941(April): Revised February 2021.
- Micossi, S. (2021) ‘On the Selling of Sovereigns Held by the ESCB to the ESM: A Revised Proposal’, *CEPS Policy Insights* 2021-17(November).
- Pröbstl, J. (2020) ‘A Legal Perspective on ESM Loans and Coronabonds’, *VoxEU*(April 4).
- Rachel, Ł. and L. Summers (2019) ‘On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation’, *BPEA Conference Drafts*(March 7-8).
- Saraceno, F. (2017a) ‘Rethinking Fiscal Policy: Lessons from the European Economic and Monetary Union’, *ILO Employment Working Paper* 219(August).
- Saraceno, F. (2017b) ‘When Keynes Goes to Brussels: A New Fiscal Rule for the EMU?’, *Annals of the Fondazione Luigi Einaudi* 51(2): 131-58.
- Saraceno, F. (2018) *La Scienza Inutile. Tutto Quello Che Non Abbiamo Voluto Imparare Dall'economia*. Roma: Luiss University Press.
- Sardoni, C. (2021) ‘The Public Debt and the Ricardian Equivalence: Some Critical Remarks’, *Structural Change and Economic Dynamics* 58: 153-60.
- Shiller, R.J. (2003) ‘From Efficient Markets Theory to Behavioral Finance’, *Journal of Economic Perspectives* 17(1): 83-104.
- Summers, L.H. (2014) ‘U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound’, *Business Economics* 49(2): 65-73.
- Summers, L.H. (2016) ‘The Age of Secular Stagnation. What It Is and What to Do About It’, *Foreign Policy*(March/April).