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DISJOINTED SOVEREIGNTIES IN THE EUROPEAN UNION
AND ATYPICAL INTERACTIONS BETWEEN MONETARY
AND FISCAL POLICIES AFTER THE SOVEREIGN DEBT
AND COVID-19 CRISES

Nazaré da Costa Cabral



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Disjointed sovereignties in the European Union and atypical interactions between monetary and fiscal policies after the sovereign debt and COVID-19 crises

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Abstract

In this article the author explains how the two forms of sovereignty disjointedness that can be found in the European Union – territorial and functional disjointedness- explain the atypical policy measures adopted and/or proposed after the sovereign-debt and COVID-19 crises and the atypical interaction between monetary and fiscal policies. In particular, the impact of such disjointedness is discussed when monetary policy enters the territory of non-conventional measures, and particularly when it crosses the last frontier, performing as a ‘quasi-fiscal policy’, which typically occurs in the case of debt monetization. The main conclusion is that the possibility to cross this frontier is much more remote in the case of the E(M)U (marked by disjointed sovereignties) than it is in cases of full sovereignty.

Keywords

Sovereignty; Monetary policy; Sovereign-debt crisis; COVID-19 crisis; Helicopter money; Debt monetization.



1. Introduction

Early on, even before the definitive creation of the European Economic and Monetary Union (EMU), Goodhart (1998) signalled the divorce witnessed in this currency union (and more broadly in the European Union, the EU, itself) between fiscal and monetary powers. As we will see throughout this article, such a divorce becomes more visible in extreme situations, of war or severe crisis – as is the current COVID-19 crisis – situations that may require non-conventional response measures both in the case of fiscal as well as monetary policies. Ultimately, these situations may impose a sort of intervention by monetary authorities that clearly intersects government intervention, meaning that such monetary policy becomes a ‘quasi-fiscal policy’. This is the case with the so-called debt monetization policies, notably under the designation of *helicopter money*. The fact was that, as Goodhart (1998) pointed out, “historically, the nation states have been able, in extremis, (whether in the course of war or other – often self-induced – crisis), to call upon the assistance of the money-creating institutions, whether the mint via debasement of the currency, a Treasury printing press, or the Central Bank. Whenever states (such as the USA or Australia), provinces (as in Canada), cantons, Länder, etc., have joined together in a larger federal unity, both the main political, the main fiscal and the monetary powers and competencies have similarly emigrated to the federal level. The Euro area will not be like that.”

As also noted by Goodhart (1998), the explanatory framework under which the EMU was about to be established was the Optimum Currency Areas, OCAs theory (firstly, Mundell, 1961), whose main intellectual purpose was to identify conditions for optimality in a currency union by confronting the benefits related to integration (e.g. the minimization of transaction costs) with the adjustment costs imposed by the process of monetary unification itself.

Goodhart (1998) stressed at that time that in the light of OCAs theory – that he considered as an expression, in the field of external monetary relationships, of the Metallist concept of money¹ - a perfect coincidence between the money/currency domain and state sovereignty

1 According to the Metallist concept of money, the value of Money depends primarily on the intrinsic value of the backing of that currency.

would not be required. The divorce between the printing of money and the boundaries of sovereignty, including fiscal sovereignty, could thus occur. Conversely, for the Cartalist concept of money^{2 3} – to which he subscribes- “money is intimately bound up with the stable existence and fiscal functions of government in any area, the sovereign government of that area is predicted to maintain its single currency within the area’s boundaries” (*Idem*, 1998).

Now that more than thirty years have passed after this and even after the completion of the EMU, when the latter is facing the greatest shock since its creation – the COVID-19 crisis – this same EMU, and the EU as a whole,⁴ have been confronted with the need to adopt impressive and heterodox policy responses to the crisis, both in the case of fiscal and monetary policies (some of which had already been proposed or applied in the aftermath of the sovereign-debt crisis). In this context, the seminal disjointedness between sovereignty allocation centres has become even clearer, as will be shown in this article. The misfit is firstly denoted in the carrying out of the single monetary policy in the EMU, notably within the Eurosystem⁵, in which anomalous elements of decentralization towards national central banks can be found (unlike that which happens in other ‘sovereign’ monetary unions), especially since the European Central Bank (ECB) has launched non-conventional monetary policies- e.g. quantitative easing – after the sovereign debt crisis and now reinforced after the pandemic crisis.

The neo-Cartalist view of money, as personified in the USA, in recent years, by the aforementioned MMT, has also inspired some of the recent proposals for policy in Europe in response to the effects of the pandemic crisis, in particular one advocating a specific form of helicopter money and another, presented by the so-called ‘more than one 100 economists’, pleading for the cancellation of the public debt purchased by the ECB. These proposals, while not new in the

2 According to the Cartalist concept of money, the value of Money is primarily based on the power of the issuing authority; that currency becomes money because the coins (or other monetary instruments) are struck with the insignia of sovereignty (Goodhart, 1998).

3 Note that the Cartalist view of Money – due to the seminal contribution of Knapp (1905) and later accepted by the Keynesian economist Lerner (1954) – was recently recovered by Modern Monetary Theory (MMT), in particular in the proposals made by Huber (2017), Crocker (2020), Kelton (2020) and Tcherneva (2020). The main idea of the MMT is that money is a creature of the sovereign (Lerner, 1947), with it being admitted, under certain macroeconomic conditions (e.g. the economy operating below full-employment) that the sovereign can resort to the printing of money as a way to finance public expenditure and/or public debt. Macroeconomic risks associated with money creation – mostly displayed by Monetarist Theory-, in particular the risk of inflation (and ultimately of hyperinflation) are largely neglected by the MMT, at least when the economy is not at full-employment. Moreover, their defendants propose the creation either of a basic income (Crocker, 2020) or of a job guarantee (Kelton, 2020 and Tcherneva, 2020) financed through the printing of money in order to achieve that goal of full employment (or at least an income guarantee). Only in extreme cases – a situation of true economic overheating or inflation pressure – could the government intervene, offsetting that previous expansionary monetary policy, and resorting to tax increases to absorb income in excess (Kelton, 2020).

4 I will use the acronym E(M)U when I am considering indistinctly the EMU and the EU as whole. Indeed, for some analytical purposes in this article it will not be so interesting to make such a distinction. But whenever required, the distinction will be made.

5 That includes the European Central Bank and national central banks of the EMU.

theoretical field, nor even in actions of the central banks' throughout History are nevertheless borderline solutions, subject to conditions only seldom verified and involving risks that in most cases cannot be run ⁶ ⁷: they indeed imply crossing the last frontier between monetary policy and fiscal policy (a situation where monetary policy definitely intersects fiscal policy), only undertaken when all the rest seems to fail. As we will see, in the European context, the transposition of this frontier is virtually hindered given the historical refusal to assign, in the case of fiscal policy, a sovereign power to the E(M)U (top) level.

The following sections are arranged thus: in section 2, I will characterize the two forms of disjointedness – territorial and functional disjointedness – explaining in particular how the latter affects the implementation of the single monetary policy in the EMU. In section 3, I will explain in which way these forms of disjointedness explain the atypical policy measures adopted and/or proposed after the sovereign debt and COVID-19 crises and the atypical interaction between monetary and fiscal policies. In section 4, I will analyse the impact of this actual disjointedness when it comes to adopting non-conventional measures, and particularly borderline solutions, that is, when monetary policy performs as a 'quasi-fiscal policy', which typically occurs in the case of debt monetization. My conclusion, in section 5, is that the possibility to cross this last frontier in the case of the E(M)U (marked by disjointed sovereignties) is much more remote than it is in cases of full sovereignty.

6 In Macroeconomic textbooks (Here I am following Mankiw, 2005, pp. 92-93), a government can finance its expenditure in three ways: i) it can raise tax revenue; ii) it can borrow from the public by selling government bonds and; iii) it can print money. The revenue raised by printing money is called 'seigniorage'. When the government prints money to finance expenditure, it increases money supply, which in turn causes inflation. Printing money to raise revenue is like imposing an inflation tax that will be borne mostly by the holders of the money. Inflation is like a tax on holding money. Moderate inflation can be accepted (in some cases the benefits outweigh its costs). However, the risk of hyperinflation is troublesome. As also noted by Mankiw (2005, pp. 108-109), most hyperinflations begin when the government has inadequate revenue to pay for its spending and has difficulties in obtaining financed through borrowing (due do bad credit risk). In such cases, the only mechanism at its disposal is the printing process – the result is rapid money growth and hyperinflation.

7 As mentioned by Issing (2020), advocates of MMT are technically correct when they point out that any country able to pay its debts in its own currency cannot become insolvent, because there is no limit to the sums of money that it can create. However, the idea that foreign investors would remain willing to invest in that currency under such circumstances does not hold water. At some point, foreign capital would become effectively shut out.



2. Territorial and functional disjointedness in the European Union

2.1. Presentation

The EU has, since its inception, been a ‘novel hybrid’ (McNamara, 2015) and this is largely due to its ontological ambivalence oscillating between a federal and an intergovernmental organization and pulled either by centrifugal or centripetal forces (Cabral 2021a). Typically, the EU is marked by two sources of disjointedness – territorial and functional disjointedness. As for the former, the EU is a disjointed territory where monetary policy is restricted to the EMU (managed by the ECB and the Eurosystem), whereas the budgetary policy – related to the capacity to collect revenue and to undertake public expenditure – is related to the EU as whole, through the management of the EU budget, that is, the central budget of the Union. As such, while this EU budget involves all 27 of the EU member states, the geographical scope of monetary policy is narrower, mostly restricted to 19 of its members (*Idem*, 2021a, p. 147).

In turn, when it comes to the countries that belong to the EMU, the same is also marked by a functional-type of disjointedness, since allocation centres for sovereign functions are not coincident. In fact, EMU member states, although sovereign countries, lost their monetary sovereignty (ultimately their money-issuing power) the moment they delegated such power to a central entity (the ECB). In contrast, those same states have retained full sovereignty in the tax and borrowing domains: firstly, they are still the prevalent tax assignment beneficiaries of the most important taxes (including typical redistributive and macro stabilizing taxes, e.g. redistributive income taxes), also maintaining full tax powers, as they are the primary (constitutional) decision makers for tax creation and settling tax incidence and tax rates (with minor exceptions for customs taxes and for a certain degree of harmonization at the EU central level involving the general consumption tax); secondly, they have preserved full sovereignty in the borrowing/debt issuance domain, being the location of the sovereign Treasury function. It should be noted, in turn, that this sovereign debt capacity is the ‘Tail’ of the coin where the ‘Head’ is tax sovereignty: sovereign debt issued by member states to finance their public expenditure (firstly and foremost investment expenditure) is backed up by their own sovereign taxes (Cabral, 2021b). It is indeed this sort of disjointedness that

is being considered by De Grauwe (2014) when he labels the EMU as an incomplete monetary union, that is, a currency union deprived of a fiscal union. This incompleteness is due in the first place to the modest dimension of the EU budget and secondly to the atypical profile of its expenditures and revenues if one compares them with ‘normal’ revenues and expenditures of central budgets, either of federal or unitary states. In fact, unlike that which typically happens with a central budget, the European one is not designed to produce interindividual redistributive effects, nor any kind of stabilizing role through the functioning of automatic stabilizers, both on the revenue (e.g. income taxes) and on the expenditure sides (e.g. unemployment benefits). None of these types of revenues and expenditures can be found in the EU budget.

2.2. The effects of the functional disjointedness particularly in the case of monetary policy

Indeed, even in the case of monetary policy implementation there are differences in the European landscape in comparison to national states and this is mostly due to the abovementioned functional disjointedness in the EMU. Firstly, regarding the transmission mechanism of the monetary policy,⁸ one should expect that the effect of this mechanism should be the same for the entire territory of a state/country, that is, that the macro effects of this mechanism both internally and externally would be felt equally in all regions of that territory. Recall that this transmission mechanism lays down the channels linking reference interest rates and various markets (ultimately affecting price developments in the economy), channels that can operate both in the short term – e.g. money market – and in the long term – e.g. expectations, credit and exchange rate channels. As for the latter – exchange rate channel – money supply is expected to affect the interest rate and the exchange rate (for example, an expansionary monetary policy can determine the reduction of the nominal interest rate and the depreciation of the domestic currency), thereby affecting - at least temporarily - terms of trade and the overall competitiveness of that same national economy vis-à-vis other countries. Finally, in a different vein, a single monetary policy is expected to eliminate credit risk differentiations between regions of that country: the national credit risk is therefore by nature the sovereign credit risk.

By contrast, in the European landscape, the effects of monetary policy have been very different for the various EMU member states since the creation of the euro and such difference was amplified during the last sovereign-debt crisis. Indeed, the single monetary policy prior to the crisis was considered too lenient for certain countries (the low interest rate environment with the creation of the euro in those countries fostered a rise in private and public debt levels), but also too rigid for certain other countries, in which, even in the presence of high saving levels, those same low interest rates were not enough to foster public and private investment (the case of Germany is illustrative). Moreover, the exchange rate of the euro had also shown asymmetric effects (the external misalignment of the

⁸ The process through which (conventional) monetary policy, e.g. fixation of reference interest rates, can affect the economy in general and in particular price developments (ECB, 2011).

euro- Stiglitz, 2016 and 2017): for some countries, the euro was a ‘cheap’ currency in comparison with the previous national currency (again, the case of the Deutsche mark) thereby benefitting the respective exports and so the overall current account position;⁹ for others, in contrast, the euro became an ‘expensive’ currency fostering an increase in external deficits in such countries.

Finally, the sovereign-debt crisis of 2010-2011 – which was above all an external balance crisis triggered by a ‘sudden stop’ in capital flows vis-à-vis EMU peripheral countries (Baldwin *et al.* 2015) – was marked by the increase in the 10-year bond spreads paid by these peripheral countries in comparison with Germany’s, which means that investors clearly differentiated between different national risk profiles leading to a ‘nationalization’ of the risk premia. This also meant that despite the existence of a single monetary policy for the EMU territory, centralized in the ECB, this same policy did not imply the creation of a European risk premium, as would happen if the EMU was a national state/country. Clearly, such risk differentiation happened not only due to differences in the economic fundamentals of each EMU member state, but also due to the abovementioned disjointedness between monetary and fiscal policies. In fact, in the EMU landscape, the debt issued – which is one of the main components of the fiscal/budgetary policy – is still the debt of each of its member states and not, as usually found in a national territory, the E(M)U’s own debt.

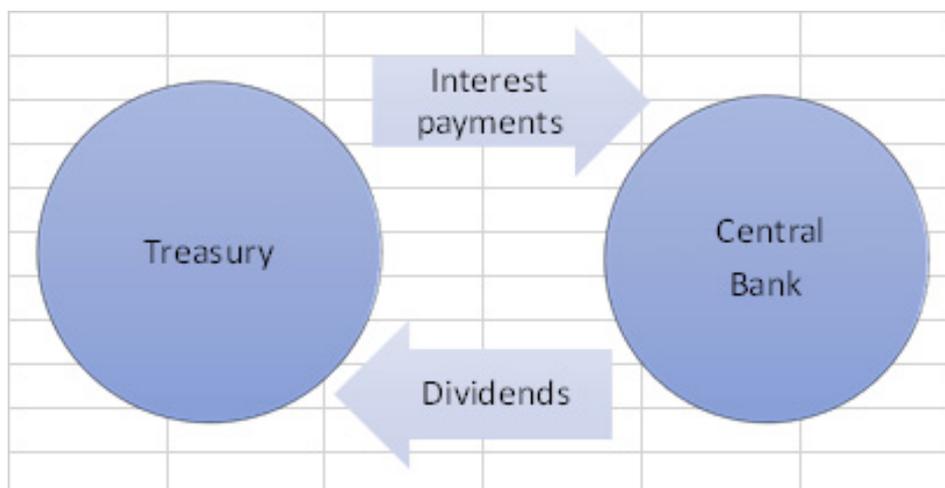
Another important issue should be noted. One of the prevailing principles when carrying out monetary policy – at least in the main developed market economies – is the principle of the independence of the central bank (in relation to the government), which in turn is substantiated in refusal of so-called ‘fiscal dominance’. If this is true, also true (and ancient) is the relationship between the central bank and the government. Firstly, the central bank is usually the bank of the sovereign and it is the source of a seminal revenue for the sovereign – the seigniorage revenue – which is, as we saw above, linked to the power to print money. Secondly, from an accounting point of view, the financial relationships between the government and ‘its’ central bank are reflected in their respective balance sheets. Therefore, bailout operations of the central bank in favour of the government, notably in the context of non-conventional monetary policies (quasi-fiscal policy) will imply the expansion of the Asset side of the central bank balance sheet, ultimately affecting the respective Capital. Finally and even more significant, also from an accounting perspective, is that when a broad approach to the public sector is considered and through consolidation of all constitutive entities – including non-financial and financial corporations as is the central bank – assets (e.g. loans and facilities) and liabilities (e.g. deposits and reserves) of the latter should hence be included in the overall Government balance sheet. A relevant question in this line is to know what are the implications for sovereign debt whenever the central bank acts as creditor for the government (Arslanalp *et al.* 2020, p. 63). Due to the massive

⁹ For an analysis of the idiosyncratic and historical features of the German economy that explain this increase in the country’s current account surplus after the creation of the euro, see Felbermayr *et al.* (2017) and Steinberg (2017).

engagement by central banks in quantitative easing (QE) in recent years, notably through the purchase of sovereign bonds, one should discuss the significance of this purchased debt for the computation of public debt. The fact is that it basically depends whether the central bank is included in the consolidation perimeter of the public sector and in the material concept of debt to be adopted: if within this concept only loans and debt securities are to be included, QE will involve debt reduction; if, on the contrary, the liabilities thereby generated in the central bank (with the purchase of debt) were to be considered, QE will not involve such a reduction (see Arslanalp *et al.* 2020, p. 72).

In the European case, this type of umbilical relationship between the (sovereign) government and its central bank encounters some distortions due to the intermediate nature of the Eurosystem. In fact, even more than in federal-based models- as is the case with the Fed's with its twelve districts- the Eurosystem resolves the abovementioned functional disjointedness between monetary and budgetary/fiscal sovereignties through the decentralization of some important ingredients of monetary policy in favour of the national central banks (NCBs) (Gros, 2017). Indeed, both seigniorage revenues and dividends related to QE implementation are mostly assigned to NCBs, the reason for which QE has definitely expanded the balance sheet of NCBs even more than it has expanded the ECB's. Additionally, dividends related to the purchase of sovereign debt are, for accounting reasons as well, also considered public revenues – of the national budgets – of each of the Member States involved (Figure 1).¹⁰

Figure 1 – Circular financial flows between the Government (Treasury) and the Central Bank



Source: Author's own design

¹⁰ Another source of differentiation between the Eurosystem and the Fed's concerns payment systems. Bijlsma and Lukkezen (2012) compare the role of federal reserve banks (FRBs) within the US Payment system (Interdistrict Settlement Accounts – ISA) with the role of NCBs in the EMU's payment system, TARGET 2. One common idea here is that FRBs are owned by other banks (private equity) and this is a strong argument in favour of the decentralized nature of system management. However, the authors dispute such an idea showing that the FRBs are effectively owned by the federal government (Bijlsma and Lukkezen, 2012).



3. Sovereign debt and COVID-19 crises and atypical responses from monetary and fiscal policies

3.1. Sovereign debt crises and the attempt to mimic a fiscal union: fiscal capacity and debt mutualization

After the sovereign-debt crisis, as the ECB definitely entered into non-conventional monetary policy territory, several proposals for reforming the fiscal policy branch were made. As we will see, most of these proposals were marked by what I would now call an attempt to mimic a fiscal union, in the absence of it.

The most important proposals were related to the creation of a ‘fiscal capacity’ in the E(M)U. A fiscal capacity can in fact be considered an attempt to mimic the non-existent fiscal union. Given the lack of a central budget fulfilling a stabilizing role (as seen before), this fiscal capacity, a sort of ‘micro-budget’, would assume that macro-stabilizing profile. It would indeed work as an insurance device or a risk-sharing mechanism aiming to respond to asymmetric shocks in the regions (member states) of the Union. The proposals for the creation of this device also exhibited the alleged territorial disjointedness of the E(M)U, since for many of them this budgetary mechanism would only involve EMU countries and these would be eventually set aside the EU budget itself.¹¹ Underlying such proposals, two main approaches could be identified: on the one hand, the anti-cyclical approach (e.g. the creation of a European Unemployment Benefit Scheme¹² and the institution of anti-cyclical funds¹³); on the other hand, the convergence-based approach (Cabral, 2021a) – in this latter case, the idea was to use EU (structural) funds, typically made for convergence purposes, to also carry out discretionary expenditure with some kind of stabilizing role, notably in sectoral areas with higher multiplier effects, e.g. certain investments implying the rapid creation of jobs, for example investments in social housing, renewable energy and transportation (Drèze and Durré, 2013).

11 For more details, see Cabral (2021a).

12 See on this issue the Report of the European Commission entitled *Feasibility and Added Value of a European Unemployment Benefit Scheme* (European Commission, 2017).

13 For example, Von Hagen and Wyplosz (2008) and Enderlein *et al.* (2013).

This latter approach was eventually accepted under the so-called ‘Juncker Plan’ launched in 2015.¹⁴ Despite its ambitious goals, the Plan would not imply a significant change in the design and dimension of the EU budget, as it was largely implemented outside this same budget. In particular, it did not entail modifications regarding the sources of financing of the EU budget, either in terms of taxes (with the discussion in 2018 about the reform of the own resources system being inconsequential) or the type of borrowing, despite the increase in the European Commission (EC) borrowing and lending capacity and of its role as a financing institution for the EU member states in the aftermath of the crisis. Moreover, the launching in 2019 of the new ‘Budgetary Instrument for Convergence and Competitiveness’ was also meant to ensure the materialization of some type of discretionary expenditure (e.g. specific investment) and through it to ensure a stabilizing function in the advent of adverse shocks.

Simultaneously, the creation of new E(M)U safe assets entered the political and academic agenda – on the one hand, there were the proposals for creating debt pooling instruments (the so-called Eurobonds)¹⁵ and, on the other hand, the proposals for the institution of new debt securitization instruments.¹⁶ None of these instruments were intended to be confused with an actual Treasury, where debt issuance is made ‘in the name and on behalf’ of that sovereign central state thereby combining tax autonomy with full borrowing capacity. However, in terms of mimicking a Treasury, the peculiarity of such instruments should be acknowledged - once again driven by the disjointed sovereignty within the EU- as they somehow intended to do more than Treasury bonds have actually been created to do. In fact, these new debt instruments to be created at the E(M)U level were assumed to have a specific purpose, which was to solve or prevent a debt crisis of members states (which are ‘the’ fiscal sovereign governments). Clearly, this is abnormal if one considers the usual functioning of national states/countries: the role of the Treasury is in the first place to finance the expenditures of the sovereign central government and not to cope with a debt crisis of its constituents (Cabral, 2021b).

To sum up, both the proposals for the institution of a fiscal capacity and for debt mutualization seek to circumvent territorial and functional disjointedness in the EU related to the lack of mutual fiscal and monetary sovereignties. In the former, the idea is to mimic a central budget of the Union, aiming in particular to cope with macroeconomic shocks and ensuring – as a proper insurance device – long-term financial neutrality (that is, avoiding could the possibility of it transforming into a permanent transfer from the ‘rich’ regions to the ‘poor’ regions of the Union). The fiscal capacity is contained in most of the proposals – due to the lack of a EU central budget with an invisible stabilizing role due to the interplay of redistributive taxes

14 See Ferrer *et al.* (2016) and Rinaldi and Ferrer (2017).

15 See De Grauwe and Mosen (2009), Delpla and Weizsäcker (2010) and European Commission (2011).

16 See Brunnermeier *et al.* (2012).

and expenditures- presented as a governmental risk-sharing mechanism providing visible and direct action as a macro-stabilizer.

In the latter case, the idea, also in its heterodox fashion, is to mimic a true and non-existent European Treasury, either through debt pooling instruments (Eurobonds) or through structured finance (sovereign-bond backed securities) in order to pool sovereign credit risk among EU countries. Moreover, the creation of these sovereign debt instruments can be also seen as a possible response to the secular decline in real interest rates, which is largely due to a shortage of safe assets- labelled as a ‘safety trap’ by Caballero and Fahri (2014).¹⁷ Incidentally, it should be noted that the non-conventional monetary policy measures adopted by the ECB in the aftermath of the sovereign debt crisis – e.g. the purchase of assets and forward guidance – were, to a certain extent, intended precisely to minimize that safety trap (Caballero and Fahri, 2014). The ultimate measure adapted to this purpose takes place in debt monetization processes, in particular the so-called ‘helicopter money’(the last frontier of monetary policy). COVID-19 brought back these proposals to academic and political debate: the UE was now actually confronted with the dilemma of knowing whether it could and wished to cross this ultimate frontier.

3.2. The COVID-19 crisis and the interactions between monetary and fiscal policies; the sovereign asset purchase programmes and the effects of monetary policy decentralization

3.2.1. Policy measures adopted as a response to the COVID-19 crisis: non-conventional fiscal policy or a fiscal federalism embryo?

I will start by recalling the responses given or proposed to the pandemic crisis. Interestingly, many of the responses have been inspired by some of those proposed or adopted in the aftermath of the sovereign-debt crisis. In the fiscal policy field, recall the political discussion, immediately after the outbreak of the pandemic, involving the proposal made by nine EU prime-ministers for the creation of ‘Coronabonds’, which was clearly based on the Eurobond proposal. And again, as with its predecessor, Coronabonds failed to be accepted by the majority of EU leaders.

In turn, the adoption of the recovery package ‘Next Generation EU’¹⁸ by the European Council in July 2020- to be allocated in the form of loans and grants to investments and reforms notably in the green and digital economy mostly under the new Recovery and Resilience Facility – is clearly more inspired on the convergence-based approach than on the anti-cyclical one (recall *supra* the two approaches for fiscal capacity). This conceptual option can be explained by the very nature and specificity of the shock caused by the pandemic: a common shock to the entire

¹⁷ Note that such decline can, in turn, be seen as an expression of the ‘secular stagnation’ as referred by Summers (2016). I will come back to this issue.

¹⁸ See details here: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940.

EU; an asymmetric shock from a sectoral (industry) point of view; a simultaneous shock upon demand and supply.¹⁹ Therefore, the challenge is new and even more complex: a smart usage of European funds is now required through making them capable of simultaneously responding to the immediate effects of the crisis upon jobs and income and addressing long-term (potential) growth challenges. This is hence a multi-purpose plan combining short with long-term economic perspectives as a way to overcome the current crisis (Pisani-Ferry, 2020).

As noted in turn by Cabral (2021b), with this Recovery and Resilience Mechanism (RRM) the EU seems to have entered a new stage of its integration process, moving on from a national to a (hybrid) European borrowing model. The RMM assigns the EC full borrowing capacity in order to make it able to finance its own expenditures, those contained in the package, grants and loans to be provided to Member States. In a pioneering fashion, the EC is allowed to raise a financial liability to be later on supported by its own tax resources, either the existing ones (e.g. GNI resource) or those to be created (e.g. digital and CO2 emissions taxes). By entering in the debt/bond markets the EC is borrowing on behalf of itself- acting as a ‘quasi-sovereign’ entity, different from Member States from a legal and accounting point of view- in short, as a new ‘sovereign’ centre for debt raising allocation. At the same time, this gives rise to a new European risk premium, partially replacing national risk premia in those debt/bond issuance processes (Cabral, 2021b). The financing model behind the RRM can hence be described as an embryo of a pure federal model – in the budgetary/fiscal domain – that which will be materialized with the creation of a true European Treasury (*Idem*, 2021b).

3.2.2 The purchase of sovereign assets and the effects of monetary policy decentralization: a constrained risk-sharing effect

In the beginning of the COVID-19 crisis, the ECB launched the pandemic emergency purchase programme,²⁰ a decisive initiative that helped to prevent the increase of 10-year bond interest rate spreads in the EMU, an increase that could have had dramatic effects especially in the most highly indebted economies.

With this programme (that should be added to the on-going assets purchase programmes adopted after the sovereign debt crisis), it became important to know its impact upon ECB and NCB balance sheets (see *supra* subsection 2.2.). This issue can be analysed according to two different perspectives and in both of them one can verify that the abovementioned monetary

¹⁹ As mentioned by Pisani-Ferry (2020), “the pandemic shock can be characterized as a combination of *lockdown shock* affecting simultaneously supply and demand in specific sectors, a resulting *demand shock* affecting other sectors not directly hit by the crisis, and a *reallocation shock* that will gradually trigger a transfer of resources across sectors, regions and possibly countries” .

²⁰ As noted by Pichet (2020), after the COVID-19 crisis, the ECB had decided to add to the 350 billion euros of the Public Sector Purchase Programme (launched in 2014) with the new, much more ambitious programme, known as the Pandemic Emergency Public Purchase of 750 billion euros in March 2020, plus a further 600 billion euros in June 2020.

policy decentralization in favour of the Eurosystem NCBs – which is partially determined as we saw by the disjointed monetary and fiscal sovereignties – ends up by constraining risk-sharing effects that should be the major outcome of the non-conventional monetary policy in itself.

According to the former perspective – that considers central bank balance sheets and the registered assets –, as noted by Kyriakopolou and Ortlieb (2021), while QE has created some risk-sharing as reflected in the ECB's holdings and NCB supranational debt holdings, the same QE has created a potential sovereign-NCB nexus, a national bias that can become more dangerous the riskier the assets involved are. In fact, NCBs have accumulated vast portfolios of government debt issued by their own sovereign- roughly 92% of public sector debt purchased by the Eurosystem, with the remaining 8% held by the ECB (Kyriakopolou and Ortlieb, 2021).²¹

The other perspective considers financial flows between these different institutions in the Eurosystem. NCBs (and the ECB to a lesser extent) are recipients of interest payments from governments on their sovereign debt holdings (*Idem*, 2021). In turn, NCBs can benefit with dividends (*supra* subsection 2.2) or incur losses related to monetary operations, the distribution of which is made in accordance with the respective ECB's capital key. The occurrence of losses, the risk of which may have been amplified by QE itself, can affect the Eurosystem's profitability and ultimately central banks' capital, leading to the undesirable and dangerous outcome of a central bank operating with negative equity. This outcome can be problematic in case of (abrupt) normalization of monetary policy (a modification one should expect given the recent developments in inflation – e.g. supply-side driven inflation, caused mostly by the increase in energy and commodity prices in the course of post-pandemic economic acceleration²²).

In this respect, one should be aware that QE has shown new interactions between monetary and fiscal policies, given the mutual positive externalities verified. So, in the same way expansionary monetary policy creates space for fiscal policy, by reducing borrowing costs, fiscal policy is also expected to create space for monetary policy, providing a fiscal backstop and therefore internalizing the risks and costs of an ultra-low interest rate environment (Bartsch *et al.* 2020, p. 56). In particular, this backstop protects the central bank from having to run with thin or negative capital in the event it incurs large portfolio losses from its monetary operations; such insurance thus preserves the central bank's independence and credibility by enabling the significant risk-taking inherent to unconventional monetary operations (Bartsch *et al.* 2020, p. 55). However, if this is true, it should also be highlighted that such risk-sharing

²¹ In turn, private sector debt purchased as part of these programmes is held by the ECB (Kyriakopolou and Ortlieb, 2021).

²² The main question for policy makers (starting with the ECB) is to know whether this is a temporary or more permanent development. If temporary, as stressed so far by the ECB's governing structure, the rise in inflation will be accommodated by the medium-term inflation targeting strategy implemented by the central bank.

mechanism is still clearly decentralized- and for this reason it becomes limited-, since such a fiscal backstop provided to NCBs will mostly be given by national fiscal authorities of each of the Member States and not by a single Treasury of the Union, as one would expect to find in a single and centralized monetary policy.

To sum up, both in the light of the first perspective – a central bank balance sheet – and of the second – financial flows between the ECB and NCBs- one can denote the effects of the disjointedness between monetary and fiscal policies in the functioning of the Eurosystem.



4. The difficult intersection between monetary and fiscal policy in the E(MU): proposals for debt monetization after the pandemic

4.1 Debt monetization²³: seminal proposals of ‘helicopter money’ and breaking through secular stagnation (in the aftermath of the sovereign debt crisis)

Despite the immediate and front-loaded political response to the pandemic at the EU level, both in the monetary and fiscal sides, some have argued that this would not be enough to cope with its destructive economic effects. More intense and heterodox responses would in this case be required. Galí (2020) for example considered that the time for helicopter money had come. The idea is not new, however. Indeed, one can find the proposal for helicopter money in the seminal contribution of Friedman (1969) where he advocated what would be coined by Bernanke (2016) as the ‘people’s QE’, in the following famous parable: “Let us suppose now that one day a helicopter flies over this community and drops an additional \$1,000 in bills from the sky, which is, of course, hastily collected by members of the community. Let us suppose further that everyone is convinced that this is a unique event which will never be repeated” (Friedman, 1969).

Bernanke (2002, 2016) himself, inspired by this idea, suggested a somewhat different form of ‘helicopter money’ – a Money-Financed Fiscal Programme, MFFP, that would also be known as ‘helicopter Ben’.²⁴ So, unlike the initial Friedman (1969) version, in Bernanke’s (2002, 2016) version the idea was not to drop money directly into citizens’ pockets but instead to promote an expansionary fiscal policy to be financed by a permanent increase in the stock of money (Bernanke, 2016). In his opinion, people’s QE faces a legitimacy problem, since it should not be the central bank (a non-elected institution) to decide whether and how to drop money into

²³ Here I use a broad definition of debt monetization, considering it as a way to transform high-interest government debt into low-interest rate reserves, that is, converting debt into money. It can be done either *ex ante*, for example by financing expenditure through the printing of money (e.g. helicopter money) or on an *ex post* basis, notably through debt cancellation (or conversion).

²⁴ Note that the name of the author, also former Governor of the Fed, is Ben Bernanke.

citizens' pockets, a decision that would implicitly translate into a tax reduction. Such a decision should be taken not by the central bank but by the political representatives of the people and, firstly, the national parliaments. At the same time, Bernanke (2016) recognizes that the option to use money finance might be a 'slippery slope' for legislators, who might be tempted to use it to facilitate spending or tax cuts when such actions no longer make macroeconomic sense. This means that the printing of money should always be seen as a last resort solution, to be used only when all the other monetary and fiscal policy tools tend to fail.

It should also be noted that the helicopter money proposal as reconsidered by Bernanke (2016) after the financial and sovereign-debt crisis can be justified by the risk of deflation that several economies – including in Europe – were about to face at the time. This could indeed be seen as an ultimate resort when monetary policy was reaching the so-called 'zero lower bound'²⁵ and its effectiveness was being put in jeopardy. In fact, "once the nominal interest rate is at zero, no further downward adjustment in the rate can occur, since lenders will not accept a negative nominal interest rate when it is possible instead to hold cash" (Bernanke, 2002).²⁶ Besides, the economic and social problems (from a redistributive point of view) posed when the nominal interest rate reaches zero are serious: in this case, the real interest rate paid by borrowers equals the expected rate of deflation, however large that may be (*Idem*, 2002).²⁷ Ultimately, in a period of severe deflation, the real cost of borrowing becomes prohibitive (*Ibidem*).

However, in recent decades the real interest rate itself – defined as the equilibrium real rate of return of a safe asset (Bartsch *et al.* 2020, p. 86) - has exhibited a downward path. Several reasons of a financial nature can explain such a trend, the most important being the already mentioned scarcity of safe assets in the face of a global saving glut (Bartsch *et al.* 2020, pp. 86-87). However, beyond financial reasons, there are economic and deeper motives – indeed, a low real interest rate is a 'sign of economic malaise' (*Idem*, 2020, p. 86) or an expression of secular stagnation (Summers, 2016). Those deeper reasons have been summarized by Zettelmeyer (2017, p. 160): *i)* low productivity growth; *ii)* expected ageing – increasing savings under pension plans and yield compression; *iii)* debt overhang.

25 See also in this regard Buiter (2014) and Turner (2016, pp. 218-222).

26 Bartsch *et al.* (2020, p. 12), explain in turn that cash – which carries zero nominal interest – constrains central banks' choice of policy rates as they cannot go far into negative territory without creating an arbitrage opportunity. Moreover, as also noted, the insurance and storage costs of holding large amounts of cash imply that the effective lower bound can be significantly below zero – by up to 75 basis points. Finally, the same authors stress that such constraint could be softened or eliminated by restricting the use of cash and switching to digital money transactions. This latter issue is crucial, perhaps the decisive one, to know what in the near future will be the role of the central bank as a printing of money institution (of which type of money) and the relationships between that money creation power and the transmission mechanism of the monetary policy, given its effects upon the economy and considering in particular its relationship with fiscal policy.

27 Recall, from the Fisher equation, that the nominal interest rate is equal to the sum of the real interest rate and the inflation rate.

Excess savings (due to precautionary reasons) mean low money demand, preventing savings from being converted into investment. A plausible cause can be described as a temporary (but long lasting) maladjustment between innovation and investment. The world economy, in recent decades facing the transition from the third to the fourth Industrial Revolutions (that is, the transition from the digital to the Artificial Intelligence Revolutions) has suffered from a mismatch between the ‘creative destruction’ caused by these new technologies and the massification of good business opportunities. Hence, it can be stressed that while these new disruptive technologies do not transform into massified production subject to stronger market competition and capable of responding to new effective consumption needs (e.g. the usage of robots in a massive way by firms and households) the incentive for investment will be mild (indeed, the same also happens with the ‘green’ investment related to climate change transition).

Indeed, in Europe, if one considers the policy goals underlying both the RRM and the new Multiannual Financial Framework 2021-27, secular stagnation problems will be solved precisely through reforms related to these technological and climate transitions. Overcoming the devastating effects of the COVID-19 crisis will simultaneously imply a true structural leap, after which European economies will be pushed to a more modernized and higher-valued stage of production and technology.

4.2. Debt monetization and the intersection between monetary and fiscal policies in response to the COVID-19 crisis in the context of disjointed sovereignties

Recall, as previously mentioned, that in the context of this pandemic some have pleaded for an even more active role for monetary policy. This was the case with Gali (2020), for whom “central banks have the ability to create money in the form of currency or, more relevantly, a credit to an account held at the central bank (...) In the current context, the central bank could credit the government’s account (or governments, in the case of the ECB) for the amount of the additional transfers and for the duration of the programme. That credit would not be repayable, i.e. it would amount to a transfer from the central bank to the government. From an accounting viewpoint, it would be captured by a reduction in the central bank’s capital or by a permanent annotation on the asset side of its balance sheet. Thus, it should not have an impact by itself on the central bank’s profits which are periodically transferred to the government, especially if the interest rate on reserves were to remain at zero. Note that such a transfer from the central bank to the government would be equivalent to a commensurate purchase of government debt by the central bank, followed by its immediate writing-off, thus no longer having an impact on the government’s effective debt liabilities.” From these words the two basic features of Gali’s (2020) helicopter money solution may be inferred: firstly, the model proposed is closer to Bernanke’s (2016) model of MFFP than that of Friedman’s (1969), the people’s QE. Secondly, this proposal would in practical terms correspond to a permanent public debt held by the central bank (typically, a debt monetization process) followed by its immediate cancellation, thereby affecting the central bank’s balance sheet and ultimately its capital.

Not far from this is the recent proposal for the cancellation of ECB debt made by the so-called ‘more than hundred economists’ (with Thomas Piketty at the head), which in turn had received some prior inspirational sources. Among these sources, the proposal made in the aftermath of the sovereign-debt crisis should be recalled, known by the acronym PADRE (*Politically Acceptable Debt Restructuring in the Eurozone*) and presented by Paris and Wyplosz (2014).²⁸ In turn, immediately after the outbreak of the pandemic, Vihriälä (2020) had also proposed the conversion of a fraction of the sovereign debt held by the ECB into perpetuity with zero coupon. This conversion was to take place in relation to the capital key, therefore avoiding moral hazard. Based on this background, the ‘more than hundred economists’ therefore advocated the cancellation of the public debt held by the ECB, starting by highlighting the huge amount of debt held by the ECB, corresponding to around 25% of the EMU countries’ public debt.²⁹ Debt cancellation would, in their opinion, have important effects from an economic and social point of view, since countries could use these funds to invest in environmental and social reconstruction, suitably repairing the social, economic and cultural damage of the crisis. In addition, this measure would prevent some sort of fiscal austerity in the near future (e.g. tax increases).³⁰

The criticisms of the idea of debt cancellation in the EMU usually concern feasibility, legal support, convenience and adequacy. As noted by Jourdan (2020), such a solution, although technically feasible, could be considered legally impossible (carrying an implicit violation of Article 123 of the Treaty on the Functioning of the European Union) and, above all, it would be politically complicated. Others stress the overall economic consequences of such a measure, in particular the resumption of inflation (Pichet, 2020), which could ultimately put at the stake the ECB’s credibility and the credibility of the euro itself. Finally, De Grauwe (2021) questions such a proposal with the argument of its inconsequential nature: from an economic point of view, a central bank’s purchase of government bonds is equivalent to debt relief granted to the government.³¹

28 This would involve the conversion of ECB government debt holdings into zero interest perpetuities to be held permanently on the balance sheet, in exchange for a permanent reduction in the transfer of ECB profits to governments in proportion to the effective debt cancellation. Such debt restructuring would generate sufficient fiscal space to allow governments to run large fiscal deficits if needed without the risk of triggering a debt crisis. (Paris and Wyplosz, 2014; Gali, 2020).

29 As noted also by Pichet (2020), the ECB now holds more than 20% of the eurozone’s public debt and its balance sheet stands at 50% of GDP. This is significantly more than that of the Fed at 33% of US GDP.

30 See the news here: https://en.econostrum.info/A-hundred-economists-call-on-the-ECB-to-cancel-the-public-debts-it-holds_a889.html.

31 Note, as a final remark (from a theoretical point of view), that the turning of monetary policy actions into a quasi-fiscal policy, in the need of debt monetization, implicitly support the Fiscal Theory of the Price Level (FTPL), pioneered for example by Sims (1994). In this regard, Afonso *et al.* (2019) and Afonso and Sousa (2021), discuss the interaction between monetary and fiscal policy in the European Union. They found a relation of substitutability between monetary and fiscal policies, assuming the Central Bank an active role in the case of high levels of debt.



5. Conclusion

The use of the printing of money as a form of expenditure and/or of debt financing is a last resource solution, only considered in situations of severe crisis or war and when all the rest seems to have failed. Macroeconomic theory – mainly due to monetarist insight – warns us about the risks associated with debt monetization, among which and the most severe, is the risk of hyperinflation. Be that as may, unlimited printing of money is unsustainable not only internally, due to the said risk of (hyper)inflation, but also externally, due to the pressure on the depreciation of domestic currency, ultimately putting into jeopardy the credibility of the currency itself. Capital outflows associated with the currency depreciation would in turn amplify this result. It is true that the value of Money depends on some form of rarity, and so unless that money/currency benefits from an ‘exorbitant privilege’ (which only happens in the case of the dollar), it is not sustainable for a sovereign country (with an open economy) to live with permanent or recurrent processes involving the printing of money. Underlying such a remark is the Metallist conception of money, for which this power exists but which is not desirable nor even necessary, at least in normal circumstances (Goodhart, 1998). We could say this the other way around, stating that such power should not be exerted, *eppùr si muòve!*

Currently, we may verify that the strong fiscal stimulus packages adopted in the aftermath of the COVID-19 crisis – with an emphasis on the Biden Plan³² - will in principle be financed by tax revenues, that is, fiscal policy measures even if conveniently accommodated by monetary policy (Sheiner and Wessel, 2020; Cheng *et al.* 2021)³³. However, the possibility of financing this expansionary fiscal stimulus with the printing of money exists and this can be exerted as in other moments (current high debt overhang can create an additional pressure for that). Indeed, resorting to helicopter money can occur, a hypothesis that would be tolerated given the incomparable strength of the dollar as an international currency.³⁴

32 See Blanchard (2021) on the multiplier effects of the stimulus measures contained in this Plan.

33 Regarding the risk of inflation returning as a consequence of this policy stimulus, see the different opinions of Demertzis, (2021), Landau (2021) and Weber (2021). More recently, in the post-pandemic environment, other causes can be added to recent price developments, coming mostly from energy and commodity prices, and also to difficulties and disruption both in global and regional supply channels. See in this regard Martin (2021).

34 However, Rogoff (2021) has recently highlighted the dollar’s fragile hegemony.

In the case of the EMU, even if confronted with a legacy of high debt levels in the post-COVID scenario, such a possibility is much more remote and so proposals for helicopter money or debt cancellation (in sum, forms of debt monetization) will inevitably face political resistance. Besides all the other risks linked to the printing of money, the major requisite to make this operational is simply not there: the perfect matching between monetary and fiscal sovereignties, ensuring that monetized debt is effectively ‘the’ debt of the sovereign.³⁵ The lack of this operational requisite makes it hard to admit such a last resource solution even in severe crisis situations. However, paradoxically or not, this additional obstacle can possibly help to prevent future inflationary pressures in the EMU, thereby helping to cement the credibility of the euro and its status as an international currency.

³⁵ This would happen, for instance, if the new debt raised by the EC to finance the RRM (*supra* subsection 3.2.1) on behalf of the EU- the new ‘fiscal sovereign’- would be afterwards monetized by the ECB.



References

AFONSO *et al.* (2019) Interactions between monetary and fiscal policies, *Journal of Applied Economics*, 22:1, 132-151.

AFONSO A. and SOUSA, A. (2021): The Interplay between Monetary and Fiscal Policies in the EU. REM Working Paper 0153-2020. Available at SSRN: <https://ssrn.com/abstract=3768613>

ARSLANALP, S. *et al.* (2020). “Concepts, Definitions and Composition”, S.A. Abbas, A. Pienkowski and K. Rogoff (eds.), *Sovereign Debt – A Guide for Economists and Practitioners*, Oxford University Press: Exford, pp. 56-101.

BALDWIN, R. *et al.* (2015). “Rebooting the Eurozone: Step I – agreeing a crisis narrative”, CEPR Policy Insight No. 85. Available at: <https://voxeu.org/sites/default/files/file/Policy%20Insight%2085.pdf>

BARTSCH, E. *et al.* (2020). *It’s all in the mix – How monetary and fiscal policies can work or fail together*, Centre for Economic and Policy Research, Geneva Reports on the World Economy, 23.

BERNANKE, B. (2002). “Deflation : Making Sure ‘It’ Doesn’t Happen Here”. Available at: <https://www.bis.org/review/r021126d.pdf>.

BERNANKE, B. (2016). “What tools does the Fed had left? Part 3: Helicopter money”. Available at: <https://www.brookings.edu/blog/ben-bernanke/2016/04/11/what-tools-does-the-fed-have-left-part-3-helicopter-money/>

BIJLSMA, I. and LUKKEZEN, J. (2012). “Target 2 of the ECB vs. Interdistrict Settlement Account of the Federal Reserve”. Available at: <https://www.bruegel.org/2012/03/target-2-of-the-ecb-vs-interdistrict-settlement-account-of-the-federal-reserve/>.

BLANCHARD, O. (2021). “In defense of concerns over the \$1.9 trillion relief plan”. Available at: <https://www.piie.com/blogs/realtime-economic-issues-watch/defense-concerns-over-19-trillion-relief-plan>

BRUNNERMEIER, M. K. *et al.* (2012). “European Safe Bonds (ESBies)”, Available at: <http://personal.lse.ac.uk/vayanos/euonometrics/esbies.pdf> .

BUITER, W. H. (2014). “The Simple Analytics of Helicopter Money: Why it Works – Always”. Available at: https://www.researchgate.net/publication/263276464_The_Simple_Analytics_of_Helicopter_Money_Why_It_Works_-_Always

CABALLERO, R. and FARHI, E. (2014). “On the Role of Safe Assets Short-ages in Secular Stagnation”. Available at: <https://voxeu.org/article/role-safe-asset-shortages-secular-stagnation>.

CABRAL, N. C. (2021a). *The European Monetary Union After the Crisis – From a Fiscal Union to a Fiscal Capacity*, London and New York: Routledge.

CABRAL, N. C. (2021b). “Borrowing in the European Union: from a pure national model to the antechamber of a European fiscal federal solution”, *Journal of European Integration*. Available at: <https://doi.org/10.1080/07036337.2021.1881499>

CHENG, G. *et al.* (2021). “What’s the Fed doing in response to the COVID-19 crisis? What more could it do?”. Available at: <https://www.brookings.edu/research/fed-response-to-covid19>

CROCKER, G. (2020). *Basic Income and Sovereign Money*, Palgrave, Macmillan: Cham, Switzerland

De GRAUWE, P. (2014). *Economics of Monetary Union*, 10th. Ed., Oxford: Oxford University Press.

De GRAUWE, P. (2021). “Debt Cancellation by the ECB: Does it make a difference?”. Available at: <https://blogs.lse.ac.uk/euoppblog/2021/02/15/debt-cancellation-by-the-ecb-does-it-make-a-difference/>

De GRAUWE, P. and MOESEN, W. (2009). “Gains for all: Proposal for a common Eurobond”. Available at: <https://www.ceps.eu/ceps-publications/gains-all-proposal-common-eurobond/>

DELPLA, J. and WEIZSÄCKER, J. von (2010). “The Blue bond proposal”, Bruegel Policy Brief, Issue 2010/03, May 2010.

DEMERTZIS, M. (2021). “Continuing fiscal support and the risk of inflation”. Available at: <https://www.bruegel.org/2021/02/continuing-fiscal-support-and-the-risk-of-inflation/>.

DRÈZE, Jacques H. and DURRÉ, Alain (2013). “Fiscal integration and growth simulation in Europa”, Discussion Paper 2013/13. Louvain-La-Neuve: Center for Operations Research and Econometrics.

ECB (2011). *The monetary policy of the ECB*, European Central Bank.

ENDERLEIN, Henrik *et al.* (2013). “Blueprint for a Cyclical Shock Insurance in the Euro Area”, Studies & Reports, 100, Notre Europe, Jacques Delors Institute.

- ESRB (2018). “Sovereign bond-backed securities: a feasibility study”, Vol. I: Main findings, ESRB.
- EUROPEAN COMMISSION (2011). *Green Paper on the Feasibility of Introducing Stability Bonds*, COM(2011), 818 final.
- EUROPEAN COMMISSION (2017). *Feasibility and Added Value of a European Unemployment Benefit Scheme – Main findings from a comprehensive research project*, Brussels: European Commission.
- FELBERMAYR, G. *et al.* (2017). “The German current-account surplus: Causes and consequences”, Thorsten Beck and Hans-Helmut Kotz (eds.), *Ordoliberalism: A German oddity?*, A VoxEU.org Book, London: CEPR Press, pp. 187-199.
- FERRER, J. N. *et al.* (2016). *Study on the Potential and Limitations of Reforming the Financing of the EU Budget*, Expertise Commissioned by the European Commission on behalf of the High Level Group in Own Resources under service contract N.º 14/PO/04, Final Version, 3 June 2016.
- FRIEDMAN, M. (1969). *The Optimum Quantity of Money and Other Essays*, MacMillan: Chicago.
- GALÍ, J. (2020). “Helicopter money: The time is now”. Available at: <https://voxeu.org/article/helicopter-money-time-now>.
- GOODHART, C. A.E. (1998). “The two concepts of money: implications for the analysis of optimal currency areas”, *European Journal of Political Economy* 14(1998), pp. 407-432.
- GROS, Daniel (2017). “The Single Monetary Policy and its decentralized implementation: An assessment”, CEPS Policy Insights, No. 2017/36, September 2017.
- HUBER, J. (2017). *Sovereign Money – Beyond Reserve Banking*, Palgrave, Macmillan: Cham, Switzerland.
- ISSING, O. (2020) “The MMT Myth”. Available at: <https://www.project-syndicate.org/commentary/mmt-myth-threat-to-central-bank-independence-by-otmar-issing-2020-11?barrier=accesspaylog>.
- JOURDAN, S. (2020). “ECB deb cancellation: a last resort, not a first-best strategy”. Available at: <https://www.positivemoney.eu/2020/12/ecb-debt-cancellation-not-best-strategy/>
- KELTON, S. (2020). *The Deficit Myth – Modern Monetary Theory and How to Build a Better Economy*, John Murray Publishers: UK.
- KNAPP, G. (1905). *The State Theory of Money*, Macmillan: London.
- KYRIAKOPOULOU D. and ORTLIEB, P. (2021). “Does central bank capital matter?”. Available at: <https://www.omfif.org/2021/01/does-central-bank-capital-matter/>.
- LANDAU, J.-P. (2021). “Inflation and the Biden stimulus”. Available at: <https://voxeu.org/article/inflation-and-biden-stimulus>.

LERNER, E. M. (1954). “The monetary and fiscal programs of the Conference Government, 1861-65, *Journal of Political Economy* 62, pp. 506-522.

MANKIW, N. G. (2005). *Macroeconomics*, 7th ed., International Edition, Worth Publishers: New York.

MARTIN, F. M. (2021). “What are the Risks for Future Inflation?”, Federal Reserve Bank of St. Louis Blog. Available at: <https://www.stlouisfed.org/on-the-economy/2021/october/what-risks-future-inflation>.

McNAMARA, K. R. (2015). “The Forgotten Problem of Embeddedness”, Matthias Matthijs and Mark Blyth Eds.), *The future of the Euro*, Oxford University Press, pp. 21-45.

MUNDELL, R.A. (1961). “The theory of optimum currency areas”, *American Economic Review* 51, pp. 657-664.

PARIS, P. and WYPLOSZ, C. (2014). *PADRE: Politically Acceptable Debt Restructuring in the Eurozone*, Geneva Special Report on the World Economy 3, ICMB and CEPR.

PICHET, E. (2020). “The dangerous utopia of the ECB’s cancellation of public debts”. Available at: <http://www.publicdebtnet.org/pdm/ECONOMIC-ANALYSES-AND-POLICIES/Economic-Policies/Documents/Document-160920201017.html>

PISANI-FERRY, J. (2020). “European recovery funds: strings attached, but not tied up in knots”, *Policy Contribution 2020/19*, Bruegel.

RINALDI, D. and FERRER, J. N. (2017). “The European Fund for Strategic Investments as a New Type of Budgetary Instrument”, CEPS Research Report, No 2017/07.

ROGOFF, K. (2021). “The Dollar’s Fragile Hegemony”. Available at: https://www.project-syndicate.org/commentary/flexible-renminbi-could-threaten-global-dollar-hegemony-by-kenneth-rogoff-2021-03?a_la=english&a_d=60633bfb117a782a6c9b43d2&a_m=&a_a=click&a_s=&a_p=%2Farchive&a_li=flexible-renminbi-could-threaten-global-dollar-hegemony-by-kenneth-rogoff-2021-03&a_pa=archive-results&a_ps=&a_ms=&a_r=&barrier=accesspaylog.

SIMS, C. A. (1994): “A simple model for study of the determination of the price level and the interaction of monetary and fiscal policy”, *Economic Theory* 4, 381-399.

SHEINER, L. and WESSEL, D. (2020). “Where is the US government getting all the money it’s spending in the coronavirus crisis?”. Available at: <https://www.brookings.edu/blog/up-front/2020/03/25/where-is-the-u-s-government-getting-all-the-money-its-spending-in-the-coronavirus-crisis/>.

STEINBERG, P. (2017). “Global imbalances – coordinating with different script books”, Thorsten Beck and Hans-Helmut Kotz (eds.), *Ordoliberalism: A German oddity?*, A VoxEU.org Book, London: CEPR Press, pp. 167-180.

STIGLITZ, Joseph (2016). *The Euro – How a Common Currency Threatens de Future of Europe*, W.W. Norton & Company: New York and London.

STIGLITZ, Joseph (2017). “The Fundamental Flaws in the Euro Zone Framework” Nazaré da Costa Cabral *et al.* (eds.), *The Euro and Crisis – Perspectives for the Eurozone as a Monetary and Budgetary Union*, Switzerland: Springer, pp. 11-16.

SUMMERS, L. H. (2016). “The Age of Secular Stagnation”. Available at: <http://larrysummers.com/2016/02/17/the-age-of-secular-stagnation/>.

TCHERNEVA, P. R. (2020). *A Job Guarantee*, Polity Press: Cambridge.

TURNER, A. (2016). *Between Debt and the Devil – Money, Credit, and Fixing Global Finance*, Princeton University Press: New Jersey.

VIHRIÄLÄ, V. (2020). “Make room for fiscal action through debt conversion”. Available at: <https://voxeu.org/article/make-room-fiscal-action-through-debt-conversion>.

VON HAGEN, J. and WYPLOSZ, C. (2008). “EMU’s decentralized system of fiscal policy”, *European Economy Economic Papers* 306, February 2008.

WEBER, A. A. (2021). “Will Inflation Make a Comeback?”. Available at: <https://www.project-syndicate.org/commentary/why-covid19-pandemic-could-lead-to-higher-inflation-by-axel-weber-1-2021-02?barrier=accesspaylog>

ZETTELMAYER, J. (2017). “German ordo and Eurozone reform: a view from trenches”, Thorsten Beck and Hans-Helmut Kotz (Eds.), *Ordoliberalism: A German oddity?*, A VoxEU.org Book, London: CEPR Press, pp. 155-164.



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