

Is the COVID-19 crisis an opportunity to boost the euro as a global currency?

Grégory Claeys and Guntram B. Wolff

Executive summary

GRÉGORY CLAEYS (gregory.claeys@bruegel.org) is a Senior Fellow at Bruegel

GUNTRAM B. WOLFF (guntram.wolff@bruegel.org) is the Director of Bruegel

This note was prepared at the request and with the financial support of the Croatian Presidency of the Council of the European Union, as a background paper for discussion at the informal ECOFIN in Zagreb, which was cancelled because of the COVID-19 outbreak and implementation of containment measures. The authors are grateful to Aliénor Cameron and Youssef Salib for excellent research assistance. They also thank their research peers for their input.

- **THE EURO BECAME** an international currency when it was created two decades ago. However, the euro's internationalisation peaked as early as 2005 and it was never comparable to the US dollar. Its international status declined with the euro crisis. Faced with a US administration willing to use its hegemonic currency to extend its domestic policies beyond its borders, Europe is reflecting on how to promote actively the internationalisation of the euro, to help ensure its autonomy. But promoting a more prominent role for the euro is difficult and would involve far-reaching changes to the fabric of the monetary union.
- **HISTORICALLY, COUNTRIES ISSUING** dominant currencies have been characterised by: a large and growing economy, free movement of capital, a willingness to play an international role, stability, an ability to provide a large and elastic supply of safe assets, developed financial markets, and significant geopolitical and/or military power. The monetary union does not meet all these criteria.
- **THE ONLY WAY** for the euro to play a major international role is to improve the institutional setup of the monetary union. First, the supply of euro-denominated safe assets from the monetary union should be increased. To avoid a COVID-19 depression, euro-area countries have increased massively the supply of their debt securities in the last two months. With its new purchase programme, the European Central Bank has ensured that euro-area sovereign bonds retain their safe asset status. Decisions by the Eurogroup also increase the supply of common European safe assets. The European Commission's proposal to issue up to €750 billion in EU debt to finance its recovery plan is a step in the right direction
- **IN FEDERATIONS**, joint issuance typically goes hand-in-hand with federal and central control of spending and a strong grip on revenues. To be politically sustainable, similar central control would be needed in the EU. The treaty-based EU framework is the closest to fulfilling these criteria with political accountability through the European Parliament, political control via the Commission, and a court of auditors and an anti-fraud office, but ultimately the treaty base is insufficient for a true quantum leap.
- **IT IS ESSENTIAL** to ensure a strong recovery for all countries and thus make the euro area an attractive destination for investment. A strong recovery will also be fundamental to preserve or even improve the supply of safe assets, as growth is crucial for debt sustainability.

Recommended citation

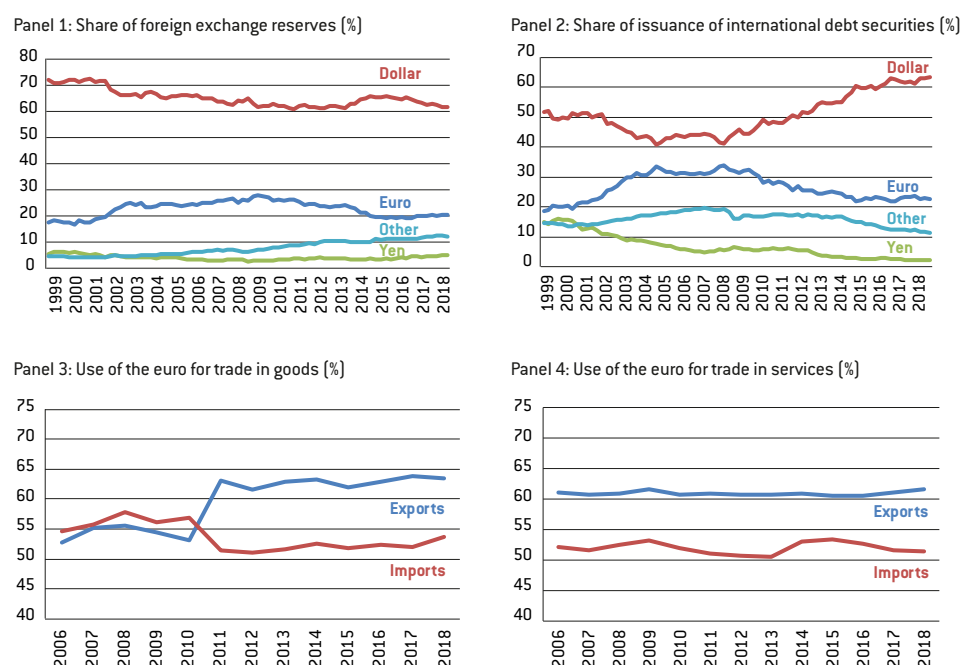
Claeys, G. and G.B. Wolff (2020) 'Is the COVID-19 crisis an opportunity to boost the euro as a global currency?' *Policy Contribution* 11/2020, Bruegel

1 Introduction

The euro was created two decades ago, and became immediately an international currency and the second most important currency on the global stage. This position was mostly inherited from the Deutschmark, reinforced by the other ten European currencies the euro replaced in 1999.

But what is an international currency exactly? It is a currency that fulfils the three classical functions of money at the international level: 1) the currency plays the role of unit of account in the international invoicing of goods, in international market prices, in the issuance of international bonds and in the pegs of other currencies with fixed or semi-floating exchange rate regimes; 2) it is a medium of exchange, ie it is used for payments in cross-border trade; and 3) it is a store of value at the global level, ie it is used as an investment/financing vehicle and as a reserve currency by central banks and public authorities from other jurisdictions. The euro fulfils these three roles, even if at a lower level than the US dollar, as it is commonly used globally as a reserve currency, a financing currency and an invoicing currency (Figure 1).

Figure 1: International functions of the euro



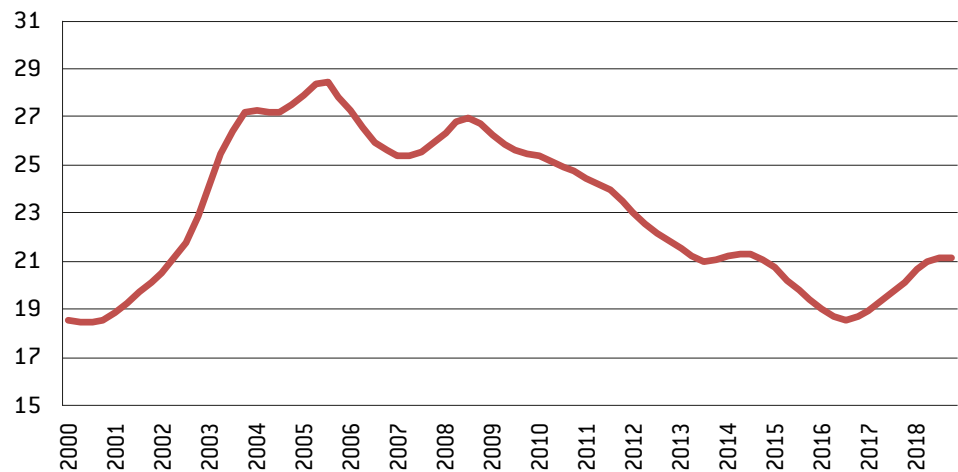
Sources: Bruegel based on IMF (panel 1), ECB (panels 2 to 4). Note: in panel 2, international debt securities are defined as securities issued in a currency other than that of the country in which the borrower resides.

However, the euro has never really come close to challenging the dominance of the US dollar, despite a belief in its early years that it might take over in the near future (see for example Mundell, 2000). On the contrary, the European Central Bank's own international-role summary index (Figure 2) suggests that the rise of the euro as an international currency peaked as early as 2005. Thereafter, its internationalisation went into reverse, with the euro crisis and the fear of a break-up of the euro-area, and the European currency has not since returned to its previous status.

As a result, the international monetary system is still characterised by the hegemony of the US dollar. Contrary to what one might expect, given the strong network effects related to currency use, natural monopolies are rare as far as international currencies are concerned, and the type of hegemony enjoyed by the dollar is not the norm from an historical perspective

(Eichengreen *et al*, 2018). Before the first world war, the international monetary system was multipolar, with three European currencies in close contention: British sterling, the German mark and the French franc. The interwar period was characterised by the duopoly of the dollar and sterling. A dollar monopoly took over only after the second world war and has persisted even though there are other international currencies, including the euro (preceded by the Deutschmark) and the yen.

Figure 2: International role of the euro summary index



Source: ECB. Note: the composite index is an arithmetic average of the shares of the euro at current exchange rates in stocks of international bonds, loans by banks outside the euro area to borrowers outside the euro area, deposits with banks outside the euro area from creditors outside the euro area, foreign exchange settlements, global foreign exchange reserves and share of the euro in exchange rate regimes globally. Data for 2016 is used for 2017 and 2018 observations for the share of the euro in exchange rate regimes globally.

The euro, therefore, is an international currency, but not all international currencies are alike (as noted by Cohen, 2019). Taxonomies of international currencies, such as that developed by Strange (1971), distinguish “*top currencies*” (or dominant currencies) from “*neutral currencies*”. While the dollar clearly falls into the first category, the euro would fall into the second category.

The main benefits – often dubbed ‘exorbitant privileges’ – of enjoying a dominant currency are well documented, in particular for the US. These include: the central bank’s seigniorage revenues arising from the significant holdings of cash abroad, lower yields enjoyed by the government thanks to the safety and liquidity premium (Krishnamurthy and Vissing-Jorgensen, 2012), an aggregate return on foreign assets superior to the cost of foreign liabilities (Gourinchas *et al*, 2010), lower transaction costs for the issuing state’s citizens and companies, a competitive advantage for domestic banks which issue international currency and, more generally, an additional geopolitical instrument for the issuing state and a way to ensure its financial and economic autonomy.

However, being a top currency can also carry costs. As the experiences of the global financial crisis and the current COVID-19 crisis show, the dominant currency needs to provide some form of insurance to the rest of the world in times of global stress. This takes two main forms. First, the appreciation of the dominant currency, related to the flight to liquidity and safety that take place during stress times, can lead to negative wealth effects for the issuing country, if debt is denominated in the dominant currency and the assets of the country are invested abroad in local currencies (Gourinchas *et al*, 2010). Second, to avoid the failure of the global financial system, the central bank issuing the dominant currency needs to play the role of international lender of last resort in stress times (mainly via currency swap lines with other central banks around the world), which could interfere with its domestic economic objectives.

These potential drawbacks of being the dominant currency explain why, in the past,

some countries, such as Germany, were reluctant to promote the internationalisation of their currencies, and actually tried to prevent it as much as possible. They feared it could weaken control over monetary policy or generate undesirable exchange rate volatility (Eichengreen *et al*, 2018). The euro area has to a great extent inherited this pre-euro German position and has not actively promoted an international role for the euro. The ECB in particular has adopted a relatively hands-off approach, neither promoting nor hindering the international status of its currency and mainly leaving it to market forces (and other central banks) to decide its fate, even if, more recently, it has adopted a more supportive approach.

Faced with a US administration less inclined towards multilateral solutions and willing to use its currency in a more explicit way to exert influence abroad and extend its domestic policies beyond its borders (for instance by forcing EU firms to cut ties with Crimea, Cuba or Iran, which are sanctioned by the US but not by the EU, or differently sanctioned by the US and EU; see Thompson Coburn, 2020), Europe is now reconsidering its neutral position. It has started thinking about how to promote actively the internationalisation of the euro to ensure its autonomy (European Commission, 2018). However, promoting an enhanced international role for the euro and challenging the dollar's dominance are not easy tasks and might involve some radical changes to the fabric of the monetary union.

2 Determinants of global currency status and prospects for the euro

Historically, countries issuing dominant currencies have been characterised¹ by:

1. The large size of their economy (in terms of both GDP and international trade);
2. Free movement of capital;
3. The willingness of their public authorities to play an international role;
4. Their stability, at all levels: monetary, financial, fiscal, institutional, political and judicial (including the rule of law and strong property rights);
5. Their ability to provide a large and elastic supply of safe assets;
6. The existence of developed – liquid and deep – financial markets;
7. Significant geopolitical and/or military power backed by a strong state.

How does the euro area fare with respect to these characteristics?

Thanks to its large economic base, the euro area easily fulfils the first criteria, and even though it is not the first global economic power, the monetary union represents one of the largest trading blocs in the world. The euro area also fulfils the second criteria, as free movement of capital is solidly entrenched in Article 63 of the Treaty on the Functioning of the European Union (TFEU). The willingness to play an international role (criteria 3) was previously not there, as the EU was not interested in promoting the internationalisation of its currency, but this has changed. The European Commission in 2018 launched an initiative to strengthen the international role of the euro, and the new Commission that took over in 2019 has stated its ambition for the EU to play a more strategic geopolitical role. The ECB is ready to support this objective, even if it considers that the main way to foster a stronger international role for the euro is to “*overcome the shortcomings in the design of [the] monetary union*” (Coeuré, 2019).

The stability criteria (4) is only partly met in the euro area. Despite missing repeatedly

¹ A summary of the literature on the determinants of international currency status can be found in Efstathiou and Papadia (2018).

since the global financial crisis its ‘below but close to 2 percent’ inflation target, the ECB has ensured price stability in the euro area over the last two decades. Financial stability risks, after being at the root of the euro crisis, have been reduced since, in part thanks to the creation of the banking union (even if it is still incomplete). And most euro-area countries fare pretty well in terms of judicial and political stability (despite some setbacks in recent years). However, the flaws in the architecture of the monetary union have sometimes led investors to doubt its long-term durability or the irreversible participation of some countries. These doubts came to the fore especially during the 2010-2012 euro crisis, but redenomination risks have periodically resurfaced since then, notably after the elections of populist parties in Greece in 2015 and Italy in 2018. Finally, fiscal stability is more complex in the euro area than in other jurisdictions, including the US, UK and Japan, given the fragility of sovereign debt in a monetary union. This forced European authorities to innovate during the crisis and use a combination of new tools (the European Stability Mechanism and the ECB’s Outright Monetary Transactions) to provide a monetary backstop to governments compatible with the legal and political constraints of the monetary union, in order to avoid liquidity crises in euro-area sovereign debt markets, while providing an incentive for countries to have sound public finances.

However, despite a significant overall increase in the issuance of debt securities by euro governments, the euro area was unable to provide a large and elastic supply of safe assets (criteria 5) during the euro crisis and its aftermath. A safe asset is a liquid asset that credibly stores value at all times, in particular during adverse systemic crises (Caballero *et al*, 2017). There is high demand for this type of asset: from savers to store their wealth for the future, from domestic financial institutions to satisfy capital requirements, liquidity ratios and more generally to post collateral in financial operations, and from abroad, from emerging market economies looking for a way to invest their foreign exchange reserves. Sovereign debt securities play this role, in advanced countries in particular, thanks to their high liquidity and simplicity – as long as public finances are considered sound by the markets.

From the creation of the euro to the euro crisis, sovereign bonds from euro-area countries enjoyed this status, but several of them lost it during the euro crisis. Because of ratings downgrades at one end of the spectrum, and lower issuance of debt at the other end, the stock of safe assets issued in the euro area by governments and by supranational or international entities (ie EU, ESM, European Financial Stability Facility and European Investment Bank) decreased significantly. The stock of AAA-rated debt securities from the euro area declined from around 40 percent of its GDP in 2008 to around 20 percent in 2018 (Figure 3). Meanwhile, during the same period, the supply of AAA-rated US Federal debt securities increased from about 65 percent of GDP to more than 100 percent.

As far as the development of financial markets is concerned (criteria 6), the comparison with the US is clearly not to the advantage of the euro area. The euro area’s capital markets are much less developed, less liquid and less deep than in the US. They are still heavily fragmented along national lines, despite the European Commission’s Capital Markets Union initiative (Sapir *et al*, 2018). Finally, even though the Commission under the leadership of Ursula von der Leyen considers itself a “*geopolitical Commission*”², the EU is still very far from being a geopolitical and, even less, a military power (criteria 7).

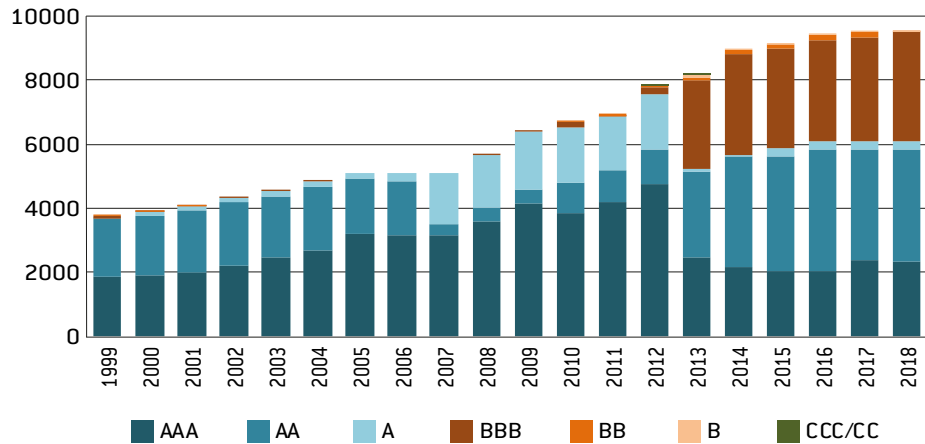
There is no shortcut to international status. The only way for the euro to play a major international role in the future is to improve the institutional setup of the monetary union in order to increase its stability and credibility, to complete the banking union, to make real progress on a capital markets union, and to increase the supply of safe assets. It is equally crucial to boost growth to make the euro an attractive currency to invest in, and to improve the prospects of individual countries so that their debt is considered safe (as productivity growth would also boost the debt sustainability of euro-area countries and their ratings). Finally, a less neutral attitude on the part of the ECB (for example, by offering easy currency

The euro area’s capital markets are much less developed, less liquid and less deep than in the US; they are still heavily fragmented along national lines

2 See https://ec.europa.eu/commission/presscorner/detail/en/IP_19_5542.

swaps to countries in which euro liquidity is important³) would help, as would progress on an EU external/defence policy and a more visible geopolitical role.

Figure 3: Supply of safe assets from the euro-area (€ billions)



Source: Bruegel based on Bloomberg for bonds issued by EFSF, EU, ESM and EIB, S&P for credit ratings and Eurostat for government debt securities. Note: includes bonds issued by the 19 euro-area countries, the European Financial Stability Facility, the European Union, the European Stability Mechanism and the European Investment Bank.

Current minor initiatives that have been put forward by the European Commission – including promoting the labelling of energy contracts and derivative clearings in euro, or encouraging the systematic use of the euro by institutions such as the EIB and the European Bank for Reconstruction and Development, or by third countries through diplomacy – are useful, but their impact should not be overestimated.

3 Promoting the euro in the midst of the COVID-19 crisis: increasing the supply of safe assets

To strengthen the euro as an international currency while mitigating the negative effects that the COVID-19 pandemic has had on the welfare of European citizens, two steps are crucial at the current juncture⁴. First, the supply of euro-area safe assets needs to be increased. Second, a strong recovery must be ensured, covering all countries and thus making the euro area an attractive destination for investment. A strong recovery, especially in weaker euro-area countries, will also be of fundamental importance to preserve or even improve the supply of safe government assets in the euro area, because growth is fundamental for the sustainability of debt.

The European Central Bank, the European Council and the Eurogroup have taken

³ In the COVID-19 crisis, the European Central Bank has played this role and has provided euros through swap lines to the Danish Central Bank since 20 March 2020, to the Croatian central bank since 15 April and to Bulgaria's central bank since 22 April.

⁴ Of course, it is important to highlight that these two steps are necessary, but not sufficient. Other steps are needed to transform the euro into a truly dominant currency, such as completing the banking union and making progress in building a capital markets union. In this paper, we focus on the steps that are most relevant currently during the pandemic.

To really strengthen the role of the euro, much larger joint debt issuance is needed; the borrowing to finance the direct crisis response and boost the recovery could be shared through the EU

major steps to ensure liquidity in sovereign bond markets and lower yields that support the recovery. The ECB's Pandemic Emergency Purchase Programme (PEPP) was appropriate in that regard, allowing governments to issue debt easily and thereby increase the supply of safe assets. The European Council and the Eurogroup have taken additional measures to buttress the situation. In particular, the Eurogroup agreed on 9 April 2020 to increase joint borrowing⁵. This newly created European debt, which could amount to €300 billion (€200 billion through the EIB and €100 billion through the new 'SURE' credit line (European instrument for temporary Support to mitigate Unemployment Risks in an Emergency), managed by the European Commission and guaranteed by member states to help countries finance temporary lay-off benefits), represents a jointly-issued safe asset. In addition, there could be further joint borrowing through the ESM, up to €240 billion, as also agreed by the Eurogroup. However, this number represents only a relatively small percentage of the total fiscal costs of the COVID-19 pandemic, and an even smaller percentage of total euro-area debt. As such, these initiatives are not game changers but only first steps in increasing the total supply of safe assets.

To really strengthen the role of the euro, much larger joint debt issuance is needed. To achieve this, the borrowing to finance the direct crisis response and boost the recovery could be shared through the EU. This is perfectly possible, as the European Commission's May 2020 proposal to issue temporarily €750 billion-worth of EU debt to finance its recovery plan shows (European Commission, 2020b). Since total government borrowing related to the crisis could easily exceed €1500 billion over only two years⁶, the adoption by the Council of the EU of the Commission's proposal would be an important step to increase significantly the supply of commonly-issued European safe assets.

However, providing funds from joint borrowing without any conditionality or any control on spending would raise moral-hazard concerns. In fact, in no existing federation is joint borrowing detached from control on spending and a strong grip on revenues. A separation of borrowing from spending and tax control would also not be desirable in the EU.

That is why we believe that the solution proposed by the European Commission to use the EU budget framework as a mechanism for joint borrowing⁷ and well-defined spending to achieve common objectives, is the right way to overcome these concerns. Significant joint borrowing by the EU, managed by the Commission and backed by increasing significantly the so-called headroom of the EU budget (ie additional resources the Commission can call on from member countries to service its debt, principal and interest, if a debtor defaults), can be used to increase the supply of European safe assets. The raised funds will be handed to member states similarly to EU budget funds, and will fulfil clear goals and be monitored and controlled by the European Commission. The advantages of this approach are clear:

- First, the EU budget has a strong legal base and a history that provides it with credibility;
- Second, decision making involves the European Parliament and thereby adds European-level democratic legitimacy;
- Third, the European institutions have institutions for monitoring and controlling spending, such as the European Court of Auditors and the European Anti-Fraud Office

5 See <https://www.consilium.europa.eu/en/press/press-releases/2020/04/09/report-on-the-comprehensive-economic-policy-response-to-the-covid-19-pandemic/>.

6 The European Commission's 2020 spring forecasts (https://ec.europa.eu/info/sites/info/files/economy-finance/ecfin_forecast_spring_2020_statist_annex_en.pdf) predicted a deficit for the euro area equivalent to 8.5 percent of GDP in 2020, and 3.5 percent in 2021.

7 Article 122 of the TFEU can be used to "grant [...] financial assistance [to a] Member State [...] seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control" (as was done in 2010 to create the European Financial Stabilisation Mechanism). However, reaching a significant size requires some financial engineering, either through member-state guarantees, as will be done for SURE (European Commission, 2020a) or by increasing significantly the EU budget 'own resources' ceiling, as suggested by the Commission for its recovery instrument (European Commission, 2020b).

(OLAF). And while not all spending is done in the right way, well defined audit processes ensure at least a minimum level of control.

Overall, such joint borrowing via the EU would have two additional main advantages. First, since this would be borrowing at a large scale, funding costs should be lower than the average funding costs for individual member countries. Second, and more importantly, such a European debt instrument would be politically easier for the ECB to buy than national debt, as possible fiscal risks related to the holding of national debt would be borne by the EU. Increasing the volume of European bonds available for purchase would also allow the ECB to significantly enlarge its asset-purchase programmes, without the usual political controversy surrounding purchases of national sovereign bonds. Nevertheless, the treaty limits how much EU debt can be issued. Ultimately, to create a fiscal union, a debate on the treaty foundations of the EU's monetary union is unavoidable.

Finally, the EU budget itself can also act as an insurance mechanism for EU countries. Countries that experience a strong negative shock to GDP should end up paying less into the EU budget, while they should receive more funds. For instance, if Italy's GDP falls more than other countries, Italy could shift from net payer to net recipient in the next EU budget cycle. In the 2014-2020 cycle, Italy contributed 0.23 percent of its GDP per year to the EU budget in net terms (Darvas, 2020). If in the next cycle it was to receive as much as Spain did – ie the equivalent of 0.18 percent of its GDP – this would be enough to cover the budgetary costs of its additional debt⁸.

4 Promoting the euro after the crisis: boosting growth through a European COVID-19 recovery programme

To strengthen the international role of the euro, an ambitious and strategic growth plan for the next decade is needed. Only if the EU is able to establish dynamic and vigorous economic growth after the current severe recession will there be a chance that its currency will be internationally attractive.

Policymakers must therefore think long-term and start planning a broad investment scheme to reboot the European economy once the coronavirus has been defeated. Why is a recovery plan needed? As the virus has spread rapidly across Europe and the world, it has become evident that a V-shaped economic recovery is unlikely. On top of the initial supply shock, this crisis is inevitably having second-round effects. Demand is quickly falling as consumers postpone or even cancel their consumption. As citizens worry about the future, they increase their precautionary savings.

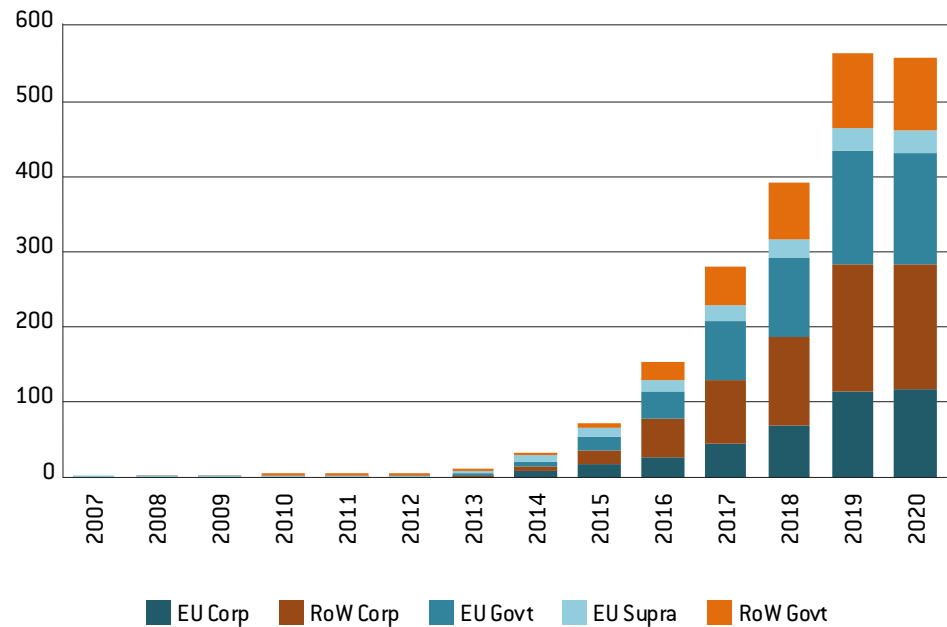
The immediate crisis measures aim to preserve productive structures to the greatest extent possible, so that the economy can reboot once lockdown measures are reduced. But a European COVID-19 recovery programme is needed to boost the recovery and prevent an L-shaped downward shift in GDP. The European Commission's proposal for a recovery fund is a good step and needs to be complemented by strong stimulus measures on the part of national governments to boost the euro-area economy.

In doing so, political choices can and should be made about the future shape of the EU

⁸ To give a concrete example: if Italy's debt were to increase by 20 percent of its GDP (as forecast currently by the IMF, 2020), the additional annual interest costs of that debt would amount to 0.3 percent of Italian GDP, given an interest rate of around 1.5 percent at the time of writing.

economy. One clear aim should be climate neutrality. Major green investments are needed to reduce carbon emissions significantly before 2030 and to reach carbon neutrality by 2050 (around €3 trillion for the next decade only, as noted by Claeys *et al*, 2019). Investment could be financed by the issuance of ‘green’ debt securities (by both the private and public sectors), which are attractive for international investors who look for such investment possibilities, and which could be considered safe assets if designed properly. Europe is already a global leader in that segment (Figure 4).

Figure 4: Global outstanding amount of green bond issuance (in € billions)



Source: Bruegel based on Bloomberg. Notes: Corp refers to corporate bonds, Govt refers to government bonds (EU27) and Supra refers to supranational agency bonds (EIB, EUROFIMA and European Bank for Reconstruction and Development). Bloomberg’s ‘green bond instrument indicator’ identifies bonds whose net proceeds are applied to green projects or activities that promote climate change mitigation or adaptation, or other environmental sustainability purposes. ‘Green projects’ are defined as those aimed at energy efficiency, pollution prevention, sustainable agriculture, fishery and forestry, the protection of aquatic and terrestrial ecosystems, clean transportation, sustainable water management and the cultivation of environmentally friendly technologies.

All these different elements could contribute in boosting the international role of the euro in the coming years. As a new and rapidly growing asset class, green bonds could offer an additional option for investment that would be attractive to international investors, strengthening the position of the euro. Moreover, if the EU succeeds, new green technologies could become the growth engine of the future.

Overall, it is crucial for Europe to find a new growth model to boost productivity and innovation after the crisis. This will provide a double dividend for the euro as an international currency by increasing the euro area’s attractiveness as an investment location, and by boosting ratings of weaker countries and thus increasing the overall supply of safe assets. Failing to do so could mean that Europe not only declines in relative terms, but also that its currency would lose credibility.

References

- Caballero, R.J., E. Farhi and P.-O. Gourinchas (2017) 'The safe assets shortage conundrum', *Journal of Economic Perspectives* 31(3): 29-46
- Coeuré, B. (2019) 'The euro's global role in a changing world: a monetary policy perspective', speech to the Council on Foreign Relations, New York, 15 February, available at <https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190215-15c89d887b.en.html>
- Cohen, B.J. (2019) *Currency statecraft: Monetary rivalry and geopolitical ambition*, University of Chicago Press
- Centeno M. (2020) 'Remarks by Mário Centeno following the Eurogroup videoconference of 24 March 2020', available at <https://www.consilium.europa.eu/en/press/press-releases/2020/03/24/remarks-by-mario-centeno-following-the-eurogroup-meeting-of-24-march-2020/>
- Claeys, G., S. Tagliapietra and G. Zachmann (2019) 'How to make the European Green Deal work', *Policy Contribution* 2019/13, Bruegel
- Darvas, Z. (2020) 'How could net balances change in the next EU budget', *Bruegel Blog*, 23 January, available at <https://www.bruegel.org/2020/01/how-could-net-balances-change-in-the-next-eu-budget/>
- Efstathiou, K. and F. Papadia (2018) 'The euro as international currency', *Policy Contribution* 2018/25, Bruegel
- Eichengreen, B., A. Mehl and L. Chitu (2018) *How Global Currencies Work: Past, Present and Future*, Princeton University Press
- European Commission (2018) 'Towards a stronger international role of the euro', COM(2018) 796/4
- European Commission (2020a) 'Proposal for a Council Regulation on the establishment of a European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) following the COVID-19 outbreak', COM(2020) 139 final
- European Commission (2020b) 'Proposal for a Council Regulation establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 pandemic', COM(2020) 441 final/2
- Gourinchas, P.-O., H. Rey and N. Govillot (2010) 'Exorbitant Privilege and Exorbitant Duty', *IMES Discussion Paper Series*, Institute for Monetary and Economic Studies, Bank of Japan
- IMF (2020) 'Fiscal Monitor – April 2020', 6 April, available at <https://www.imf.org/en/Publications/FM/Issues/2020/04/06/fiscal-monitor-april-2020>
- Krishnamurthy, A. and A. Vissing-Jorgensen (2012) 'The Aggregate Demand for Treasury Debt', *Journal of Political Economy* 120(2): 233-267
- Mundell R. (2000) 'The Euro and the Stability of the International Monetary System', in R. Mundell and A. Clesse (eds) *The Euro as a Stabilizer in the International Economic System* (pp. 57-84) Springer, Boston, MA
- Sapir, A., N. Véron and G.B. Wolff (2018) 'Making a reality of Europe's Capital Markets Union', *Policy Contribution* 2018/07, Bruegel
- Strange, S. (1971) 'The politics of international currencies', *World Politics* 23(2): 215-231
- Thompson Coburn LLP (2020) *Checklists of Foreign Countries Subject to Sanctions*, available at <https://www.thompsoncoburn.com/insights/publications/item/2016-03-01/checklists-of-foreign-countries-subject-to-sanctions>